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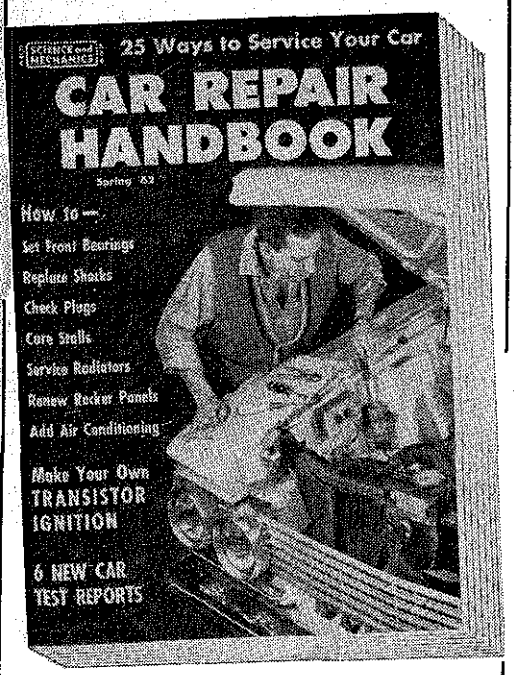

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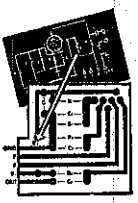

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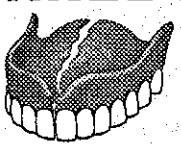

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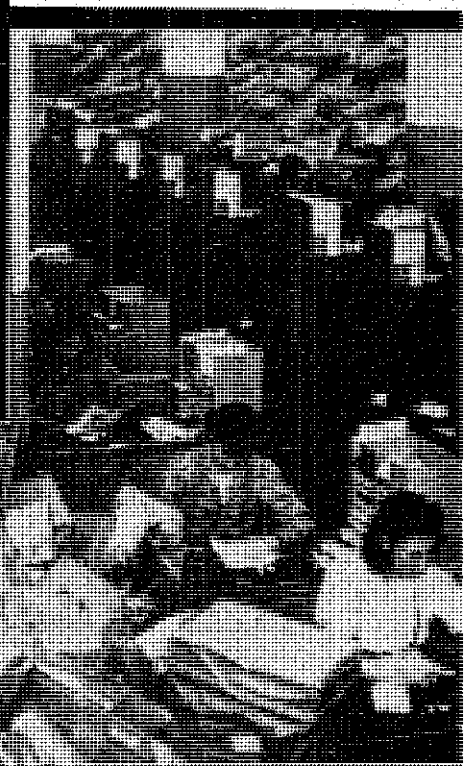



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By Robert Stevenson

When Anthony Sambati injured his bac and was laid off from work he never dreame it would be a blessing in disguise. Bedridde for weeks, he decided to start a small ma order business. This was something he coul

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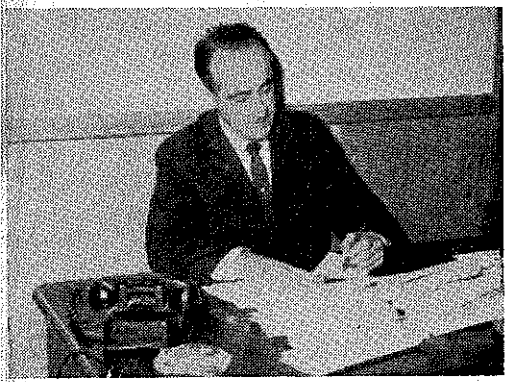


The thrill of receiving money in your morning mail is one you'll never tire of.

MAIL ORDER COURSES, you name it, Statile has the catalog or mailing piece. Select your market, order your mailing literature and you're in business.

(6) You'll be told how to compile your own mailing lists—and this is the most important part of your business. Many a beginner has fallen by the wayside simply because he mails his catalogs to a poor list of names. Suppose, for example, you offered a beautiful scale model of a 40′ Chris-Craft cabin cruiser by mail. You would probably make your mailings to boating enthusiasts and the chances are that nine times out of ten your mailings would show a loss instead of a profit. How would Statile help you solve this particular mailing list problem? He would show you where to get the names and addresses of *actual owners* of 40 foot Chris-Craft cabin cruisers! Surely every owner would like to have a scale model of his own boat. Strange as it may seem, such a mailing list is available to anyone. The secret is where to find it. This is just one example of how an experienced mail order expert giving you personal advice, may mean the difference between success and failure!

This same method of obtaining selective specialized mailing lists may be applied to practically any market . . . selling baby items to new mothers, selling toys to young children, etc., etc.

So much for starting your own mail order

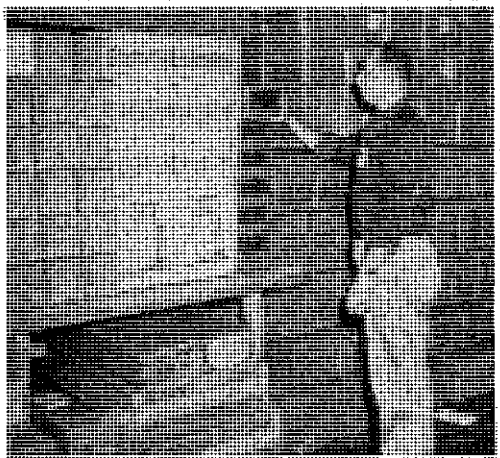
REPUTABLE MAIL ORDER FIRM. Unfortunately, during the past few years a number of ads have appeared in newspapers and magazines offering to start people in mail order. The ads are grossly misleading. Many imply that you can become a millionaire over night if you use their catalogs. Beware! Particularly if they operate their own mail order business direct to the consumer. These firms compete with their own franchised dealers! They could just as well mail all the catalogs themselves. They don't need you.

Other shady firms fail to drop-ship your orders promptly, thereby losing customers for you. In mail order, prompt shipment is an absolute requirement for a successful operation.

Deal only with firms whose business is preparing catalogs and shipping merchandise. They operate on a strict wholesale basis for franchised dealers exclusively. Such a firm is the A. J. Statile Co. Letters from successful franchised mail order dealers speak for themselves. A woman from Milwaukee writes, "It has been better than my expectations." A gentleman from California states "we are quite pleased with the response we are receiving." Another man from Wisconsin writes, "To say the least, I am more than satisfied."

Yes, a small mail order business offers you an opportunity to earn a second income, or—if you work at it in earnest, a chance to strike it rich. The young housewife in St. Louis may be content to make an extra $20.00 a week . . . the office worker in Los Angeles may be aiming for $150.00 weekly full time business . . . and the ambitious schoolteacher in Newark may reach $20,000.00 a year. What is your objective? Set your own goal, pick your own hours, and the sky is the limit.

Even a government report stated that a number of the most successful one-man mail order enterprises make as high as $40,000 to



Big firms will carry all stock for you. They ship

The Patent System At Work



A trip through the world's greatest scien tific and mechanical library—Patent past, present, and future

IN THE words of Abraham Lincoln as inscribed above the entrance to the Patent Office, truly "The patent system added the fuel of interest to the fire of invention."

A system which has promoted countless applications of the arts and sciences to the needs and wellbeing of our people and contributed so materially to our high standard of living warrants looking into. Just how does our patent system work? Who makes all these inventions? Is there any need for or can this country absorb 1000 of the new inventions each week? What of the future? For a better understanding of the articles to follow, let us take a quick tour of the Patent Office at work.

Fundamentals of the System are both simple and brief. In general, any person who has invented any (1) new, (2) useful, and (3) unobvious process, machine, manufacture, or composition of matter, also certain varieties of plants, or any improvement thereof, may obtain a patent on it.

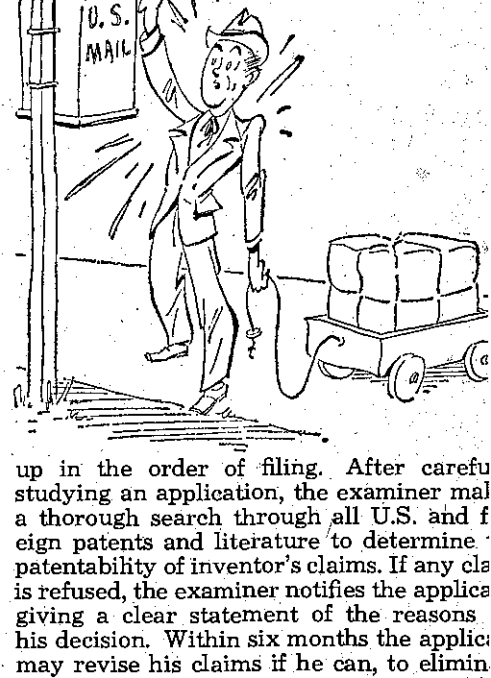
The first condition requires that the invention must not have been previously patented or described in any printed publication in any country or in public use or on sale in this country. The second stipulates that the invention be operative for a useful purpose. The third recites the degree of ingenuity or cleverness needed to warrant a patent: the thing must be "unobvious" to the ordinary person skilled in the art.

A patent on an invention is to effect a contract between the inventor and the people of the United States, negotiated by the Patent Office. In exchange for complete disclosure of an invention so that it can be understood by and become available freely on expiration of the patent, our government rewards the inventor by granting him the protection rights recited in the patent. The chief right excludes all others from making, selling, or using the invention during the 17-year life of the patent.

the invention may do with the invention he pleases. In contrast to patents granted most foreign countries, U.S. patents are r taxed, nor are there any early fees or t like.

To Obtain a Patent, an application must filed with the Commissioner of Patents. complete application includes drawings of t invention, a specification fully describing a claim or claims of matter regarded as ne the oath prescribed by statute, and the fili fee, normally $30.

The Patent Office has a staff of 976 exa iners, each a specialist in a certain field invention. Applications in each field are tak



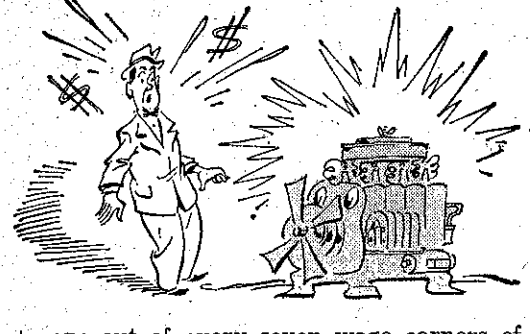
up in the order of filing. After carefu studying an application, the examiner mal a thorough search through all U.S. and f eign patents and literature to determine patentability of inventor's claims. If any cla is refused, the examiner notifies the applica giving a clear statement of the reasons his decision. Within six months the applic may revise his claims if he can, to elimin any grounds the examiner has refused allow.

The applicant should point out any er he discovers in the examiner's position, a give reasons for allowance of the claims. due course, the examiner will reconsider

With the patenting of the "Six Shooter" by Samuel Colt of Connecticut, and the barbed wire fence, by Joseph Glidden of Illinois (1873), the development of the West was at hand.

The period of 1875-1900, covering the latter half of the first million patents, may be called the golden age of invention. That brief period spawned more inventions which have altered living conditions throughout the world than in any other period in history. Among them were the telephone, electric lamp, internal combustion engine, induction or AC electric motor, electric welding, phonograph, moving picture, automobile, typewriter, steam turbine, wireless, linotype, production of aluminum, carborundum, zeppelin, and scads of other things.

Impact of the golden age inventions has been stupendous. The automobile now furnishes employment, directly and indirectly,



to one out of every seven wage earners of America. The telephone is our second largest industry, with employees in every community.

Aside from affording convenience and ease, inventions have reduced the cost of many commodities and brought former luxuries within the reach of all. For instance, it would take a half ton of candles to produce the amount of light used monthly by the average American family!

What of the Future? More than 2000 years ago King Solomon asked (Ecclesiastes I: 9,10) "Is there anything in the world whereof it may be said: 'See, this is new?' There is no new thing under the sun." For over a century, many have suspected the end of American invention to be near.

A noted skeptic was Henry L. Ellsworth, the first "commissioner" of patents. Back in 1844, when Morse received his patent on the telegraph, Ellsworth had succeeded in getting Congress to appropriate $30,000 to lay the first telegraph line from Baltimore to Washington. The same year, Ellsworth signed the Goodyear patent. He was awed by it all.

In his annual report to Congress, he said: the arrival of the period when human i provement must end." This quotation probably the basis for the erroneous sta ment that once an official of the Patent Of resigned because he thought there was no ing left to invent. During the year of E worth's report, 1067 patents were granted

The past affords ample grounds for a r sonably accurate prediction of the future. took 75 years under our present system, augurated in 1836, to reach the millio patent; 24 years to reach the second million and 25 years the third millionth. The sli time lag for the third million was due to diversion of research to national defense a the policy of suspending granting patents this field, as well as all inventions pertain to atomic energy.

In 1960, 50,607 patents were granted a 79,331 applications were filed. On last rep 195,885 applications were pending before Patent Office. Presently pending applicati alone will ripen into some 125,000 patents!

For several decades, patents have be granted at a steady rate of one for every of our population. In medicine, agricultu and foodstuffs, inventors have only scratch the surface. The greatest of all invent methods is group research. Its full effect yet to come.

Therefore, we may confidently predict t American invention will be more rapid a revolutionary in the next few decades. I perts predict the fourth millionth patent v issue about 1980.

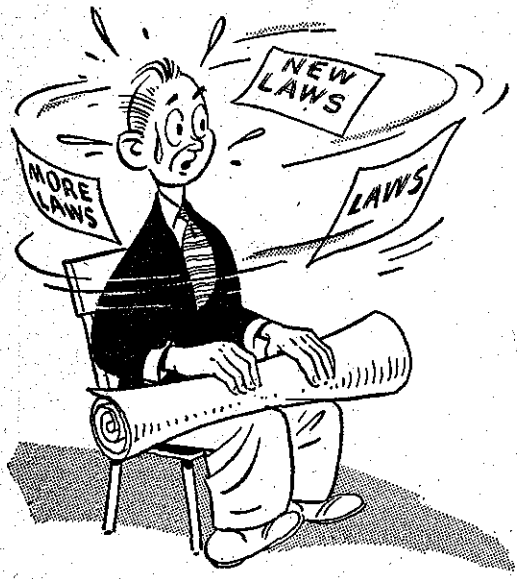
Necessity Not the Mother of . . . Manifes there is no crying need for 1000 inventi each week of the year. These inventions not produced out of any necessity, and old adage "Necessity is the mother of inv tion" is pure bunk. If American indus were to attempt to adopt and absorb all ventions passing through the Patent Offi industry would be in a continuous ma process of tooling up. However, America a the world does need and can absorb the p centage of these inventions which have place in their life and industry.

Often it will take a combination of 50, even 100 inventions to bring a single dev to a practical and saleable state. Even w so simple a thing as the "zipper," Gide Sundback of Meadville, Pa., patented alm 200 inventions to bring it to its present co mercial form. Sheer presence of so ma alternative proposals presented by the n merous patents benefits both industry a the public.

The sporadic inventor should realize t competition in inventions is keen and bitt In all frankness, the world does not bea pathway to the inventor's door, and the

What The Patent Law Means To The Inventor

By ALAN MONTAGUE



IT WILL no doubt still be news to most people, but until the Patent Act of 1952 went into effect, a strong case could be made for the contention that most U.S. patents were not worth the paper they were printed on. That is, they weren't if you took into consideration two (and perhaps more) Supreme Court decisions which cut the ground out from under the validity of patents almost entirely.

Many of us (me included) somehow got the idea that a patent is something that "nobody can touch." "This is mine, brother," we can hear ourselves saying to some greedy character, "and if you lay a finger on it, Uncle Sam will throw you in jail for life!"

Well, it's a wonderful dream, only it's not so. A patent is nothing but a ticket of admission, giving you the right to sue infringers in federal court. No arm of the government will automatically intervene in your behalf, nor does your patent automatically assure you that you will win your suit.

How, if you have a patent, can the court decide in favor of the party who is infringing on your patent? Simple. The court merely decides that your invention isn't really an invention, that the Patent Office made a mistake and that, therefore, you really have no cause for complaint. Case dismissed.

in order to get some perspective on the sit tion, let's go back and make a brief revi of the development of patent law.

When It All Started. Back in the reign James I of England, Parliament passed statute of monopolies to cut down on, break up, all kinds of monopolies which w strangling business—at the same time gra ing monopolies to people who would int duce new manufacturing businesses or a

When our Constitution was established was provided in article I, section 8, that "C gress shall have the power . . . . to prom the progress of science and the useful a by securing for limited times to authors inventors the exclusive right to their resp tive writings and discoveries."

Under this provision the first patent was enacted on April 10, 1790, setting u three-man Patent Board which was to con of the secretaries of State and War, and Attorney General.

Pretty soon inventors started showing As Secretary of State (and the world's le ing basement workshop fan), Thomas Jef son did most of the work, which appare consisted of listening to the inventor and t giving him a patent, neatly signed by Geo Washington.

Inventors were evidently just as lo winded in those days as they are now, cause by 1793 the Patent Board, includ Jefferson, threw up the sponge. A new was passed which made the issuance patents a mere matter of filing some pa



and paying some fees, after which a cl gave you your patent.

There was no critical examination of applications with the result that the o was handing out grants almost indiscr nately. Such confusion and protest arose conflicting claims, duplicate patents, pat on old ideas, etc., that the whole busi was in a mess.

Flash of Genius Rule. Finally, whether in search of ultimate truth, or out of sheer frustration, the Supreme Court rendered two decisions which, in essence, seemed to say "—to arise to the dignity of invention and to merit the award of a valid patent, the subject-matter must relate to, and be a startling development in pure science, and it must result not from skill in the calling or toil or experimentation, but from a flash of genius."

For practical purposes this would mean that nobody but Einstein and the atom bomb could get a patent and there would be considerable doubt about Professor Einstein.

In other words, no mechanical patent was valid and no patent of any kind was valid if it could be proved that the invention resulted from conscious effort on the part of the inventor, as opposed to a flash of genius. Let's say you were sitting on a mountain-top,



thinking of absolutely nothing, and there suddenly flashed through your mind the solution to inter-planetary travel by which a man stepped into a disintegrator here and out of a re-integrator on the moon. You might have something. But if you spent a year working out a new egg-beater which cost less and worked better than any other egg-beater in history, why, nuts to you.

From a certain theoretical standpoint this search for the absolute may be good law, but it would certainly be bad medicine for 99$\frac{44}{100}$% of all inventors.

All of which brings us up to the law which went into effect in January 1953. There obviously was need for re-codifying the old law, clarifying the language, weeding out obsolete or over-lapping provisions, and reconciling conflicting interpretations. The law also makes certain substantive changes—most important being the repeal of the "flash of genius" decision, plus the provision in the statute that the court shall presume that a patent is valid.

Of basic importance to inventors is section 103, which says, "A patent may not be obtained although the invention is not indentically disclosed (elsewhere or previously), if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would the art to which said subject matter pertair *Patentability shall not be negative by t manner in which the invention was made.*"

Hard Work Recognized. The last senten is the important one. It clearly directs t court to consider as immaterial whether t invention was the result of a flash of geni or of long and tedious work.

The first sentence of section 103 simply pu into statutory form what the Patent Offi and the courts have been doing for 100 yea —refusing or invalidating patents on t ground of lack of patentable novelty over t prior art. The fact that this is now in t statute, and that it has a definite phraseolo may lead to the development of better crite regarding novelty.

If the differences as a whole would r have been obvious, at the time the inventi was made, to a person having ordinary sk in the art, then the invention is patentable

So, I think we may say that section 103 something of a Magna Carta for invento It does not necessarily give you any rig you didn't already have, but it does forbid t courts to snatch them away on capricio philosophical grounds.

In addition to the foregoing, section 2 of the law says: "A patent shall be presum valid. The burden of establishing invalid of a patent shall rest upon a party assert it." In some courts before this, the burden proof had been on the inventor.

While the law covers many other poi among them a clear rule which will ma things rough for contributory infringers, main result from the standpoint of the ventor is this:

If he now goes into court on a patent, cards are stacked in his favor.

QUESTIONS

Any Veterans' Benefits?

Q. I am a disabled war veteran and won whether the patent law includes any ass ance for development and patenting of ve ans' inventions?

A. No. Veterans receive no advantage o other inventors. The Veterans Patent Ex sion Act of 1952 did extend the time wi which a veteran might apply for a patent, in some cases it extended the life of his pa by the number of months of overseas serv But rights under this law have expired.

Can a Patent Be Knocked Out?

Q. Isn't it true that once I get the pa papers, nobody can touch me?

A. Not exactly. A patent may be repe or invalidated if it was obtained by frau granted by mistake. Also, one or more cla of a patent may be held invalid or disclair while others may be good. If there is

this book is intended primarily for the use of attorneys and agents.

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Presents the main divisions and subdiv sions in which all of the 3,000,000-plus U. patents are divided. There are some 340 ma headings, such as aeronautics, printing, wea ing apparel, etc.; also more than 60,000 su divisions. For example, the class of games i cludes a heading of "golf balls," which turn is further divided into 17 sub-heading Primarily intended for searchers, but copi of the manual are available in the sear room for study by the public.

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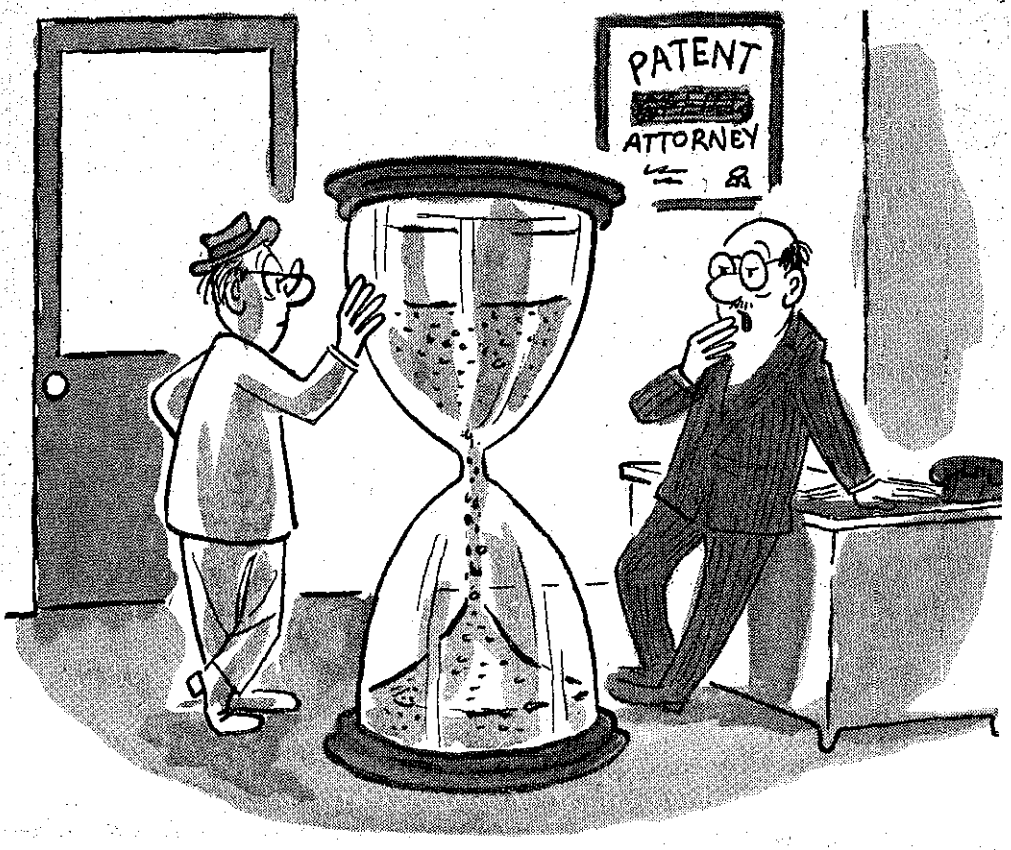


Seven Guideposts to Inventive Success

Every inventor can profit by this advice from the great American inventor whose electron tube made possible all modern radio, television, and electronics*

By DR. LEE DeFOREST

ALTHOUGH I am descended from a long line of teachers and preachers, industry and invention have fascinated me since my childhood. A blast furnace was built in our town when I was 10 years old, and I promptly ran away on every possible occasion to watch the engineers and workmen build the plant and put it into operation.

As soon as I had grasped the techniques, I proceeded to secure an old ash can, punched two holes into it near the base—one to admit the nozzle for the compressed-air supply, the other being the tap-hole from which the molten metal was to flow—and then purloined a pair of heirloom bellows to produce the necessary blast. The result, of course, was that I melted the nozzle off the bellows, burned my fingers, and scorched my eyebrows—but I had the supreme satisfaction of knowing that my blast furnace was at least operative, if not a great financial success.

Another of my early enterprises was to get an inexpensive electroplating outfit from a mail-order company, and with this I managed to earn the astronomical sum of $5. I refer to it as astronomical, because in the early 1880s the average boy's allowance was 10¢ a month. I plowed my $5 profit back into more tools and gadgets, and felt I was on my way.

A Crucial Decision. I go into some of these childhood recollections to make the point that the successful inventor must have some native taste and talent for mechanical ideas, for tools, and for business.

When the time came for me to go to college, my father wanted me to enter the ministry, but I felt that I could never be a preacher, and the academic life of a professor, even of the sciences, could not possibly give vent to my inventive propensities. I told my father that I intended to be a machinist and an inventor, and should therefore go to scientific school instead of taking the regular college course. Father finally said, "Well, Lee, if you positively know you want that sort of half-baked education, you may have it . . . I hope you never regret the choice you are making."



Dr. DeForest, called the "father of radio," show his shop at work on an electronic communica problem. Credited with more than 300 patent has probably influenced our way of life more any other present-day inventor.

I have never regretted that decision. Sc the very outset, I would certainly advise man who has invention in his bones to get right kind of education. This is not to that you should not read the classics, but successful inventors come out of the se nary. Even while I was yet in high scho took time to go to the public library and r the reports from the Patent Office. I fir notation in my diary for June 27, 1891, w says. "No dime novels for me."

Learn What Others Are Doing. So, brings me to the first piece of advice whi would like to pass along to the rising gen tion of American inventors. A wide rea of technical and semi-technical magaz is essential to widen the mental hor and to learn as much as possible of v other inventors and research men are dc Such magazines as SCIENCE and MECHA and Scientific American are espec recommended.

The aspiring inventor should also

the line you are following, or intend to follow, to obtain the names of several patent attorneys. Then interview several of these attorneys yourself, and decide which one is best qualified to handle your particular type of work. The proposed charges should also be agreed upon.

Any registered patent attorney is theoretically qualified to handle any type of patent work, but, obviously, some will have more experience along particular lines than others, and are therefore in a position to serve you more skillfully.

I think I can qualify as something of an authority on this subject, having been awarded more than 200 patents, having been involved in much litigation concerning these patents, and having at one time, indeed, nearly been thrown into jail.

So, believe me, it will pay you in more ways than one to make an intelligent choice of a good attorney, and then cooperate with him fully.

Keep a Diary. It is of the utmost importance to keep a careful diary of inventions and of inventive work in progress. such items should be dated and importar ventions should be witnessed. It was a book maintained by my assistant Van I which helped establish my prior discove the feed-back effect. In one of the mos mous interference cases in U. S. history Supreme Court recognized this noteboc proof of my claim to priority.

In having your notes and drawings nessed, choose a disinterested party witness, and one who, in addition, is i position to be tempted to copy or encr upon the idea.

In my opinion, patent brokers are h prone to strive to make a quick deal fo mediate profit, rather than to carefully vey the field for the best possible conne In dealing with a broker, therefore, ca him that he is not to stampede you int first deal which comes along.

The right sort of lawyers are apt to h wide acquaintance among men of wealth if you can find one to handle your pro tion on a commission basis, he may be

Some People Were Hard to Convince

THROUGHOUT his boyhood days in Talledega, Ala., Lee DeForest was never in doubt that he would be an inventor, but few others believed him.

Once he was expelled from school for day-dreaming and he was said to have lost more than one job for the same inability to concentrate on work that did not interest him. His father, a Presbyterian minister, tried at great length to convince young Lee that his future lay in the ministry, but he would not be swayed.

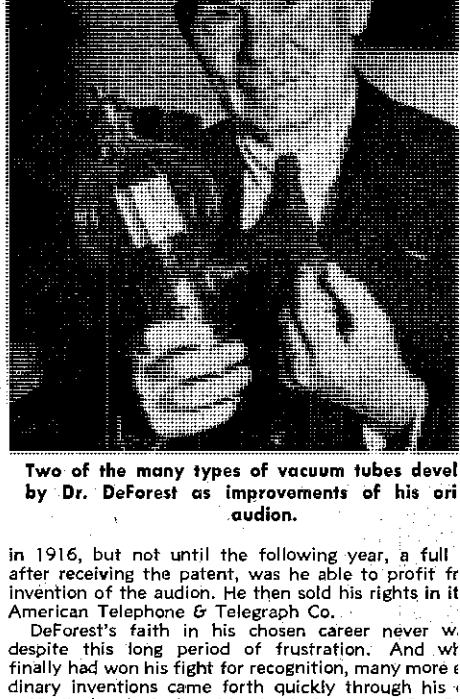
As he neared graduation day in a Massachusetts private school, the lad implored his mother to intercede on his behalf, with a brief note in which he penned the familiar lines from Longfellow's "A Psalm of Life":

"Lives of great men all remind us
We can make our lives sublime,
And, departing, leave behind us
Footprints on the sands of time.
Footprints, that perhaps another,
Sailing o'er life's solemn main,
A forlorn and shipwrecked brother,
Seeing, shall take heart again."

In a postscript, the boy added: "Dear Mama, the only footprints I will leave will be my inventions. I had better take the scientific course, don't you think?" Shortly after, he entered Yale University where he remained for six years to gain his PhD. in 1899.

Eight years later, he received a patent for his "audion," a triode vacuum tube which, in time, was to earn him the title, "father of radio." But since the tube was an improvement on the diode, patented two years earlier by British inventor John Ambrose Fleming, he could make no use of it until the two inventors' companies agreed on a cross-licensing arrangement.

In 1912, five years after the patent was granted, DeForest and others in his company were accused of gross exaggeration in advertising and arrested for mail fraud. His statements that radio would transmit the human voice across the Atlantic in a few years were ridiculed by a prosecuting attorney as absurd and so misleading as to constitute swindling of the public! And though DeForest was ac-



Two of the many types of vacuum tubes devel by Dr. DeForest as improvements of his ori audion.

in 1916, but not until the following year, a full after receiving the patent, was he able to profit fr invention of the audion. He then sold his rights in it American Telephone & Telegraph Co.

DeForest's faith in his chosen career never w despite this long period of frustration. And wh finally had won his fight for recognition, many more e dinary inventions came forth quickly through his

Until shortly before his death last year, Dr. D

Developing Inventive Ideas

How a thinker becomes an inventor

By ALAN MONTAGUE

HERE'S an interesting question: "Are inventors born or made?" The broad answer is *both*. Your natural intelligence and your emotional make-up determine whether or not you *could* be an inventor, while the extent to which you train yourself for the job is likely to determine the degree of your success.

Tempermentally, there are two general kinds of people in the world: first, the outgoing "sales" type who get a kick out of talking and working with people, and tend to take the world as they find it, and enjoy it; and then, their opposites, the type who like to work with ideas and frequently prefer a job at a machine, desk, or drawing-board, where they meet as few people as possible.

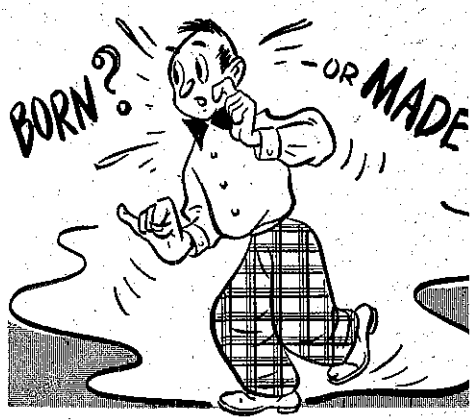
Most of us are mixtures of the two extremes. But if you are the outgoing type, chances are you won't make a good inventor. On the other hand, if you enjoy working with things and ideas or solving some hard problem with an ingenious solution, you may have what it takes to become a successful inventor.

Importance of Training. While intelligence and temperament indicate a man's possibilities as an inventor, training will determine the likelihood of success.

Some years ago, I got a letter from a 16-year-old kid who had noodled out a revolutionary new invention—an automobile with a kingsized storage battery where the engine should be, with a cable running back to an electric motor which drove the rear wheels. When I told him the last electric automobile I had seen was in a junkyard back in 1924, he couldn't believe that the electric auto had been invented, sold, used, and junked years before he was born.

Now, this boy had inventive talent. After all, the idea was totally unlike anything he had ever seen or heard of. The trouble was that he needed more background. People with real inventive talent are constantly coming up with "new" ideas that are as old as the hills. They haven't soaked up enough background to know what it will pay them to invent: they haven't *trained* themselves in the art of invention.

Method of Training. High school, even college, will not necessarily equip you to be a successful inventor. A lot of self-education and a wide range of reading are required. Since invention is essentially a mental proc-



elements to produce a new, unexpecte sult, you must keep your eyes open to is going on in the world, and stuff your with "elements" that can be combined recombined. You also must know en about patent law to be able to judge wh or not an idea really amounts to an inver

The first step in conditioning your for inventive work should be boning u science, mechanics, and the related art get a solid background from which to in developing your invention. Reading n zines like SCIENCE and MECHANICS is a beginning, but go beyond that: buy a mechanical dictionary, and read and re it from cover to cover. Read books on mentary mechanical engineering, elec engineering, physics, chemistry, aerody ics, and architecture.

Get a book or even take a correspond course in drafting. (Many men with valu ideas simply can't make them understood cause they don't know the rudimen draftsmanship.)

Marketability. To learn the potential kets for your inventions, get a set of The Register of American Manufacturers, v runs about 7000 pages, carries some 4 advertisements, and list manufacture everything from "A" frames to zwieback price is around $15 to $20, and it's well v it. If you can get next to the purchasing of some company in your locality, he m willing to give you last year's set.

Carefully study the Sears, Roebuc Montgomery Ward catalogs, to see wh selling, and keep your eye on products

you had to display a "flash of genius," and while this has been modified by stature, it will probably continue to be a fact that the best inventions are those that *do* come in a flash.

A Flash of Genius, or sudden inspiration, is said to represent the working of the subconscious mind. It is a matter of fact that there are upper and lower portions of the human brain, and that the upper portion does the conscious and logical thinking, while the lower, or "subconscious," portion is a somewhat disorganized storehouse of memories. Many psychiatrists believe that we never forget anything, as far as the subconscious mind is concerned: everything we have ever learned is stored up there. The question is whether there is any way to put this treasury to work.

A man who can't make up his mind will often say, "Let me sleep on this. I'll give you my answer in the morning." This constitutes one of our oldest proverbs, and with reason: when you can't make up your mind at the conscious or logical level, you can go to sleep and turn the job over to the subconscious.

But your subconscious can't come to your rescue unless it has something to rescue you with. That's why you should feed your mind with all the study and reading I have outlined, in order to give it the building blocks it needs to function productively. Furthermore, it is not likely that your subconscious will bother to put the blocks together at all unless you have been working on the problem on a conscious level.

Putting the Subconscious to Work. The best way to make use of your subconscious in inventing is to adopt the following program: First educate yourself along as many lines as possible. Then, when you are confronted with a particular problem, or wish to develop an invention to perform a particular task, get a stack of file cards, sit down in a quiet place, and start writing and sketching on these cards, making notes of everything you know about the subject.

Write down any ideas that occur to you, no matter how cockeyed they may seem. (Cockeyed ideas sometimes have a negative value in showing you what not to do, and they may suggest an opposite idea which has merit.)

Take your time, keep thinking all around the subject, keep making notes, until you feel there is nothing more you can possibly do. Then spread all the cards and other reference material out on the table in front of you, and start trying to fit the ideas together into some sort of pattern. Right here, it is possible that you will drive straight through to your solution.

Sleep on It. You may reach a point where you are sick of the whole business and suffer-

the movies. Let a fully charged subconsci mind take over, removing the burden fr the conscious mind entirely.

Sleep on the problem, and you may f that you wake up with either a solution something mighty close to it. Subject t new idea to your logical, critical processes see whether it is really any good or not, a you may find you have invented a soluti



The next step, of course, is to have a pat attorney make a search of the pertinent ords in the Patent Office, to see whethe not the invention is likely to be patenta

If you see nothing in this organized proach to creativity, I'm sorry to have wa your time. But an outstanding psychoana has assured me that the "flash of genius a result of the working of the subconsc mind. Why not check the validity of idea? If you are a creative type, and test procedures suggested, you will come up personal experiences of your own which be of far greater interest and value than amount of theoretical discussion.

A Hospital Bed. Jack Killifer, who out patent No. 2604639 on an improved pital bed, started developing his idea whe was laid up for a number of months and n the mistake, when in a weakened condi of trying to get out of a high hospital without assistance. The result was disastr

When Jack got home and into his own he started boning up on patent lore. F a war surplus ad he got the idea of u hydraulic lifts for the legs of the bed; fr correspondence school he learned the es tials of mechanical drawing; and from ad of a patent attorney he got a free l telling him what to do next.

As a result, he developed a bed which patient can raise or lower, and tilt either head or foot, simply by turning a

Chance to Help Others. There will be wards of 200,000 readers of this handb Will one hundred of you come through letters telling us how you developed you vention? This handbook is to be rev yearly, and if we are able to incorporate s of your experiences in the next editic

in the suggestion box at your place of employment or offer it to some manufacturer as a suggestion. Or write it up as a "kinks and hints" or "tricks of the trade" item for some magazine. Or print the plans and sell them as a craft project. Or, if you are on your way to join the Foreign Legion anyhow, sell it to your brother-in-law. Any of these methods may bring you some cash.

Big Cost of Big Inventions. Standard Oil (N. J.) Company's consultant on research and patents, Frank A. Howard, says that, while the success of an organization depends upon the number and value of the patents which originate within it, "a patentable invention may be expected to result from an expenditure of perhaps $100,000 or four to seven man-years of industrial research in a heavy industry."

Moral: If you are a sand-lot inventor, don't try to bat in the big leagues. Stick to consumer items, auto accessories, household gadgets—stuff that can be batted out on existing production machinery with a minimum of tooling up. Trying to tell big machinery or heavy industry experts what's what is like the Paris police chief who used to tell the Prince Regent how many wild parties there had been in town the night before. He wondered why His Highness chuckled. Shucks, His Highness had been at all of those parties, plus six or eight the police hadn't heard about.

Very often when it comes to selling an invention, manufacturers who ought to be interested will turn you down because they are not familiar with working certain materials, or do not have the right equipment. So try to make certain that those you approach have the right set-up.

Goofy Ideas Patentable. To be patentable, an invention must be new and useful, but it is not up to the Patent Office to decide how useful. The automatic hat-tipper, which was awarded patent No. 556,248 was a famous example. Its only value actually proved to be its use as an advertising novelty.

Moral: Contrary to persistent popular opinion, a patent is no guarantee either of practicability or commercial value.

"The Idea Is Copyrighted." You have probably read news stories or descriptions about some operation that say "the idea is copyrighted." This is silly. The man at the Copyright Office says:

"There are no provisions in the copyright law under which it is possible to secure the exclusive right to an idea, system, plan, or method of doing anything. An original writing, embodying the operation of a particular idea, system, plan, or method may be copyrighted upon complying with the requirements governing the particular class of work pictorial matter against exact or colorable i production. It would not secure the exclusi right to the idea, plan, or system."

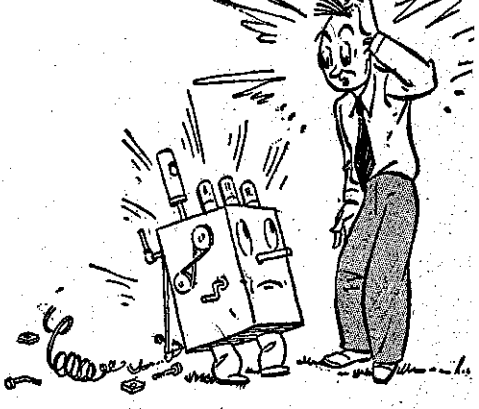
Moral: Don't fiddle around with copyrigh on descriptions of mechanical inventions compounds or processes.

However, if your invention has any u usual artistic design or elements, and cou in any way be classified as a work of art o sculpture, it is wise to seek copyright prot tion. An ornamental vase or statue used a lamp base or a candlestick may be prop subject-matter for copyright, as may a do knocker, a chandelier, or whatnot. And copyright is easier to get, costs less, and la longer than a design patent. Furthermore is renewable. A design patent is good for years; you can stretch a copyright out to years.

Can Inventions Be Shelved? Apparent an invention may be "shelved" or forgott The president of Cluett Peabody & Co., example, once mentioned that a certain ve popular collar in their line was the subj of a patent which he found lying around, u used, in the company files when he came i office. Somebody had just forgotten about

As to "shelving," it is not at all impossi for a company to buy patent rights on so minimum annual basis of $500 or $100(year, and then never go into production. T occurs where the company finds that its n mal business is taking up all its floor sp or energy, and it simply puts off getting i production on the new item until subsequ developments make it worthless or obsol

Inventors should therefore insist that, royalty agreements, royalty money must paid out of income from bona fide manuf ture and sale of the invention. The agr



ment should further specify that if s

Is There Really an Inventor's Clinic?



By FRANK MARTIN

THE process of developing an idea from invention through to patent puzzles many a would-be inventor who, in his guarded quest for experienced help at a bargain price, may be found to be chasing a rainbow called an "inventor's clinic."

Like peace, the clinic idea is wonderful, but insofar as we now know, it is only pie-in-the-sky.

A True Clinic for inventors should be based on the principle of assisting any needy inventor who applies for aid. But after reading over the letters from many readers of Patents and Inventions, a regular feature of SCIENCE and MECHANICS, we strongly doubt that such a clinic does exist. From the experiences expressed and claims made in these letters, we must conclude that few people are motivated by a true desire to help the inventor.

Perhaps a score of societies, clubs, and other organizations purport to do this. In some instances, their system may work out well for both the organization and the inventor. But these groups are no panacea. Before you pin your faith in one, therefore, play it safe and investigate.

When claims appear to be too good to be true, ask for some tangible evidence for proof. If your request is evaded or ignored, that should be all the cue you need to sidestep. If everything still appears fine, find out what the Better Business Bureau or a chamber of commerce in the area has to say. Then you will have some basis to arrive at a decision.

Recently, an alleged inventor wrote in praise of a certain club because he said it had helped him to obtain and sell a patent. Because of this aid, he suggested that the club should be recommended to inventors. We were interested and asked for the number of the patent cited in the letter so that we could study the way the patent was handled. Names and qualifications of the club officers were also requested. Though a stamped reply envelope was furnished, that marked the end of that attempt for publicity—there was no further word.

ber joins for $30, then pays $20 a year d
There are no other charges unless
member wishes to receive patent advice o
apply for a patent, in which case costs
said to be about half of the normal rate.
club cannot represent inventors in the Un
States since it is not registered.

Actually, it is very doubtful that such
organization can save money for an inve
in the preparation and prosecution of his
ent application. Those who do the work n
be registered at the U.S. Patent Office be
they are recognized, and if they are quali
they are not likely to serve for less than
prevailing scale of fees. Any person wh
not registered and represents himself
qualified to do this work is violating Titl
of the patent statute and is subject to a $
fine if caught. Bootleg patent help is
economy.

Some Offers Not What They Seem. S
organizations proclaim an "interest in
and novel things," rather than propos
assist an inventor in obtaining a patent
letter sent out by one reads:

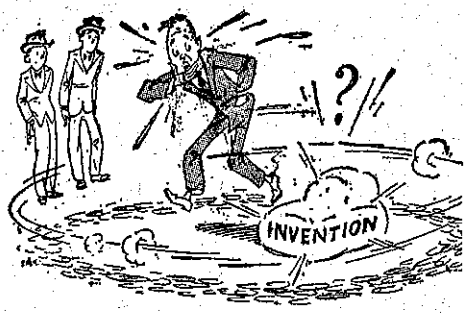
"We receive ideas and analyze them f
the standpoint of their possible use in
program. In some instances, we work
royalty basis. In the event an inventor wi
to sell his item outright, we consider
chase. It is difficult to determine what
royalty rate would be without some ide
what the product is.

"Before we can consider any ideas,
must have from you a signed copy of
letter. By your signature, you represent
agree that the item is original with you
that you have the full right and authorit
disclose the same to us and to enter int
agreement respecting it, and that it is orig
and novel. You will observe that we are
demanding that the item be patented, th
fore we must and do insist that it is orig
new and novel, unpublished and, to the
tent it is not, we will not be bound to res
its disclosure.

"When we have received the enclosed

Have You Fully Worked Ou Your Invention? *Or is it just an idea?*

By AUBREY D. McFADYEN



BEFORE you rush to prepare and file your patent application, pause a moment and think—have you really worked out your invention?

Some time ago, an amateur golfer called at the Patent Office to investigate the novelty of what he believed to be a revolutionary golf ball, one which he thought he had invented. He had in mind the development of a ball that could not be lost easily and, thus, would nearly eliminate one of the game's most aggravating problems—time consumed in tracking down missing balls.

The would-be inventor proposed to coat the golf balls with a compound which would emit smoke for a few minutes after it was driven. The golfer could find his ball through the smoke trail. After several hours of pouring over the copies of all prior patents on golf balls, he was assured that none were for a ball built to emit a smoke trace.

He decided to apply for a patent and consulted a patent attorney for assistance in preparing his application. The attorney, knowing that patent applications must contain a detailed description explaining how the invention is constructed to accomplish its intended purpose, asked his new client what compound he had found satisfactory for the purpose of giving off smoke upon impact of a golf club with the ball.

"Oh," came the reply, "I haven't found a compound yet that will do it!"

"In that case," the attorney said, "you haven't made any invention at all. You have nothing but an idea of something that would be a good thing if and when someone invents it. You can't get a patent on a bald idea. Patents are granted only for the novel structure designed to carry out an idea."

Common Mistake. Though our friend's idea has since been developed (and not found satisfactory), his experience is cited here because it typifies one of the most common misconceptions about patents for inventions.

The frequently heard expression, "He applied for patent on the idea," is dead wrong. Patents are applied for on an apparatus, machine, manufacturing process, compound, etc., through which the idea is practicably available to the public. Rather than the idea, it is the physical structure that is patentable; or, in the case of a process, the tangible pro-

vention" is the solution of a problem ra than mere recognition that it exists. S patents are intended to reward those have made tangible contributions to mank patents cannot be granted for wishful th ing. If so, a patent on non-breakable g probably would have gone to the first ho wife who sighed for a non-breakable drin glass; tempered copper would be credite the Egyptians, and the airplane would be garded as an invention of the mytholo character Icarus instead of the Wrights.

A Patent Is a Contract between the in tor and the people—or government—and all contracts it is based on a consideratio value passing from each party to the ot

The inventor turns over a complete ex nation of his invention so that the public use it freely—on expiration of the pa For this very reason, an idea alone cannc accepted as the basis for a patent. In me expressing an idea, the inventor woulc turning over to the public nothing more a statement of a problem, the solutio which would still call for inventive geniu

On the other hand, the people (gov ment) pay the inventor by guaranteeing exclusive use of his invention for the d tion of the patent.

A patent is much like an ordinary dee land. The papers may be considered in parts. First is the jacket, or folder, signe the proper authorities and having a set printed on it. The form states that upon amination the inventor has been "adju justly entitled to patent" on the inver disclosed in the specification "hereunto nexed" and grants to him the exclusive to make, use, and sell the invention fo years.

The "hereunto annexed" or second pa

it and was able to sell it at an acceptable price.

Whether you have an invention of merit or only an idea depends on many factors. For example: Have you actually made and tried out one of these plugs? If so, did it work satisfactorily? Does it involve replacement of old structures, or is it an entirely new structure? Until you have found out these things, a patent attorney cannot be of much help to you.

Patenting Endless Tracks?

Q. I have an idea for a new application of endless tracks such as are used on tanks and tractors. Would it be patentable?

A. Not the broad idea, since the caterpillar tread is very old. However, you show certain control features in your sketch, and a patent on these details might be very valuable. Remember, patents are not granted on purpose or on new applications, but upon new structures, and often very small, but vital details.

Making Unpatentable Idea Pay Off

Q. I have an "idea" or a "method" of doing business and know that such things cannot be patented. How can I try to make some money, anyhow?

A. Try to set up a "confidential relationship" with the prospective buyers. Try to get them to agree in writing that they will look at the idea and pay you if they use it. This sets up a contractual relationship, in which they pay you for your services in bringing the idea or method of doing business to their attention. In other words, they do not pay you for the idea; they pay you for telling them about it. Frankly, most big companies won't go for this kind of proposition, but there is no harm in giving it a whirl. After all, what have you got to lose?

When it comes to schemes or systems, a copyright may protect you. For example, there is a fellow in Illinois who dreamed up a salesmen's contest. The idea is that all salesmen start the contest "naked." For each sale, they get one article of wearing apparel credited to them—a pair of shorts, one sock, shoe, hat, collar, etc. Then, at the end of the contest, the company holds a banquet where the men must come wearing just the amount of apparel they have earned. The costumes are crazy, the banquet is a riot, and everybody has a swell time.

The inventor of this scheme has the postcards illustrating the articles of apparel and the various pep letters copyrighted. He simply goes in to the sales manager of a companies, he has his material printed in big quantities, which enables him to the individual deal for less than it would the sales manager to do a similar job for h self. The copyright keeps out competito

This system, as well as the sale of c righted instruction books or blueprints, help you make money from an unpatent idea.

Is a Secret Sacred?

Q. I have learned from my boss the se method of making a popular cosmetic pr ration. This method is so simple that e the chemists have overlooked it, but it tually does something supposed to be possible." This is not my boss' own idea got it from his grandmother. Now, the q tion is, can I get a patent on this, or can into business for myself and use it?

A. You cannot get a patent on it, since not your invention, nor can your boss g patent, either.

Perpetual Motion Again

Q. I am working on a perpetual motion paratus and almost have it in operating or Is there a market for this?

A. There certainly is. If you succeed in tually making such a machine, your feat make the front page of every newspape the country, and the world will be oyster. The trouble is, men have been tr for generations to make such a machi one that will operate without applicatio driving energy such as heat or electricity far nobody has done it and scientists unanimous in saying that nobody ever w

Should you go ahead and apply for a ent, you will promptly be told by the Pa Office that your device appears to be i erative for any useful purpose. And will go on to say that you must show t —by actual apparatus—that your inven will indeed operate. Up to now, no inve has met this test.

What Can Be Protected?

Q. I have developed what I believe to much-needed new consumer use for a n made material. This use does not alter material in any way from its normally p essed state, but does make use of some h tofore unexploited laws of physics. Is an idea patentable?

A. You don't really tell enough to pern very definite answer. However, from v you do say, the crux of the matter lies in *use* of the laws of physics and not in the themselves or the material. It is likely, th

prominent local attorney. Your congressman may also be able to help. More specifically, it is strongly advisable to retain someone whom you can reach for face-to-face discussions. Many a patent has proved to be inadequate because the attorney or agent was not aware of items the inventor "forgot" to put in his letter but which would have been revealed during an interview.

Considering the few minor matters that may require personal attention in Washington, your local representative has the advantage. He is better qualified than the inventor to supply any Washington contact with ne information. He does not seek to make m on the messenger work, so you save not and may lose something, by remote comm cation yourself.

Title 33 of the patent statute, designe protect the inventor, declares: "Whoever being recognized before the Patent C holds himself out or permits himself t held out as so recognized, or as being q fied to prepare or prosecute applications patent, shall be fined not more than $100 each offense."

QUESTIONS

Attorney vs. Agent

Q. What is the difference between a patent attorney and a patent agent?

A. A patent *attorney* is a member of the bar who has been found by the Commissioner of Patents to be possessed of the "legal, scientific, and technical qualifications to render valuable service" to inventors and who is "otherwise competent to advise and assist them . . . before the Patent Office." A patent *agent* must have the same qualifications, except that he is not a lawyer. Only attorneys and agents who meet these requirements and are registered with the office are permitted to represent an inventor before the office.

Unethical Help

Q. When I deal with an attorney or agent and think he didn't handle my work efficiently or ethically, what can I do about it? The same with searchers.

A. You shouldn't, of course, make such charges lightly. But if the attorney or agent is registered—and you are thoroughly satisfied that he has acted unethically, with gross negligence, or with marked inefficiency—you should notify the Commissioner of Patents.

The commissioner may refer your complaint to his grievance committee, which will investigate and recommend action. The committee may go so far as to recommend suspension of the attorney or agent, complete withdrawal of his registration, or even an indictment. If you are dealing with an unregistered person, the commissioner has no authority to help you. Because searchers normally are not registered, the commissioner is powerless to help you with them.

Finding a "Competent" Patent Attorney

Q. How can one be sure of engaging a competent registered patent attorney?

A. This revolves upon your definition of claims that will meet with the procedura quirements of the Patent Office.

As to competence in a particular field o vention, the only thing you can do is t quire of the attorney whether or not he particular experience along the lines in w you are interested. In other words, most ent attorneys are pretty good at simple chanical cases, whereas some may be i perienced when it comes to dealing with signs, compositions of matter, processes, as a very last example, plant patents.

Fear of Theft?

Q. I have an invention I want to get ented, but how do I know my patent atto won't steal it?

A. You don't, any more than you know your doctor isn't going to give you the w medicine, just for the fun of seeing you su Seriously speaking, however, you have n ing to fear.

A patent attorney must spend the best y of his life preparing for his profession then building up a practice. He is regist to practice before the Patent Office, and not practice without this registration. false move could ruin him for life. Be that, from a practical standpoint, he can n better money sticking to his practice tha trying to sneak into some other line of b ness concerning which he knows littl nothing.

Finding an Attorney

Q. Will you please recommend to me s qualified patent attorney?

A. We cannot recommend specific attorn There are several thousand of them, som every state. A list, entitled "Patent Attor or Agents Available to Represent Inven Before the United States Patent Office," g the names and addresses of all such attorn arranged alphabetically and also broken d into the states they live in. A copy ca

of papers; (4) filing; (5) prosecution; (6) payment of final fee.

The preliminary search should determine within reasonable limits whether or not the invention is probably patentable. It covers the classes of U. S. patents which, in the opinion of the man making the search, have a bearing on your case. Opinions of these searchers vary in accordance with their skill, experience, and willingness to work. Some are young clerks just learning the business; others are attorneys who have spent years specializing in searching.

Normally, no searcher has access to pending patent applications or to the scientific and technical references which examiners keep in their private files. Thus no preliminary search should be considered conclusive unless the searcher happens to hit upon an exact copy of what you have invented, or a combination of patents which would clearly prevent you from receiving a grant. A large patent attorney firm once figured it knocked out 40% of its cases on preliminary search, lost 10% in the Patent Office, and won the remaining 50%.

Preparation of drawings and papers should be self-explanatory, and nothing will be gained by going into detail about them. Filing is routine and costs $30.

Prosecution is something else again. An application for patent is almost never granted right off the bat. If it is, your attorney might have asked for so little that the examiner decided to let him have it to get rid of him. As a matter of course, the attorney usually asks for too much, thus kicking up an argument. What ensues is known as the prosecution, consisting of a series of letters known as "official actions" and "amendments." You pay for the amendments. And finally, if your application is allowed, you pay the final $30 fee and get your patent signed, sealed, and delivered!

Fees for Searchers and Drawings. Obviously, each step costs money. Searches normally cost anywhere from $15 to $50 but those for a simple mechanical patent should run between $15 and $25. You have no way of telling which of these price levels means the best service. If you have had experience with patents, the minimum fee may tell you all you need. If you don't know anything about it, you may possibly get a little more interpretation and better advice at $25. If I were asked for much more than that, I'd start shopping around.

Official drawings are fairly tricky things and must be prepared by a patent draftsman. Here, too, you can pay nearly any amount, but $30 to $50 per sheet is a fair range in price, and the vast majority of cases require from one to three sheets.

even $25 a sheet may be adequate. A with a smaller practice who depends on side draftsmen may well have to charge each sheet. A few attorneys who make t own drawings may simply include the ch in a blanket fee.

The Attorney's Charge for services in dition to search and drawing fees varies w ly according to the size of his firm, typ work in which it specializes, and numbe expensive experts employed, all in add to the particular problems your patent a cation may provoke. The nature of you vention should have as strong a bearin selecting an attorney as well as a purely saving consideration.

First, find out whether the attorney or with whom you hope to deal makes a speci of corporate work or caters to individu Some instances where the inventor is cha $1000 or more for a simple case may be counted for by the fact that he wandered the offices of a firm whose payroll is loa with extremely high-salaried experts— who are not only patent attorneys, but p ably lawyers and engineers as well.

Men of this type live and work in a relat ly rarefied atmosphere, usually handle on few cases (but those of great importa each year, and may well be worth $50 $1000 a day. But they aren't worth it to inventor with a simple mechanical device. like going to the Stork Club for a hambu You'll get it, all right, but you will also for it.

Any patent attorney should be able willing to quote a full schedule of fees c he has made the preliminary search and an opportunity to estimate the amount of t



and effort which will probably be involve the complete handling of the case. On other hand, it is absolutely unreasonabl ask for a quotation before you disclose y invention to the attorney, and not particul wise to ask for it until after the search is ported.

Prosecution costs are not often include the attorney's fee. There's a chance the

into the act for you'll only be a barnacle on the keel of progress.

Your Attorney Is Entitled to courteous communications from you when some word is necessary, and also to a reasonable time in which to respond. Your case is but one of many, and it comes up for periodic attention in its proper rotation; taking it out of rotation simply gums up his schedule to no good purpose.

If you make material improvements or changes in your invention, you should promptly send details to your attorney. This does not mean a six-page letter every time you ch a lock-washer. But it is wise to warn h radical new developments; otherwise you wind up with a patent which does not your final invention but comes close enou it to make it difficult to get another paten does.

As a final step, your attorney can e: you to assume responsibility for payin government fee of $30 to secure issuan your patent. If you expect him to pay it the Patent Office for you, send it to hi least 60 days before the deadline.

QUESTIONS

What Are Reasonable Attorney Fees?

Q. An attorney may say his fee will be "reasonable," but what does reasonable mean?

A. A general rule was laid down by Judge Woolsey in Lewys vs. Eugene O'Neil, Boni Liveright, Inc., 49 F2d 603, 9 PQ 465, 469, SD NY (1931) as follows: "In determining what is a reasonable fee for an attorney, the elements to be considered among others, are: the amounts involved (for that measures the attorney's responsibility), the amount of work used, and the result." In the usual matter of preparing a simple patent application on a mechanical invention, any attorney should be able to give you a firm advance quotation. In other matters, he may be able to give you nothing but a "guesstimate." And while we are on the subject, be it noted that judges generally take a very dim view of the man who tries to avoid payment of lawyer's fees. If your finances are such that you really have to know in advance, try to find an attorney who will give you a quotation of a set figure plus or minus 10%, depending on the considerations mentioned above.

Patent Attorneys' Fees

Q. Why do patent attorneys insist on seeing my drawings before they furnish an estimate of approximate cost of obtaining a patent? Can you advise me what this cost should be?

A. If you asked a builder how much he would charge to build you a house, he couldn't give you an answer until he saw and studied your plans. It's the same with patent attorneys. They must see your drawings before they can compute costs, which vary considerably, depending on the complexity of the invention.

Pay as You Go?

Q. The concern which prepared and filed my patent application [illegible] which I paid $6, found the patents cited b Patent Office and prepared my applicatio cordingly, no amendment would be nece now. I feel that I shouldn't have to Right?

A. Probably wrong. Let's take a look. had to pay the Patent Office a $30 fee to its examination of your application (and at that fee, the office loses about $25 on search). It is to be expected that the examiner often will find more pertinent patents than were found in a $6 search. I are dealing with a registered patent atto or agent, you probably were advised a outset that the first charge covered onl preparation and filing of your application. plications ordinarily have to be amended or three times, and it is standard practi charge for this

Responsibility for Bad Search

Q. I have just had a patent application and now in an old issue of SCIENCE and CHANICS, I find a picture of the identica vention as patented several years ago. patent was not cited in the search report before I filed application, and it looks li have been gypped. Can my attorney be for mail fraud, or is it really possible tha didn't know about the existence of this pat

A. You may or may not be right about the time to squawk is when and if your cl are rejected on the basis of the claims in patent to which you refer. It may be that attorney has strategy all mapped out to around them. On the other hand, this pa may have been missed entirely in the liminary search. The particular patents have been in a group being reclassified, it have been misfiled or the searcher may l happened to snafu the search. That's preliminary searches are never guarant and there is no use talking about fraud. will have to assume that it was an honest take. However, if you are finally rejecte

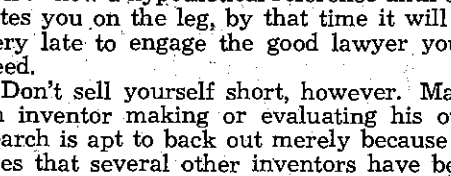
more patents so very close to your idea that you must proceed at your peril but you do stand a fair chance of getting knocked out. "Favorable" means that it looks new to him, and that you should go ahad.

Hypothetical Reference. All the old patents cited in a search report are called "references," and wise use of them by a good search may save you a lot of trouble over a "hypothetical reference"—the one the searcher cannot find, but which the Patent Office examiner is likely to hypothesize or dream up. Remember that the purpose of the patent law is to make the knowledge of inventions open to the public. You are thus presumed to know (ignorance of the law being no excuse) all about all of the 3 million patents in Washington.

The law also presumes that you, as an inventor, have done something just a little bit startling—and not merely combined a couple of elements out of some of the patents at your disposal, as any good mechanic could easily do. So there's a good chance that when you file your patent application that, if the examiner cannot find a red light to stop you, he will dream up an imaginary or "hypothetical" reference by combining two or three old patents and saying that, since any mechanic could have done the same, there is no invention involved in what you have done.

The professional searcher must anticipate this and extend his search far enough through various subclasses to come forward with a substantial sample of the kind of thing the examiner is apt to rely on and combine. This action may well save you money and grief. It's something the layman is not competent to do and is the major reason why you should not try to make your own search. If you don't know a hypothetical reference until one bites you on the leg, by that time it will be very late to engage the good lawyer you'll need.

Don't sell yourself short, however. Many an inventor making or evaluating his own search is apt to back out merely because he sees that several other inventors have been in the field before him with devices that



served the same purpose as his. Such a man reasons, "Well, shucks, I thought I was Christopher Columbus on this Widget-Remover, but I see Joe Blokes had one back in

ents are granted as to structure and n
purpose. The mere fact that Blokes w
the Widget-Remover field ahead of you,
with Schmaltz, Klotz, and Epstein, has
ing to do with whether your particular s
ture is patentable or not. You may, of cc
decide that if the others couldn't fi
market for their versions, there will prol
be none for yours either.

Reference Copies obtained during a
liminary search may have real value to s
up your application. You may find in
vious patents, including the expired g
which may be used freely, that a lot of c
work has already been done for you, s
time, and that a critical analysis of the cl
in the reference will enable you and you
torney to prepare your own with more b
and adroitness. In other words, if you l
what the other fellows have done, it is a
help you out a great deal in doing your
work . . . something like studying the
persion area of a salvo, and then corre
range and deflection for a direct hit with
next single round.

Reasonably good searches on the ave
type of invention run anywhere from $
$35, depending on the complexity of th
vention, and the art to be searched. A
searcher should be able to estimate his
rather closely, so you may often obtai
advance estimate of cost.

Preliminary searches are generally of
types. The "usual search" varies from a c
al thumbing through two or three subcl
of U. S. patents to a reasonably compre
sive and careful examination, dependin
the searcher and his fee. The "thoroug
"exhaustive search" calls for the search
"leave no stone unturned," put in extra
and often includes a check of foreign pa
and other literature. It may be qualifie
a time limitation, such as "not more
four hours."

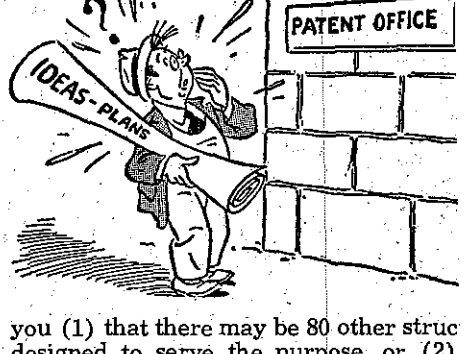
The Official Search. The preliminary se
is intended to save you money, but it
never be the equal of the official search r
by the examiner in the Patent Office
you file your application for patent.

Here's the trouble: Mr. O'Mulligan,
makes the preliminary search for you,
search nothing but the 3-million-plus cc
of U.S. patents in the public search r
The examiner cannot only search these,
also through English, French, German,
ian, Swiss, Russian, Japanese, Irish and—
name it—other patents, to say nothing of
erences to be found in mechanical dic
aries, trade publications, scientific jour
and old Sears, Roebuck catalogs.

If the invention has ever been publi
or put into public practice anywhere,

How to Use Patent Office Services

The public search room; searching by mail and in libraries; subclass subscriptions, and special handling



ONE day recently, while our friend John Doe was getting his beard moth-proofed in the local tonsorial parlor, it occurred to him to go over to the Patent Office and act ignorant (no trouble at all), just to see what they had to offer a fellow who wandered in or wrote in looking for help. So he went.

Is an Attorney Necessary? The question John wanted to settle was whether an inventor should deal directly with the Patent Office when he wants to obtain a patent, or whether he would be better off to have a patent attorney do the job for him. Mr. Doe found out—as so many inventors have before him—that you should definitely have a patent attorney finish up the procedure of obtaining your patent, if you want the job well done.

However, there is no law that says you are required to engage an attorney at the outset; you have an absolute right to make your own search and file your own application over your own signature. And there are situations in which it could be advantageous to commence procedures by dealing directly with the Patent Office, as thousands of inventors do.

Take the fairly common situation in which an inventor senses the need for an improvement but does not know (1) what form the improvement ought to take (since he sees several possible ways of doing it) or (2) how much work has been done by other patentees in the same field, and so has no real perspective in which to evaluate the potential acceptability of *his* or *any* new ideas in the industry.

A Novelty Search. Let's suppose that you decide to improve the stove, and you send a model or drawing to your patent attorney, agent, or searcher, along with the routine small fee for a novelty search. The searcher will report back with three, four, or maybe five U. S. patents, indicating that your precise structure *as shown by you* is or is not a *new structure* in that particular section of the

you (1) that there may be 80 other struc designed to serve the purpose, or (2) there may be 400 other patents all sho stoves better than yours from a prac standpoint, or (3) that if the search we be extended into radiators, condensers, p switches, dials, heating elements, and the stats, it might be possible to come up a combination of parts that would, whe sembled, constitute your invention.

Going to Washington. If all you r have in mind is the general idea of impro stoves, and you are not completely sol any of the particular structures which occurred to you, it may pay you to n direct use of those Patent Office serv available to you at this stage of the game doing so, you can go into a wider fiel search and get a much broader view of art as a whole.

The most obvious and expensive stu to go to Washington and make your se in person. The public search room of Patent Office is open from 8:30 a.m. to 9 on workdays, and 8:30 to 12:30 on Saturd You just walk in and show the Chief C of the search room what your inventio or explain what you are looking for. T he flips open his Manual of Classification tells you where to look in the stacks.

Park your hat and coat on the hanc empty chair, get your bundles of pa copies from the stacks, and search to y heart's content. You're a citizen, and can search for 15 minutes or 15 years. If like, you can go to the other side of building and read up on your subject in scientific library, where there are over 35 scientific and technical books in vari languages, about 40,000 bound volumes technical magazines, and over 6 million eign patents.

Search by Mail. If you are making a "l time study" of a particular field, you ob ously can get a lot of benefit from a p tracted stay in the scientific library. Howe the library will not do you much good in course of a flying trip through Washingt

TABLE A—LIBRARIES MAINTAINING PATENT FILES

Albany, N. Y.	—University of State of New York
*Atlanta, Ga.	—Georgia Tech Library
Boston, Mass.	—Public Library
Buffalo, N. Y.	—Grosvenor Library
Chicago, Ill.	—Public Library
Cincinnati, O.	—Public Library
Cleveland, O.	—Public Library
Columbus, O.	—Ohio State University Library
Detroit, Mich.	—Public Library
*Kansas City, Mo.	—Linda Hall Library
Los Angeles, Cal.	—Public Library
Madison, Wis.	—State Historical Society
*Milwaukee, Wis.	—Public Library
*Minneapolis, Minn.	—Public Library
Newark, N. J.	—Public Library
New York, N. Y.	—Public Library
Philadelphia, Pa.	—Franklin Institute
Pittsburgh, Pa.	—Carnegie Library
Providence, R. I.	—Public Library
St. Louis, Mo.	—Public Library
Toledo, O.	—Public Library

* Collections incomplete, but should have copies of patents issued subsequent to July 1, 1946.

know how to "apply the art" (and if you don't know what that means, you don't know how to do it), you run the various dangers of backing down before something that isn't a real reference at all, of failing to understand the language of some claim that actually reads on your structure, or of failing to foresee the possible application of combined or hypothetical references.

Here's a suggestion: If the field of search, as indicated by the Commissioner, contains an enormous number of patents, running into the hundreds, where the price of patent copies alone would be prohibitive, turn the list over to an attorney, agent, or searcher, pay him his nominal fee, and let him make the search.

If you want to work in absolute secrecy, however, and deal with nobody but the government, there is nothing stopping you.

Subscription Service. Here is something else most people don't know: If you are a really serious inventor working on some major project in industry, you may not only want to order all the patent copies in the subclasses in which you are interested, but may also wish to be kept abreast of new patents as they are issued. To do this, you may enter what is called a "subclass subscription."

By prepayment of a deposit and a service charge, you may have sent to you, as they issue, further patents classifiable in the subclasses in which you are interested. To find out what this will cost in any particular instance, write to the Patent Copy Sales Branch of the Patent Office.

Coupon Books. If you are a chronic buyer of patent copies, you may find it very inconvenient to run out and buy a money order for some trifling amount every time you want a few copies. To accommodate you, the Patent Office will sell you coupon books in 10¢ and 25¢ denominations.

can buy a book of 20 for $2, or a book c for $10. If you are going to be ordering chanical or other types of patent copies will need 25¢ coupons; a book of 20 cos a book of 100, $25.

Separate Letters. In dealing with the ent Office directly, you may have a l different things on your mind, but don' them all into one long letter. Write a arate letter in relation to each distinct ject. Or at least discuss separate matte separate sheets of paper—each address the Commissioner, and each with your r and address—so that they can be par out to the various people in charge. In way, each subject will receive prompt expert attention.

Don't ask the Patent Office to make a liminary search for you. While they advise you of the proper field of searc advance, furnish you with subclass lists, sell you patent copies, they will not ma search on anything except a complete pa application, accompanied by a filing fe $30 ($10 in design cases).

Special Handling. There is one situa in which you may appeal to the Commis er for mercy. Since all patents are take for examination in the order of their fi and since nearly all divisions of the Pa Office are behind in their work (they about 500 more examiners, and can't them), it may take three or four years your application to go through. If, in period of time, somebody else comes ou the market with your invention, and you being grievously injured, you may peti the Commissioner to have your case ta out of order and given special handling.

If your tale of woe is sufficiently he rending, the Commissioner may ask the aminer in charge of your application to it quick treatment. He does not have to so, however, and he will not do so merely cause you have ants in your pants. You n prove that you are really taking a bad b ing, and that the pirates will skim all cream off the market unless you get y patent in a hurry and stop them.

No More Caveats. It is useless to try file unofficial papers and incomplete appl tions. Not since 1910 has it been permiss for an applicant to file a "caveat" for purpose of obtaining further time to mat his invention.

In spite of this fact, people still try, officials in the Patent Office wish they wo quit. They say, "Since no provision has b made for officially dating papers and retu ing them to the owner, it cannot be s where any advantage would be gained sending such papers to this office." Inc

For example, a patent was issued on a set of lazy-tongs hooked up to a rubber bulb at one end and a derby hat at the other. You put the hat on your head, hide the bulb in your overcoat pocket, and then, when you meet a lady on the street, you squeeze the bulb—thus tipping your hat without getting your hands cold.

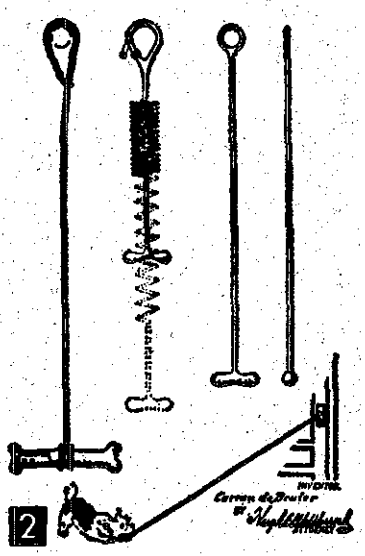
What will the lady think when the hat tips automatically? That's up to the lady. Does the device have utility? Certainly: It (a) tips your hat and (b) keeps your hand warm.

Limited ability or scant public appeal may affect its commercial value, but it's not the job of the Patent Office to decide whether or not Sears, Roebuck may catalog your item.

Operability is something else. If your device can't work at all, you'll be denied a patent. Note in Fig. 1 an example of an inoperative device where, if power is applied at A, then B would rotate in the opposite direction, were it not for gear C which freezes the whole works.

Assuming your proposal is new and useful, the next hurdle involves invention. Here is where whoever passes on your idea must riddle out the difference between an invention and an aggregation of existing ideas which any mechanic could have figured out.

For an example of a new combination of old elements which received a patent b it produced *a new and unexpected resu* Fig. 2. In it, a hook, a spring, and— end—a ball or bone-shaped object are bined to amuse a dog.



QUESTIONS

What's Patentable?

Q. Are there any limitations as to subject matter on which patents can be granted?

A. Coverage of the present patent law is quite broad and says that a patent may be granted on "any new and useful process, machine, manufacture (viz., article), or composition of matter, or any new and useful improvement thereof."

Another provision notes the exception that no patent may be granted in the field of atomic or nuclear energy. Printed matter is also not covered, since it is embraced instead by the copyright laws.

Painless Taxes

Q. I have devised a new and improved system for collecting taxes which will operate less painfully to the public than does the present income tax. Is there any way I can derive payment for this idea?

A. Probably not. Your only chance, and it's a pretty slim one, is to make a deal with the federal or one or more of the state governments. Your idea doesn't fall under the patent act, since it is—like life insurance—a method of conducting business. You could copyright a written explanation of your tax system, but that would protect only the printed language

How About Clothing?

Q. I have some new ideas for comba forms as well as clothing for farmer hunters. Do such ideas fall within the of the patent laws?

A. They surely do! We usually think ventions as relating mostly to machiner new and useful improvements in weari parel are definitely patentable.

Change of Material Patentabl

Q. I recently got an idea for making a out of a different material and by a dif method of manufacture, although neith method or material is new. Is there any of patent protection for this deal?

A. In general, a change in the mate construction is not considered as inve unless some new and unforeseeable a tage arises. As to the method—if, as yo it is old, then it would not seem paten However, if you can cut costs or impro product by your substitution of ma and use of your method, you ought to patent attorney on the job and see wh can figure out. In a case like this, the i tor should not try to be the judge be process and method patents are someth

to the patent attorney and let him decide whether changes should be made at this time. The changes may or may not be of any patentable significance, so have the matter carefully reviewed.

Incidentally, this is a very popular and often a very wise procedure—to have the application prepared, but not filed, until after the item is in production. The application and resulting patent will then cover the invention as it actually appears on the market.

Where Does Partner Sign?

Q. Should my partner sign the application.
A. A resounding no. The only person who can sign is the actual inventor. The way to protect yourself and still take care of your financial backer is to form a partnership. And, if you want to avoid some of the problems often inherent in a partnership, you may be best advised in forming a corporation. This may cost around $100, and a local laywer can advise you on it.

Trip to Washington Needed?

Q. My friends tell me I have to go to Washington to apply for a patent. Is this true?
A. No. It is an awful waste of time and money, and accomplishes absolutely nothing. You will just get into everybody's hair and run up an unnecessary hotel bill. There is no more sense in going to Washington to see the Patent Office than there is in going to Chicago to do business with Sears, Roebuck.

Problem Partner

Q. My partner, the inventor of the item we want to market, is in a mental institution. A preliminary search at the Patent Office has shown that the invention is probably patentable. I have a lot of time and money tied up in this thing and would like to know if there is anything I can do about the patent?
A. Yes. The law provides that the guardian of an insane person can file the application in his behalf. Get together with the inventor's family and a lawyer acceptable to all of you, and take it from there. If the inventor has not actually been committed to the institution by court order, it may not be possible to file for him as a lunatic, but you probably could still file as being a party with a material interest in the invention.

Take Out Patent for Another?

Q. An inventor got me to pay for a preliminary search on his invention and agreed to assign a half interest in the patent to me if I would pay for the application. I am willing

can I do with a deal like this?
A. All is not lost, so be of good ch
used to be that only the inventor could
but the law was changed in 1952 as f
"Whenever an inventor refuses to e
an application for patent, or cannot be
or reached after diligent effort, a per
whom the inventor has assigned or ag
writing to assign the invention, or who
wise shows sufficient proprietary inte
the matter justifying such action, may
application for patent on behalf of
agent for the inventor on proof of th
tinent facts and a showing that such
is necessary to preserve the rights
parties or to prevent irreparable dam

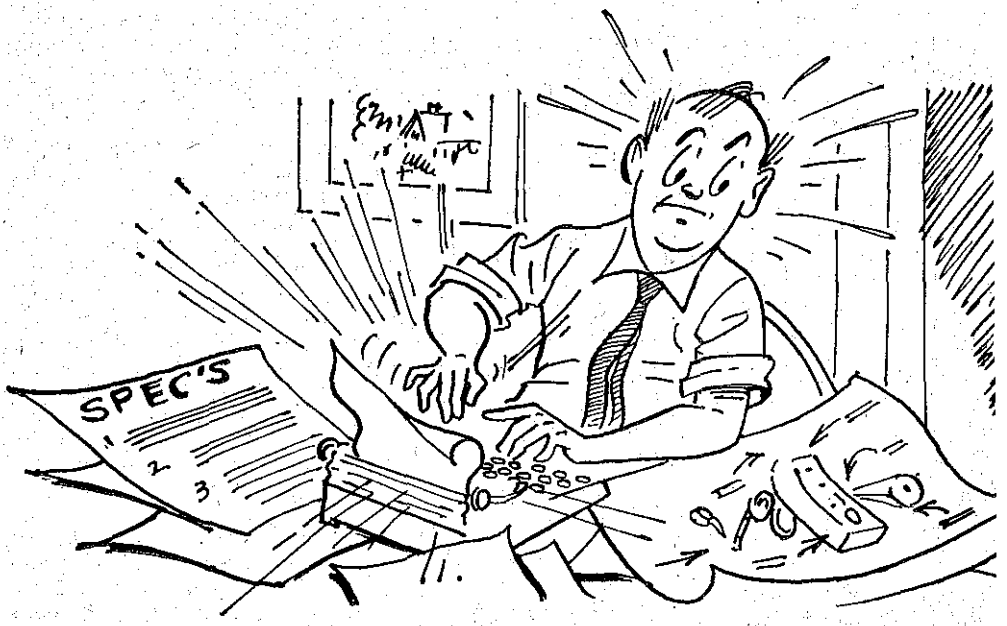
Reviving Abandoned Applicati

Q. I filed a patent application in 19
1957 the Patent Office advised that one
claims contained allowable subject mat
that an amendment would be necess
bring the case into proper condition
passed to allowance.

At the time, I was fresh out of mone
could not afford an attorney, so I just dr
the whole business. Now I would like
vive it but, of course, my six-month
period was long ago shot. What do I do
I get it reinstated, or sell it, as is?
A. If you had been sick unto death ar
able to attend to your business, the
Office would probably let you pick u
prosecution where you left off, but la
money is no excuse. You will have to
the whole business over anew. Have a s
made to be sure that no recent patents
been issued which would now bar you
getting a grant. If the report is favo
have an attorney prepare an entirely
application, putting in the amended
which the office said was allowable.
ought to get a patent in fairly short
As to selling the deal the way it is, it's
a try. Write to manufacturers who mig
interested. If you can sell the inventi
one of them, his attorney can re-file.

A "Partner" Patent?

Q. If two or more persons work togeth
make an invention, who gets the patent
A. If each had a share in the ideas for
the invention, they are joint inventors-
a patent will be issued to them jointly. A
patent operates about as though each
had received a separate patent. But i
of the persons has provided *all* of the ide
the invention, and the other has only
lowed instructions or furnished mone
making the invention, the idea man is
sole inventor and gets the patent. I



Patent Drawings. The purpose of the patent drawings is to get across the idea of the invention, so that an engineer or skilled mechanic who is reasonably familiar with the art to which the invention relates can fully understand what you have in mind, and then take it from there on a practical basis.

The purpose is *not* to provide working drawings or project plans, and the fact is that working drawings and blueprints are not acceptable at the Patent Office. Instead, your patent drawings should probably be out of scale, with the important parts of the invention drawn big enough to be readily understood. For example, if a certain bolt on the cylinder head of an automobile engine were the most important feature, you might show the bolt bigger than the whole engine.

It should also be noted that parts of drawings must be big enough to stand reduction in size and still reproduce nicely in the columns of the Official Gazette, wherein selected portions of the drawings are reprinted as soon as a patent has been granted.

So don't waste money on blueprints. The Patent Office won't accept them, and your manufacturer's engineering department will do its own anyway.

Preparing the Drawings. Once you boned up on drafting and other phases o ent procedure, you will see that the firs in preparing a patent application is l out your drawings in pencil form. should be done on tracing paper.

After you have a nice, logical arrange smudge up the back of the paper and im the drawings on the regular Patent grade of Bristol board. Take your pen the Bristol board and darken up the li little, but apply no India ink at this sta the game.

Incidentally, if you are not a good d man, hire somebody who is. The Patent will bend over backwards (well, tilt a anyway) to cooperate with a sincere inve but patent examiners are only human. are staggering under an intolerable load, and a quick comprehension of the terial submitted to them is essential in ge a day's work done.

If you send in a mess of bad dra where nobody can tell the difference bet a cross-section and a top plan view, you baffle the examiner to a point where yo scarcely help but prejudice your case. reaction is almost certain to be: "If this



Drawing Up Claims

What a claim is and how to write it; finishing and filing an application



THE most important step in filing your own patent application is the "drawing" of the claims. The word "drawing" in this case, of course, has nothing to do with making pictures. It means, in effect, drawing or pulling from the specifications you have already prepared a description of what you believe you have invented. This description, or "examinable claim," is what the patent examiner must have to make his official search respecting the novelty of your invention.

While we are at it, let's also note that the word "claim" as used in patent parlance has nothing to do with the meaning implied in the term "advertising claim." An advertising claim is too often an exaggerated self-glorification, designed to induce the public to buy something.

What a Claim Is. A patent claim, on the other hand, is an exacting description. Like a mining claim, it describes *that particular piece of territory* which you allege you are the first to discover and call your own. As a matter of fact, when you claim the south 40 of such-and-such a section, you can get what is called a land patent, so the comparison is fairly close.

When you come to the job of dressing up your patent claim, you actually should avoid advertising claims, and simply make a cold, clear statement of what you think you have invented. To put it another way, you don't "claim" that your invention is the "greatest thing since the hogs et granpaw." Instead you claim, for example: "In a device of the class described, a pawl, a ratchet, a nut and a bolt, and expansible means for producing a dignitary motion of the fragistram."

In a sense, you boil down what you have already said in your specifications to the fewest possible words. And these should not only be few, but broad in their meaning. For example, in your specification you may have mentioned a "spring," but in your claim you refer to this as "expansible means," in order that you may also cover a rubber band. This would protect you against someone trying to get around your patent by substituting a rubber band for the spring.

But don't get the idea that ... you be

claim the part, improvement, or combin which he believes he has invented.

A House. Suppose you are the inv of the dwelling house. You might enter a claim as this: "A structure designed tc vide protection from the elements." however, would be too broad, since it v cover the Indian tepee, the Quonset hu Roman temple, and the pup tent. Wh claim of such breadth would enable y collect royalties on everything from lawr brellas to the Taj Mahal, it would nc allowed.

Instead, if what you have actually inv is the house, your claim would read these lines: "A structure affixed to the e consisting of a foundation, outside wall upon the foundation to form the she the house, said outside walls being pi with apertures for the admission of air light, a floor, partitions set upon said flo divide the enclosed area into rooms, a roof mounted overall."

A claim of this kind tells what you actually invented, and nothing more nor Note that you do not claim things you not invented. You do not claim a firepla furnace, hot air ducts, plumbing, air c tioning, window panes, electric lights, ranges, or the kitchen sink. These ar extraneous to your invention, and inclu such elements in the claim would mal mean less.

Your claim is essentially "A structure consisting . . . of outside walls . . . ar roof . . ." You don't say what kind of st ture: it might be brick, wood, stone, ram earth, adobe, marble, steel, or glass.

Breadth and Language. After the

used the same reference numeral twice, or given two numerals to the same element in different views. These are perhaps minor mistakes, but it is easier to catch them now than go through all the trouble of correcting them by amendment later on.

When you are satisfied everything is in order, finish the drawings in permanent India ink, and have the papers typewritten on legal size white paper. The very last sheet will be the Oath and Petition, which you may copy from p. 30 of the pamphlet "General Information Concerning Patents" (free from Commissioner of Patents, Washington 25, D. C.).

Be sure to have one or more carbon copies of the papers and a photostat of the drawings made, for your own records and for use in showing the invention to manufacturers.

Take the papers to a notary public, and sign them in his presence and have them notarized. Get a money order for $30 made payable to the Commissioner of Patents. Put the drawings, the papers, and the money into a big, flat envelope with plenty of rugated cardboard, and mail the whole ness by first class mail to the Commis of Patents, Washington 25, D. C.

Be Patient. In about a month you w ceive a little blue slip known as a receipt," giving you your serial numbe are then ready to start looking for a bu

Because most divisions of the Patent are overloaded with work, it will probal about six months before you get the fir cial action. After you receive this, you six months in which to reply. So yo have ample time—if you work energe —in which to contact prospective ma turers and learn whether or not your i tion has any apparent commercial val

If you become convinced that it is value, forget about it.

On the other hand, if it looks like you something worthwhile, put the matte the hands of a registered patent attorn

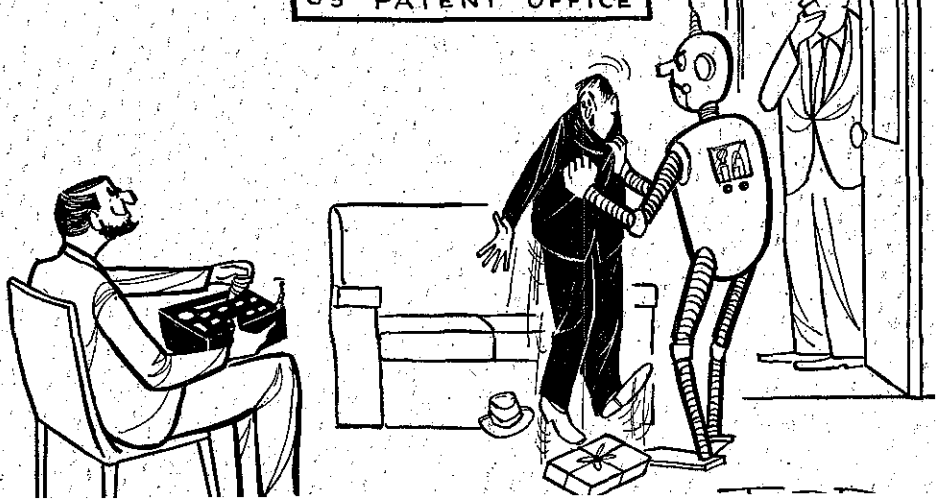
QUESTION

Two Patents Needed?

Q. I have developed a new type of dispenser-container which could be made of either aluminum or cardboard. My original design is the aluminum job, and if cardboard is used there would have to be a slight alteration in the design. Do I need two patents, or will one be enough?

A. Usually—note that usually—these little changes in design so worrisome to first-time inventors have no importance. Most patents reserve to the inventor the right to res minor mechanical modifications witho parting from the spirit of the inventio every patent attorney endeavors to claims broad enough to cover all reasc forms of the invention.

File an application showing both Then, if the Patent Office decides the really two different inventions involvec will be called upon to file a divisional cation. This would enjoy the filing d the original, so there is no sense in filin cases right off the bat.



Specialized Vocabulary. Make sure any technical or specialized vocabulary you use is explained and understood. That doesn't mean you have to include an education in the basic laws of science which apply to your invention. For example, your attorney should know the general principles of refrigeration and insulation: so, in explaining an invention in this field, you need not go into the theories of thermal dynamics.

If you have invented a new type of nail for fastening corkboard together, however, you would do well to point out that no insulation is 100% efficient, and that as long as temperature differentials exist there is going to be a certain amount of moisture deposit, and that steel and iron nails are notoriously affected by rust. This is the type of detailed information, gained from your special experience, with which the patent attorney might not be familiar.

If your invention relates to meat packing, you do not have to tell your patent attorney that it deals with beef, pork, and lamb, but you should acquaint him with the fact that animal glands are a very valuable by-product, and that they must be handled rapidly and at a low temperature. You may also wish to give him a little chemistry with respect to the make-up of the glands themselves and the type of metal containers into which they are put when they are removed from the animal.

Value of the Invention. Having given your attorney a little bit of background on the industry to which your invention relates, you should include a discussion of current practices in the industry which are affected by your invention, and what is wrong with those practices that your invention will help to solve. Understand that while he may not put all these details into your application papers, he should have the information so that he can describe the value of your invention.

Be sure to include in your description specifically how and why your invention saves time or labor, cuts down costs, prevents rejects, or speeds up operations (if it is a machine); or tell precisely what human difficulties it overcomes or what advantages it offers (if it is a product for the consuming public).

After you have set down information respecting the industry or market to which the invention relates, and a statement as to what is wrong or lacking in the present situation, as well as what is to be expected of your invention, you are in a position to go into the details of the invention. There are some general principles you should follow in this phase of the description, as well.

Details of the Invention. Focus your attention upon the central working feature of the invention. If this central feature is a

a right angle. Tell what the critical ang
and why this angle is critical in terms c
consistency of the material to be wo
and the resiliency of the steel to be
Then you can branch off to the means of
ing the blade at the critical angle an
precisely how this means is constructed

Go on to tell how all of this is connect
a source of power. You need not go
great detail regarding the source of p
since this is probably well understood, 1
you have a slip clutch or a shear pin to
with an overload, that should be expla

In other words, you start with the co
your invention and work out to the final
less important) details. Sometimes, as a r
od of checking yourself, you may want t
write your description—"turn it u
down," and work back from the perip
details to the central point.

In this actual description of your inve
and its components, the drawings you su
can do a lot of the explaining. But don't
on either drawings or a written descri
alone: they must work together to show
attorney what your invention consists o
how it is applied.

Comparison of the Invention. Ha
clearly pointed out the precise structure
arrangement of parts in your invention,
next step is to compare this structure
arrangement very definitely and criti
with other devices already invented, per
already on the market, which are simil
purpose to your own. Tell your paten
torney just how your particular desig
different from those already invented,
why it is superior.



You should go into detail in this, and
should also set forth very clearly just wh
combination of preceding designs or i
you know of will achieve quite the same t
as that which you have invented. In o
words, your particular structure or comb
tion of parts should produce a "new
unexpected result."

The reason for this is that the prin
examiner in the Patent Office, when he
dertakes the examination of your applica
is going to assemble parts out of all the
patents and old ideas he can find, in an e
to create what is called a "hypothetical

How Official Drawings Are Prepared

Rules and regulations; work of the attorney and the draftsman



A BIG step in completing a patent application is the preparation of the Official Drawings. Many inventors, who have had a little drafting, or perhaps have a friend who can make blueprints, may ask: "Why can't I make the drawings myself and save a draftman's fee?" The answer is that you can try it if you like, but the chances are 100 to 1 that your drawings will not be acceptable and you will have to pay for Official Drawings anyway.

General Rules. The Official Drawing is a legal part of the application for patent, and the rules respecting its form are just about as rigid as the rules of evidence in a court. The Patent Office is not interested in beautiful drawings, or even ones that meet industrial engineering or drafting requirements. Special rules have been established governing patent drawings, because their purpose is to make the meaning of the patent clear to the public. This purpose is served by the publishing of patents in the Official Gazette of the Patent Office.

This means that when your patent is granted, the drawing must be of a proper proportion to come down (in the engraver's camera) to the right size for a one-column reproduction in the Official Gazette. The lines have to be thick enough, and the reference numerals big enough, to reduce to about 25% of the original and still print clearly. If a drawing has a lot of hairlines and small numerals in it, these may drop out of the negative.

Normally a draftsman, used to working on tracing cloth the size of a table-top, makes lines so thin that they would fade out in such a reduction: so there is a rule against big drawings. Since blue won't photograph, there is also a rule against blueprints.

The Official Drawings need not be "working drawings." In fact, a machine shop working drawing is not likely to be acceptable. In Official Drawings, for example, objects or details are often drawn out of proportion in order to get the idea across.

Detailed Regulations. Complicated isn't

of the U. S. Patent Office devoted to the aration of drawings.

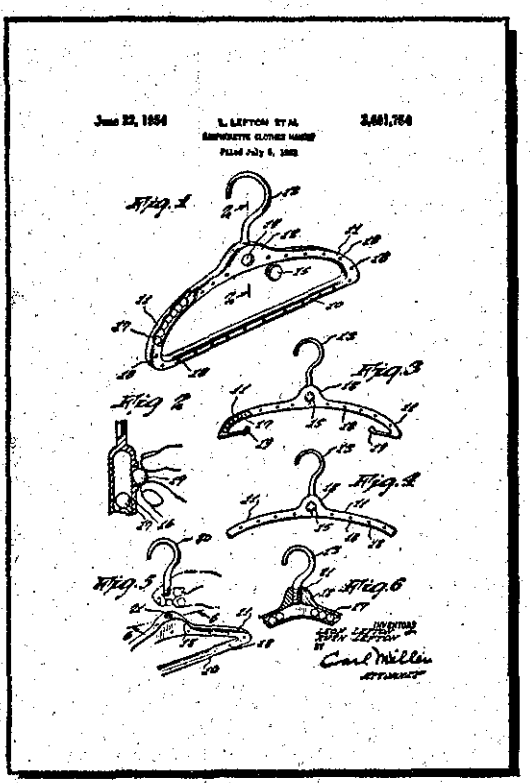
There must be one view which cl shows the main idea of the invention a susceptible to reduction by photo-lith phy to a width of not more than 2⅝ Another rule provides that "all lines be clean, sharp, and solid, and they mus be too fine or crowded. Surface sh should be made by oblique parallel which may be about 1/20th of an inch a Solid black should not be used for sect or surface shading. . . ."

Reading further, we see that "Heavy on the shade side of objects should be except where they tend to thicken the and obscure letters of reference. The is always supposed to come from the u left hand corner at an angle of 45°." The go on and on, going into extreme detail w is sometimes difficult to interpret, but ways rigidly enforced.

You can buy a copy of the Rules of Pra of the Patent Office if you wish, and ta crack at making your own drawings, or some local draftsman try it—but the cha are good that there will still be some wrong. Then you will have to pay for co tions or completely new drawings; or, if the originals are admitted on a proba ary basis (for examination only) by the draftsman of the Patent Office, the la conformity in your preparation may ma difficult for the examiner to understand patent.

The Patent Attorney. The best thing have the drawings prepared by an ex enced patent draftsman, under the s vision of a patent attorney or patent a The patent attorney handling the case i boss of the show. You are just a bysta and the draftsman is a technical assista

The ultimate value of your patent is to reside in the claims which your atto gets for you, so his first step is to look at sketch and description and compare wha



This patent drawing shows that the technique used on Official Drawings of patents does not conform to drafting or mechanical drawing standards. It does, however, accomplish the Patent Office's purpose of showing the invention clearly, and the weight of line and shading meets the official Patent Office rules well enough to show clearly even when reduced in size. (This is a one-third reduction.)

broken down into several different applications.

When the attorney is in doubt, it is customary to file one case, and see what the examiner says. Then, if he makes a requirement for division, the inventor has the advantage of the fact that the divisional application takes the filing date of the original application. This would give the inventor priority over any other applicant who might have filed on one of the divisional matters in the meantime.

Occasionally an Official Drawing will contain a number of modified forms of an invention, and will go through without either a requirement for division or a requirement for cancelling out unnecessary material. An advantage in a case like this is that these modifications, which are classified as "shown, but not claimed," are nevertheless "published," which bars any other inventor from obtaining an improvement patent on one of

complete facts, and let him work out important technicalities.

Final Preparation. It is customary fc draftsman to prepare the drawings in p and submit them to the attorney for his liminary OK or corrections. Then a pho or photoprint is made and sent to the i tor for *his* OK or corrections.

At this point, many inventors express disappointment because the lines seen light or there are no numbers on the Actually, there is no cause for alarm. I have any changes or comments to make make them on the face of the photoprin tissue overlay and send it back. You wi a new print (if the changes are exten or you will see your minor changes i finished job.

Once the pencil drawings are approve attorney sits down with them and write specification. As he comes to each pa the device he gives it a number and v it down in pencil on the drawings. The d man then finishes the drawings in perm India ink. A print or photostat of the fin drawings goes to the inventor along wit papers when they are ready for signatu

QUESTION

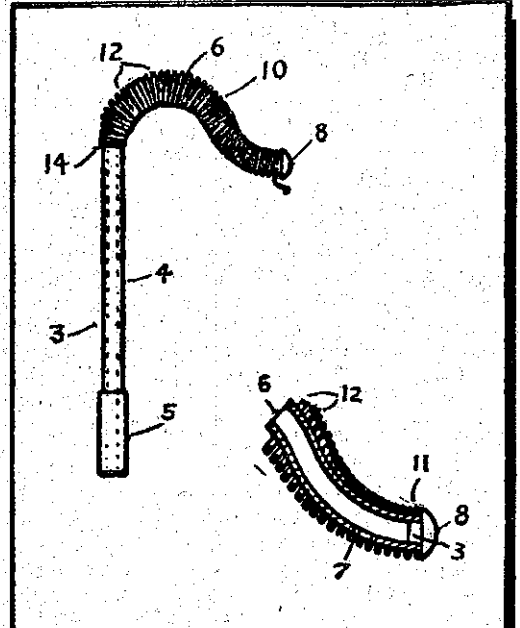
Cost of Patent Drawings

Q. I have had a Washington patent atto make searches on two of my inventions he quotes me $60 and $70 respectivel official drawings. Where can I get them u up at a reasonable price?

A. Chances are you are not going to bea figure by much. Patent drafting is a h specialized profession with which few d men are familiar, and unless a ma thoroughly familiar with Patent Office d ing regulations he is almost certain to off.

Theoretically you can file an applic with non-regulation drawings, and then the chief draftsman of the Patent Offi make correct drawings, but they are jammed up to render this service with speed. Their minimum charge is $25 a s for the simplest drawings and $5 an hou corrections, and charges in each case based on the relative simplicity or compl of the subject matter.

Among free-lance draftsmen in Washir the going price is $50 a sheet, and they l with satanic glee if you try to haggle, s they are all usually up to their ears in w and not really interested in handling jobs for individual inventors at any p Also—and this is very important—only patent attorney who is visualizing the cl is qualified to tell the draftsman wha show. So, with drawings at $50 a sheet



ing device, shown in Fig. 2 on p. 49. This invention (covered by patent No. 2194736) consists, in essence, of a rubber dog bone attached to a rubber strand, with a loop in the free end of the rubber strand for hanging the device to a doorknob. The claim in the patent reads as follows:

"An animal exercising and amusement device, comprising a member adapted to be grasped by the mouth of an animal, an expansible elastic member affixed to said member, and means for detachably securing said elastic member to a support."

First consider the words "an expansible elastic member," and note that the simple description above refers to a "rubber strand." The patent attorney, trained to consider possibilities of mechanical equivalents, uses terminology which protects the inventor not only on the use of rubber, but on the use of anything whatsoever that will stretch. If the attorney had said "rubber strand," anyone

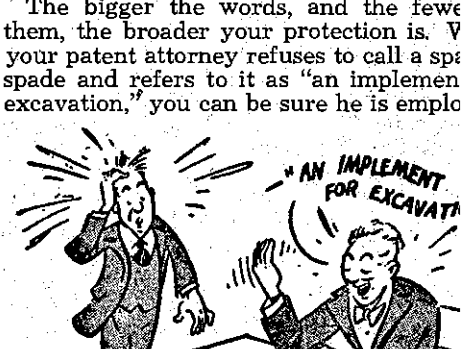
Next, consider the words "a member ad ed to be grasped by the mouth of an anin and compare them with the reference t rubber dog bone." A "member," in this could be anything from a rubber mouse real beefsteak; and you will observe tha attorney does not specify what kind of mal this involves, either. Thus, while patent is primarily concerned with the tection of the inventor on a rubber dog attached to a rubber strand, you could nc a bale of hay to a grapevine for entertai an elephant without infringing the clain

To Analyze Further, if the attorney claimed only "a rubber dog bone," and a manufacturer had then substituted a prene ball, chances are a court would that the patent was not infringed. How c it be infringed when the patent specified ber, and the alleged infringing device made of neoprene? This would be a cas the applicant having inserted into the c an "unnecessary limitation."

However, since the attorney actually "a member adapted to be grasped by mouth of an animal," a court would li take an enlarged view and hold that the prene ball came within the "spirit of th vention" and the "scope of the claims," that the patent was infringed. A mere ch in the material of construction would nc enough to get the infringer off the hook: er all, his neoprene ball would be "a n ber" and it would be "adapted to be gra by the mouth of an animal."

This is a good example of a broad cl and illustrates what a patent attorney m when he says that he is seeking to se broad coverage for your invention.

The bigger the words, and the fewe them, the broader your protection is. V your patent attorney refuses to call a spa spade and refers to it as "an implemen excavation," you can be sure he is emplo



the type of phraseology that will correctl pand instead of diminish the court's cor of your inventive thinking if and when bring suit for damages in an infringer action.

The Examiner's Search

Exhaustive official check covers all U.S. patents, foreign patents, and other pending applications

IF ALL of the inventors now awaiting word on their applications for patent were to stand 2 ft. apart, the line would reach from Washington, D. C., to Gettysburg, Pa., more than 75 miles away.

Slightly more than half of these 200,000 hopefuls will wind up with a patent, according to present averages, but because of their great number and of the exacting search work required from patent examiners, each inventor may have to wait six months to more than three years for the verdict. When that carbon copy of the final, very impersonal, report arrives, he'll have the examiner's cool, honest, and expert opinion of his invention's worth. The copy won't even be signed (the original goes to the Commissioner of Patents) and the chances are the examiner has likely not even noticed the inventor's name.

Involved Process. Theoretically, getting a patent involves nothing more than handing in your drawing and description, and paying $30 to have a U. S. patent examiner look it up. If he can't find anyone who beat you to the idea, you can have your patent upon payment of another $30.

The trouble with this oversimplified theory is that the examiner has to give you something which will stand up in a court of law. He can't give you a patent on some collection of parts merely because it doesn't show in Montgomery Ward's catalog. He has to decide whether or not the mystic element of "invention" is present in your particular collection of parts.

This recalls the famous pencil eraser case. When someone attached a rubber eraser onto the end of a pencil, a patent was issued on the combination. But the court later ruled against the patent on this theory: If you break the pencil in two, one end will still write and the other will still erase. There is no necessary or simultaneous coaction between the two elements; hence there is no invention involved. The combination *should have been* obvious to anybody.

Ole Debbil "Should Have." It's the "should have" or "would have" that causes trouble. Even if you are actually the first person to put together a "Rube Goldberg," the patent examiner can and will toss it back to you with the objection that such a combination of someplace else—*unless you produce a and unexpected result.* It's got to be so thing that surprises the experts; somet that makes an engineer scratch his head mutter, "who'd of thought it?"

The examiner doesn't have to find an e copy of your particular idea. In fact, Patent Examiner Training Manual instr him to turn you down on one referenc view of another reference, where the reference shows the claimed device ex for some detail and the second shows the tail. He can go far afield to dig up the erences showing the detail. When attorney puts in modified claims to a these references, the claims may cause examiner to turn you down again by ext ing his search and bringing out new set references.

To show how far this might go, there the case where an attorney filed an app tion on a complicated machine. He foug through over the years until the exam finally agreed to give him a claim on a l nut. At this point the inventor wrote in said, "I don't see how I am entitled to a cl on *that* . . . after all, I bought it in a h ware store in Toledo, Ohio!"

Such an absurd case doesn't happen of but it shows how far afield from the orig idea the examiner's search may go.

We Wuz Robbed! Where a patent appl tion is finally rejected, the inventor frequ ly raises a great scream of anguish accuses his attorney of being either a or a scoundrel—and, in either case, a rob

Why, the inventor asks, didn't you tell about all those other patents in the place? You made a search and told me I co get a patent. Now, after you've got my mo you big horse-thief, you tell me I cannot a patent. How come?

The answer is that the attorney did actually say you could get a patent. He that he *thought* he could get a patent o the references turned up by *his searcher.* did not say he *knew* he could get a pa over the references which *might* be tur up by the U. S. *patent examiner.* No in his right mind would make such an sertion.

The preliminary search which your at ney makes at the outset is not and can be viewed as conclusive—unless it is fl unfavorable. Its only purpose is to whether or not your case is absolutely ho less. This happens in about 60% of th cases, when the searcher comes up wit

your attorney can make is through the U. S. patent copies in the public search room of the Patent Office. In addition to this mountain of 3,000,000 potential references, there are over 6,000,000 foreign patents, countless publications, and many cross-references (both official and unofficial) not available in the search room but kept in the private files of the examiners.

Beyond this, the 200,000-odd pending applications are maturing into patents at close to 1000 a week. If you had a search made today and it took you a month to get your application on file, there would be 4000 more new patents on hand, any one of which might have a bearing on your case. You could also go into interference with any of the pending applications, which, naturally, are held in strict secrecy beyond the reach of a preliminary searcher.

So, there's a lot of important material your searcher cannot lay hands on. It would even be impractical for him to make an exhaustive search of all patents and other references that are available. To make such a complete check, a diligent searcher would not only go through all the U. S. patents which might conceivably have a bearing on your idea, but would also delve into everything he could find in the scientific library of the Patent Office, and go through the bound volumes of all the trade papers in the Library of Congress. It could easily take him a month to do this, and the work could cost well over $500.

All this and still you would not have the examiner's official opinion—the only one that counts. So let the examiner do the exhaustive searching for you—it will cost a lot less and tell you exactly where you stand.

Searcher's References. For a better understanding of what a preliminary search means, let's see how the searcher may come up with one set of references while the examiner comes up with another. Figure 1 shows what U. S. Patent 2,718,087, issued to A. J. Cheesebrew on a fishhook shield, looks like. When the preliminary searcher, looking for hooks with protective casings, went to work on Cheesebrew's idea, he came up with copies of the patents shown in Figs. 2 through 5.

These references covered a fishing hook guard, a sinker, fishing line clip, and fishing reel. These patents hit *all around* the Cheesebrew invention, but none hit it squarely on the head. To the preliminary searcher, they represented the closest art to the invention, as he understood it, as he could find. The patent to Wineinger (Fig. 2), showing an invention for the same purpose (a fishhook guard or shield), seemed closest.

Based on this search, a favorable report

the application was accordingly prepared subsequently filed.

Examiner's References. Naturally, the ent application claims were written so would not conflict with any claims ir patents found by the preliminary sear This had the effect of driving the ol patent examiner out of the original fie search, and over into neighboring where he might look for a conflict of cl After his search, he came up with an al entirely different set of references. H mention the patent to Wineinger (Fig but otherwise his art was all different that of the preliminary searcher, and in ed the patents shown in Figs. 6 throug So, Cheesebrew's attorney now had a set of references to fight. Before we tell how that battle came out, let's see if Ch brew has any legitimate complaints a the progress of his patent thus far.

If the searcher had missed the Winei patent, or the attorney had stated flatly Wineinger made no difference, or the e iner had turned the entire case down on the Wineinger reference, then the inv would be reasonably entitled to a squav

None of these things happened, how The examiner mentioned Wineinger in ing, but also cited six other patents. Ren ber, the invention under consideration fishhook shield. But the examiner cited sall's invention (Fig. 6), a pants hanger the back of a closet door; Sullivan's piv plate (Fig. 7) to attach on a fishpole ha Harsted's "book" for holding artificial (Fig. 8); Dayton's capsule-line contain attach on a fishpole handle (Fig. 9); renz's trot line snell fastener and hook s (Fig. 10), and Uttz's invention (Fig. more of a fancy tool kit than anything

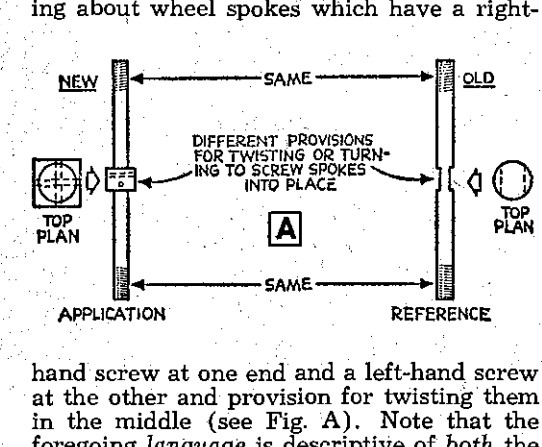
Notice the wide range of the art or that the examiner covered in his search. cannot reasonably expect a prelimi searcher looking for fishhook shields to g on excursions into patents on pants han fly books, or fishing utility tool kits. I were to look into all 80,000 subclasses– a day at $10—it would cost you $80 and take 200 years. Frankly, it's cheaper quicker to file a patent application—a $400 and two or three years—and get patent or not get it.

Back to the Cheesebrew case, the attor studied the new references, made suit changes and arguments, and wound up ting a patent—to give the story a happy ing.

Keep in mind, though, the fact that patent was not secured over the original liminary search references, but over the aminer's search references. The patent

spoke you had invented) would probably have been held to "lack invention" over some previous spoke patent. Here your attorney would either change the language of claim 4 and enter an argument, or cancel claim 4 and write an entirely new claim, submitting an explanation as to why the new language avoided the reference.

To visualize this, let's assume you are talking about wheel spokes which have a right-



hand screw at one end and a left-hand screw at the other and provision for twisting them in the middle (see Fig. A). Note that the foregoing *language* is descriptive of *both* the new and the old forms of the invention. In getting a patent, language on the new one must *not* cover the old one.

When the examiner shows the old reference, the attorney is going to rewrite the claim to make it read more specifically on your new structure. He will cut out any wording about the right- and left-hand threads. Since this is obviously old, you cannot claim it.

Then he will phrase his claim so that it is directed only to the square collar at the center of the spoke, and the two holes going through at right angles to each other.

Finally, in his explanation or argument, he will point out how your square collar gives twice as many gripping surfaces as the channels in the old "reference" spoke—at the same time strengthening the structure instead of weakening it; and he will also tell how the two holes permit the use of a nail or a bodkin as a twisting implement and provide not only four angles of approach, but likewise admit of work where the spokes are too close together to get in with a wrench.

A Limited Claim. Assuming there was nothing else among the references to stop him, the examiner would allow this claim. You might be very unhappy about not being able to cover the right- and left-hand threads, but there is nothing to do about it; you are limited to your twisting or turning means, only.

On the other hand, things may get worse.

a second official action in which he ap an unexpected reference showing a shaft an octagonal collar but no holes.

Your attorney must then enter a new sponsive amendment, try to argue th square collar is better than an octagonal lar, further entering a new claim directe the holes only. To this the examiner w probably reply in his next action that octagon was better than the square, in it provided more gripping surfaces and ar for a wrench, and that the square was th fore "a step backward in the art." As to holes, he might either give a claim or sir condemn them as a mere mechanical exp ent not arising to the dignity of inventio

Final Action. This action, whether he lowed a claim on the holes or not, w probably be his last. You could then ei accept his verdict, or carry the matter u the Board of Appeals in the Patent O This costs another fee and calls for a sp brief.

If the board decides against you we appeal to the Court of Customs and Pa Appeals or to the U.S. District Court for District of Columbia. If you follow the course, the court will simply review the ord made in the Patent Office and rea decision. If that decision is against you, is the end. On the other hand, if you go to District Court, you can present testim and can carry the matter on up to the preme Court of the United States.

Broadly speaking, it is not to the advan of the individual inventor of a simple ga to think of appealing. The work of the aminers is usually thorough going and jective and in the great majority of c their determination is upheld by the co

Hypothetical References. Occasion you may run into the type of examiner delights in exercising a fiendish ingenuit the development of "hypothetical" refere —references which would have existe somebody had only thought of them.

To illustrate, let's go back to the spok really good hypothetical reference man, a a comforting breakfast of old razor bl and muriatic acid, would scorn the ide finding a real reference and would, inst find (1) a patent on a spoke, (2) a pa showing a right-hand thread, (3) a Ger patent showing a left-hand thread, (4) a lar, and (5) a Swiss cheese with holes g all through it in various directions. He w combine these to show that any fool c have thought up your invention witho spot of trouble.

Against these people, there is simply much defense. Once you have shown so body your invention, what kind of comeb

How to Appeal Your Twice-Rejected Claim



Career-man board will hear case, but there's a one- to four-year backlog now

EVERY applicant for a patent or reissue of a patent whose claims have been rejected twice by an examiner may, on payment of a $25 fee, appeal the decision to a Board of Appeals provided by the Patent Office.

The applicant, or appellant, may request an oral hearing or that a decision be made from briefs submitted. The rub is that there's such a backlog of cases on appeal that oral hearings are being scheduled roughly four years later. Appeals decided on brief take about a year.

Normally, the appeal must be taken within six months after the examiner's last action on the application, unless he has specified a shorter period. The board comprises 14 members appointed by the President and approved by the Senate. It happens that all present members are longtime career men of the Patent Office. Any three members may constitute a quorum to hear and decide an appeal. Within 60 days after filing an appeal, the appellant must file a brief listing the authorities and arguments he will rely on as well as giving a concise explanation of the invention and a copy of the claims involved. Failure to file the brief within the allotted time will cause dismissal of the case.

Two to four months after filing the brief, the examiner will furnish a written statement in answer to it, explaining fully why he denied the patent. A copy of the answer will be sent to the appellant. No other person should undertake to sustain the examiner's position and he will not appear at the hearing.

When the examiner's answer is received, the Board of Appeals clerk will docket the application for the oral hearing or decision on brief as requested.

The board may affirm or reverse the decision, in whole or part. If it is reversed, the application is returned for issuance of the patent. If affirmed, the appellant can drop the matter or carry his appeal into court. On due notice to the commissioner from the board, he may appeal to the Court of Customs and Patent Appeals or file an action within 60 days in District Court, District of Columbia.

Court of Customs and Patent Appeals

sented in the Patent Office, and what proper arguments the appellant may sul The CCPA appeal fee is only $15, but appellant must bear the expense of pri ing printed copies of the Patent Office ord, brief and other items, which run in tidy sum. It takes about two years to an appeal through CCPA and a membe the commissioner's legal staff appears be this court to support the boards decis

In a Civil Action, the proceeding is that of any lawsuit and the commissi will be represented at all times. But the inventor is proceeding anew to ol a patent, so he may present witnesses add to the record any newly developed he deems pertinent to patentability.

The court will determine any clain claims it considers patentable, and may rect the commissioner to grant a paten

Appeal of an Interference. Since the q tion of priority of invention between inventors is first decided in the Patent fice by a board, further review must b the form of an appeal directly to court, ei to CCPA, to the District Court, Distric Columbia, or to the District Court ha jurisdiction where the winning party of appeal resides.

Petitions. In an organization of ne 1000 patent examiners, boards, and nu ous clerical divisions, some protests wil evitably rise as to whether an individua a board exceeded his or its authority, or interpreted the rules.

For a review of rulings on such mat Rule 181 states:

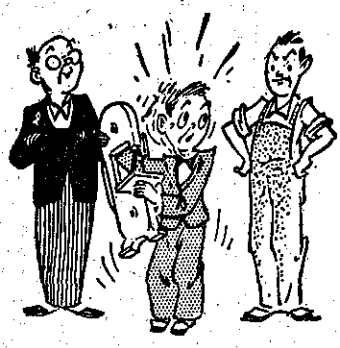
"Petitions may be taken to the com sioner (1) from any action or requiren of an examiner in the *ex parte* prosecu of an application which is not subject to peal to the Board of Appeals or to the cc (2) in cases where a statute or the r specify that the matter is to be determ directly by or reviewed by the commissio and (3) to invoke the supervisory autho of the commissioner in appropriate circ stances."

Petitions must contain a statement of

or just out of step, your improvement invention may never pay off for you. What's more, if you were hasty in putting out the cash to secure a patent on it, you will have poured money down the drain. So let's see how you can go about saving unnecessary expense.

Suppose, as a starter, that you have conceived of some improvement on the band saw. Is your improvement patentable? A Patent Office search will show you whether previous patentees have developed solutions to the problem which are as good as or better than yours. If their solutions have not been adopted by manufacturers, it may indicate that there has been no widespread demand. But if your idea proves to be startlingly new, you may either conclude that there never has been any demand for such an improvement, or that in spite of the demand nobody has yet been able to solve the problem. There is also a chance the machinery market is not ready for it.

The question revolves around the extent of the demand, and in trying to reach the answer you must beware of your own favorably-prejudiced opinion, and endeavor to get answers from two groups: the mechanics who use the equipment and the bosses who buy it.



If the idea is worth a whoop, the mechanics will probably vote for it, but unless it seems to make a big noise to the bosses, they are apt to veto it on the grounds that there isn't enough of this type of work being done to justify junking old machines for new ones.

But suppose the bosses tell you that they are thinking of junking the old machines anyhow. Now you have something to go on, and your next move is to find out whether or not any band saw makers are thinking of producing improved models, and what the market for band saw improvements will actually be.

If that sounds difficult, don't despair: there are definite steps you can take. Organize your thoughts by writing out a list of pertinent questions. If your invention relates to a band saw improvement, it will pay to find out: 1. How many band saw manufacturers (what do they cost to make; how mu they sell for; how many are bought time); 4. What is the average life of chine; 5. What industries make the mo of them; 6. How important are miter o tions in these industries (let's assume the miter feature is your improvement) is important enough to make them pay for it?

The secretary of your local chamb commerce will probably not know th swers to these questions, but he can great assistance in telling you where to and whom to contact. He can refer y Thomas' Register of Manufacturers McRae's Blue Book to find out how band saw manufacturers there are. If he not have them try your local library.

Statistics on quantity of production pricing may be available from the De ment of Commerce, Washington 25, D. from such industrial publications as M Machine Shop and Machine and Tool Book. For names and addresses of such lications, ask the nearest advertising a to let you see a copy of the Standard R Data directory. Through your telephone pany you may be able to see a copy o Washington, D. C., classified directory. you will find listed about four solid pag national associations of all kinds, such a chinery & Allied Products Institute. presumably could tell you something band saws. A world almanac will also lists of such associations and their addr

In any research effort like this, it is w write and call as many potential sourc information as possible. Many of your tacts may have little or nothing to offer you may hit the jackpot on one call.

Once you have all the obtainable facts can determine whether your field is en ing or contracting, whether sales are u down, and where most of the busine being done. If it were to develop tha miter problem is important to a big seg of industry, and that this segment is a h and consistent buyer of band saws, then would have a clear green light to go a On the other hand, if you find that band are a very slow-moving item, and that a chine is rarely replaced until it is fa apart, then you may decide that the pote is too small to justify any investment in ent procedure.

A Halfway Step. Let's assume, how that you have enough of a green light to to present your improvement to manufa ers with a view toward making a deal. If are not nursing your nickels too caref go ahead and actually file a patent applica That is really the safest procedure.

However, if you still have your doubt

Error in Your Patent?



Mistake may lead to certificate of correction, reissue of patent, or filing of a disclaimer

ONCE a patent has been granted, it is out of the jurisdiction of the Patent Office, with few exceptions.

Every once in awhile a patent will be issued which contains one or more errors. They may range from minor typographical or grammatical slips to omission of important items of the patent and the invention, which renders the patent defective or at least inoperative to the extent the patentee is entitled.

On the other hand, an error may be made in the other direction by indicating the patent contains more than the patentee had a right to claim as new. Provision is made in the patent statute and Patent Office rules for handling these and other errors which occur under two headings:

1. Errors on the part of the Patent Office, including the printer.
2. Errors on the part of the patentee (inventor) or his attorney.

The inventor is entitled to have the patent conform with his application, including all amendments presented during the prosecution. Where the record reveals any error through fault of the Patent Office, the office will correct the mistake at its own expense on request of anyone owning an interest in the patent.

Certificate of Correction. If the nature of the error is minor, such as omission of a few words, the Commissioner of Patents will issue a certificate of correction. This is attached to the patent and states how the erroneous portion of the patent should read. Thereafter a copy of the certificate will be attached to every copy of the patent supplied by the Patent Office.

In regard to some minor errors such as the omission of an unimportant word, and where the sense remains clear, patentees sometimes simply write to the Patent Office to call attention to the matter without requesting a certificate of correction. Such a letter is placed in the patent file and anyone seriously considering the patent is bound to recognize the erroneous matter in it.

Reissue of Patent. If the error is of an extreme nature, the Patent Office may request return of the patent and grant a reissue in its place. A reissue patent is a new patent incorporating alterations and running for the unexpired portion of the original patent. Such a correction once occurred when a sheet

treme case, the printer happened to leav
a substantial portion of the specificatio

Correction of errors by patentees o
signees must be borne by them. If the
take is of a clerical or typographical n
not attributable to the Patent Office, an
patentee shows that it occurred in
faith, the commissioner may issue a ce
cate of correction. This will be endorse
the patent itself, provided that the corre
does not involve introduction of new m
or require re-examination of the inver
Fee for the certificate is $10.

If a patentee finds that his patent is wl
or partly inoperative, or invalid, due to
fective specification, claim, or drawing, c
reason of his claiming more than he h
right to claim as new, he may apply f
reissue patent to correct such defects.
application must be accompanied by
original patent, or an offer to surrende
and a fee of $30. No new matter may b
troduced into a reissue application.

The application will be re-examined by
Patent Office in much the same manne
the original application, but with specia
gard to the changes sought. Only *bona*
errors may be corrected so that the rei
patent will conform to that intended
thought to be embraced in the original
ent. After thoughts may not be added
mistakes of judgment cannot be correcte
reissue. The application involves but the
$30 fee and, if granted, runs only for the
expired portion of the original patent.

Statutory Disclaimers. On occasion, a
entee may discover, or a court may de
that a certain claim (or claims) of his
ent is invalid. To retain it knowingly
invalidate the entire patent.

To facilitate withdrawal of such a cl
or claims, Rule 321 provides that the pate
"may make disclaimer of any comp
claim," which disclaimer "shall thereafte
considered as part of the original pate

The fee for filing such a disclaimer is
It is effective immediately upon filing
the patent need not be returned to the
ent Office. Notice of all disclaimers is p
lished in the Official Gazette.

A patentee by disclaimer may relinq

nesses, but never has one been lost to a witness.

Normally, the date of conception is the most important event to be established. It represents the completion of the invention in the mind of the inventor. It may be tied to a sketch, a model, or a written or oral description. Regardless of the character of proof to be advanced, the facts alleged by the inventor will be accepted *only* when corroborated by testimony of at least one reliable witness.

Here is as simple a way as any to assure proof of conception: Call in one or two persons, not related to you and who would be credible witnesses. Show and explain the drawings, model, machine, or whatever you have made to illustrate your invention so that they know what it is all about. Then have each witness sign and date the drawing or whatever tangible thing you have, so that they can identify it, if the necessity arises, as well as the date.

Despite the simplicity of the foregoing, inventors have attempted many futile modes of fixing the date of conception of their inventions. One particularly common, but erroneous belief of inventors is that their date may be established by simply mailing to themselves a registered letter containing the first sketch of the invention, then keeping the letter sealed until opened at a critical moment of an interference proceeding. Such procedure is faulty because it lacks the corroborati a witness to the sketch. Having a sketc tarized likewise is in itself of no more p tive value as to what is shown in the s than having any other person place his on the drawing.

Another procedure sometimes follow to have photographs made of a model o size embodiment of the invention, an photograph dated. The photograph is as as a sketch, but the witness is still neces

Preserve a Carbon Copy of all corre ence concerning your invention, espe that engaged with your patent attorn agent, modelmaker, draftsman. These p may fill in many gaps in the testimony of witnesses and help to "save the day" b tablishing your diligence.

The inventor often hears about pr forms with which he can "protect" hims record the essential facts of his inve While these blanks are perhaps a conveni they afford no extra protection at all, i sense of acquiring or reserving a patent All sketches and "evidence of conceptio cordings, when properly witnessed, are ible evidence if and when you becom volved in an interference. But a form n nothing in itself. A particular famous sl was prepared by an inventor on the m of a newspaper while riding on a train. low commuter was the witness!

QUESTIONS

Value of Record of Invention

Q. Is a record of invention form, filled out and witnessed, any good?

A. Sure. It may save your neck in an interference proceeding in the Patent Office.

Hold on to the Evidence

Q. Is it advisable that I leave my sketches with the person in Washington who made my preliminary search, or should I keep them myself?

A. Better hang on to all proof bearing on the date of your invention. The best witnesses are reliable persons from your own town who are readily available in case they have to testify for you. Having witnesses at distant places could impose a needless expense on you.

That o/oloe3# Registered Letter

Q. I fix my date of invention by sealing my sketches in an envelope and writing my name with indelible pencil across the flap. Then I post the letter to myself by registered mail. Doesn't this establish satisfactory proof of the date of my invention?

how can the Patent Office be sure you d write your name on the flap after the l had been mailed, steamed open, and s again. Second—and most important—th fice requires that all sketches be corrobo by witnesses (none of whom could sq inside that envelope). So forget that infa registered letter and instead have at leas reliable witnesses sign and date your sket make sure they understand the sketches the invention's operation, of course.

Re-Witness Old Disclosure?

Q. I made the drawing of my invention years ago, and had it witnessed. Since I have done nothing about it and have n no changes. But now I want to have a se made, and proceed with a patent applic if things look favorable. Should I have drawings witnessed again?

A. Having the drawings witnessed a would not affect the situation, one way o other. After you file your patent applica if it runs into interference with another a cation pending in the Patent Office, y

ing a share of expenses incurred in his home on a particular invention. The inventor might have a rather difficult task of allocation if he has worked on more than one item, especially so if some of them were for his use. However, items of cost which could possibly be allocated would include: Depreciation on machinery and equipment, cost of small tools; materials and supplies used; wages paid helpers; payments for outside custom work.



It is not likely that the part-time or amateur inventor, would be permitted to include a portion of his overhead costs on his home (such as heat, electricity, taxes, depreciation, etc.). He might have a good argument though if he had a room primarily used for nothing but work on inventions or if he has had a room added to his house for this purpose. But he would first have to allocate a proportionate part of total home overhead to the workshop room and then reapportion that amount if he had worked on more than one invention during the tax year.

Records to Be Kept. As with all tax matters, the individual should keep on file the invoices, cancelled checks, or other original documents relating to work on his invention, which will support the items entered on any books of record which he may keep. Keep such records for tax purposes for a minimum of three years from the filing date of the tax return. In the case of patents where the necessity of establishing costs may arise some time later, keep pertinent records indefinitely.

This applies whether you are an amateur or a professional inventor. The big difference to remember is simply that the amateur can only deduct expenses after he has sold a patent, while the professional may deduct his expenses as part of the cost of operating his business, whether, presumably, he sells anything or not.

There are three ways in which the professional inventor may secure tax benefits from research and experimental expenditures connected with his trade or business of inventing. He may deduct them as current expenses, amortize them over 60 months or more, or charge them to capital. These methods are complicated enough to justify your having a tax lawyer or expert advise you on which is

Income from Patents. What does t ventor do about the income he receive the sale or licensing of patents? Well, all, Congress has ruled that a patent is ital asset, and the proceeds from the sa may be considered capital gains (on taxes may not exceed 25%) instead of i (on which taxes range up to 90%).

Capital gains treatment results in a tax whenever taxable income exceeds $ in the case of a separate return, $36, the case of a joint return by husband an and $24,000 in the case of a head of a hold—the long-term capital gains rate being a flat 25%. Such figures may seem ly astronomical to the average man n around $7000 a year, but it must be re bered that when an invention pays off, pay off big.

Not only can the inventor treat the i from his patent as capital gains, but thes efits are now extended to any other indiv such as a financial backer, who acquir interest from the original inventor prior actual reduction to practice of the inve Thus, if the financial backer is not t ventor's employer or relative (other brother or sister), and if he buys his in in the patent before a full scale working has been built, he should be able to treat ever he makes from his interest in the p as capital gains instead of income.

Taxes on Royalties. In the past, ma ventors hesitated to sell patents outrig account of the big bite taken out whe money was treated as income for tax pur Royalty arrangements were often pref in that they spread the money out and the inventor in a low tax bracket.

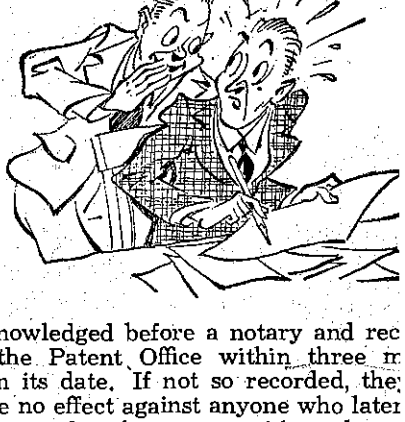
However, now that you can treat a right cash sale as a capital gain, you m well advised in selling on this basis. Fi all, it is sometimes very hard to collec alties. Second, four out of five new pro on the market are said to be failures. chances are therefore four to one against ever being any royalties to collect. C quently, you may be better off taking a of cash and running with it.

There may still be situations where a alty set-up will seem best, or it may b only kind of a deal you can get. So h the tax story on royalties:

Royalties will be taxed as capital where there has in fact been a sale o change, as distinguished from a license. proof of an actual sale seems to hinge o terms "all substantial rights" and "undi interest." "Substantial rights" mean rights to make, use, and sell the inve either absolutely, or subject to nothing than a performance clause. "Undivide terest" means, as nearly as I can get

Transferring Your Rights

How to dispose of your patent or application by assignment, grant, or license



AFTER he has obtained his patent or a patent application, the owner may transfer the rights so secured in several ways, if he does not elect to make and sell his invention himself.

Since a patent is personal property, it may be sold, mortgaged, or bequeathed in a will and passed on to the heirs. The most common transfers of patent rights are known as assignments, grants, and licenses.

The Assignment is an instrument in writing providing for the transfer or sale of a patent, or the sale of an invention covered by a patent application. Owner of the patent or application is called the assignor and the person to whom it is transferred is called the assignee. The same statute in the patent law also covers transfer by assignment of a part interest, such as a half or third interest in a patent or application.

Regardless of whether the assignment is for a whole or part interest, the rights acquired by the assignee extend throughout the United States. If a patent is assigned and the assignment is recorded on or before the final fee is paid, it will be issued to the assignee. In the same situation, if the assignment is for a part interest only, the patent will be issued to the inventor and the assignee as joint patentees.

A conditional assignment passes ownership of the patent and is regarded as absolute until canceled by the parties.

The Grant is another form of written instrument by which the owner conveys the same right as an assignment, except that it will cover only a specified *part* of the U.S., such as a state or a county.

The License is still another written form which conveys a right less than or different from an assignment or grant. Normally it is nothing more than a permission extended to someone to make, use, and sell the invention throughout the U.S. or in a portion thereof as stipulated, and on an exclusive or nonexclusive basis as stated in the agreement.

A patent confers the rights to make, use, and sell. Such rights cannot be split up in a conveyance or license agreement, but must be kept intact. It is under licenses that ...

acknowledged before a notary and rec
at the Patent Office within three m
from its date. If not so recorded, the
have no effect against anyone who later
rights under the patent without know
of such instruments.

QUESTIONS

Sale of Patent Pending

Q. I have filed a patent application an
derstand I can now use the words I
Pending. Can I sell the invention n
must I wait until I get a patent? If a c
which is best?

A. You can sell now and I'd advise you
so. This will relieve you of further ex
prosecuting your case before the Pate
fice, will get you your money forthwit
will enable the buyer's patent attorn
take over the application and shape it
requirements. An attorney familiar v
manufacturer's patent position and pr
tion problems may be able to add c
subtle touches in the amendments of
importance. He may also see some g
deficiency, in which event you can ab
the application and file a new one dra
exactly as the purchaser ought to ha
Finally, it's to the manufacturer's adva
to get rolling under Patent Pending, si
adds several years to his monopoly po

How Many Licenses?

Q. Is it permissible to license more tha
manufacturer to operate under a pa
What percentage royalty or return ma
patentee expect?

A. You can sell either exclusive or n
clusive rights covering all or any desig
part of the U.S. If you haven't given
sive rights, you can license as many
facturers as you want.

There is no set royalty percentage
pect. You negotiate with a prospective
facturer. The rate is governed by f
such as value of the patent to the make

However, if you start by saying, "We want about $1500 to cover costs and legal fees, plus 5% royalties," the prospective buyer will continue to talk business.

Insist on a minimum annual royalty of around $500 to $1000 to keep the patent from being shelved . . . and have this further hedged with the provision that you can refuse such payment, and snatch the patent back, unless the money is actual royalty proceeds from regular sales through normal distribution channels. In other words, don't give them the right to keep your patent on the shelf for a token payment of $500 a year.

Try to get a royalty of 5% of the manufacturer's invoice price as the manufacturer needs some latitude in pricing, and may, as conditions warrant, invoice out some merchandise at either more or less than a fixed wholesale price. Be sure to have the contract drawn up by someone who is skilled in that type of work.

There are, of course, many other procedures. Rights to a home-made brick-cleaning machine, for example, I once saw sold on a county-rights basis. The inventor sold the right to house wreckers from county to county, permitting them to build and use his machine within the confines of the county in which they operated. There are no doubt other inventions which can be exploited on this basis. (Warning: "County rights" has often been worked as a racket. Before you buy such rights on someone else's invention, make certain that your county is big enough to provide an adequate market potential.)

Again, licenses may be granted to a number of manufacturers. If you have a component which can be used in a variety of different and non-competing machines—which is not important enough, in itself, to justify an company in making it exclusively—you license as many manufacturers as you

There is always the possibility of ou sale. In most cases, because of mark risks, manufacturers will not pay big m for a patent on a consumer item or tool. However, if you hit something i cracking, or electronics, or perhaps ae namics, you may be able to sell out for sum. Sometimes the sale involves a payment on a put-up-or-shut-up basis tool which a certain manufacturer wa take off the market. This is what is k as "pre-emptive" buying, the purpose i to deprive the public of a good inve but merely to keep a competitor from ge something to sell.

Going Into Business for Yourself. It theoretical right of every American into business for himself. However, ownership of a patent is scarcely enou these times to justify the average ma trying it.

If you are an experienced business willing and able to buck the modern structure stacked against you then go a If you are a salesman, and can see a fi one spread between loading-platform and retail price, then perhaps you are in sinking a few thousand dollars in a duction run by a contract manufacturer. will know what to do, and how to ge from under if the item doesn't move.

If you are a production or factory wo or a professional man, unwise in the wa the business jungle, you will sell out little cash and a reasonable royalty—sa the realization that you haven't lost thing, and *may* collect a lot.

QUESTIONS

Determining Demand

Q. I am making my gadget on a very small scale in my basement workshop and have passed out a few samples. All the women in the neighborhood say they want one, but I haven't seen any of them beating a path to my door to pay cash. How can I really determine public demand?

A. This is a very interesting and commonly-encountered situation. Everybody will say they want one, just to be polite, but when it comes to buying, that is apt to be another matter.

Your best bet is to run some ads under "Agents Wanted," sell samples to the agents, and wait for reorders.

Once you are able to show that you have a good item, you should encounter little dif-

Publicity and Royalties

Q. I am in the last stages of securing a ent on a thoroughly tested and succe underwater fishing light. Can you giv any advice on how to find a buyer for light? Do you think an article on the m of my light in a conversation or fishing azine would help? Also could you tel what is a fair cash price to expect and royalties I should ask for?

A. As long as your patent application i ready on file, there is no reason why should not permit articles to be printe the various conversation magazines, an the hunting and fishing magazines.

The financial details are something w must be worked out in the course of neg tions with the manufacturers. All tha

of getting all stirred up over another new promotion? I'd have to double-check it all the way though our engineering department. We'd have to re-tool, meaning a layoff for the assembly line people (and more trouble with the union). There'd be packaging, distributing, and advertising (with those high-pressure boys on my neck again). So I might wind up making another million dollars and then have to give 90% to Uncle Sam. Why should I bother?"

Do It Yourself? Where you run into a situation like this, try examining your total picture and see whether you should attempt to go into business for yourself.

First ask yourself whether or not your invention is actually enough better than existing devices to give you an immediately *obvious* edge over well-established competition. The edge should be very obvious, because you must do a David and Goliath job of knocking down buying habits, brand loyalties, and business friendships.

The first company in the world to put a detergent on the market was also the first detergent company to go broke. Its sales pitch was built around a startling demonstration of washing dirty axle grease out of a piece of pink chiffon under a cold water tap.

This demonstration not only startled people; it scared them into screaming that the "soap" was "too strong," and no amount of explaining helped. The few who did understand that a detergent is not a soap and cannot have any chemical "strength," were still unwilling to pay 13c a pound when they could buy alkali for 9c. So the company went bankrupt, and detergents went off the market for a quarter century. The old dogs in the laundry, rug cleaning, and wool industries just didn't like new tricks.

Your product may be infinitely superior to that being sold by a competitor we'll dub John Doe. But here's another not uncommon sales barrier. Suppose you call on a big industrial firm. The head man himself may invite you into his private office for a demonstration. The more you demonstrate the more enthusiastic he may get. But when you pull out your pad and ask for the order?

"Oh, no," he may well say, "I wouldn't think of buying any."

"Why not?" You gasp in genuine astonishment, "You yourself have just been telling me how wonderful it is. What's the matter?"

"Oh, nothing's the matter with your product," is the reply, "but I wouldn't in a thousand years think of doing anything to hurt John Doe's feelings."

These experiences show how things *can* go. You are apt to make a very serious miscalculation if you go into business on the theory that price and quality are the only factors

udices, buying habits, and even busine friendships are frequently the real deciders.

Production facilities and ability to financ your accounts may also be problems. If you invention is a component part or accessor the really big buyers may be unwilling to o der, for fear you lack the facilities to delive on time. Or you may find, in a particular ir dustry, that the boys have come to expect 6 or 90 to 120 days of credit, just enough to ti up your entire working capital in accoun receivable and break you, unless you had sympathetic banker.

Advertising and Selling. Even assumin that your product has a very obvious and re assuring edge over competition, you must pro vide liberally for advertising and sales ex penses, because nobody will know about you product's advantages unless you smack ther between the eyes with it. It has been said



"Doing business without advertising is lik winking at a girl in the dark; you may kno what you are doing, but nobody else does."

Because most inventors are basically me chanics or engineers, their business exper ence has usually been gained in the shop. Th lopsided experience permits them to imagin they are "in business" when they are actuall only "in production." The end result is t sink $15,000 or $20,000 of neighborhood cap ital into product, and then wind up paying junk man $50 to haul it away.

It might be smarter to work out the adver tising and selling plans in advance, and the see what's left over for production.

Successful Failure. One way to try sellin your invention is shown by the case of an in expensive burglar alarm market-tested abou 15 years ago. This gadget was essentially spring-operated bell, like an alarm clock, to b mounted on a door frame or window sill wit a trip mechanism set to go off the instant an effort was made to open the door or windo The noise of the bell was supposed to scar a prowler into heading quickly for parts un known. The inventor and a promoter scrape together $3200 which they split down the mid dle: $1600 for manufacturing and the balanc pegged for sales promotion.

They got a contract manufacturer to mak and package the alarms for 50c each, whic

into four phases: 1) *Planning,* which means getting your patent, your working model, and your tools; 2) *Producing,* which means making and packaging; 3) *Distributing,* which means getting your product into the hands of someone (agent, wholesale dealer, or consumer) who will pay you for it, plus all the advertising, selling, sales promotion, point-of-purchase display, credit investigation, and shipping efforts and costs needed to do the job; and 4) *Collecting,* which means just what it says.

Anywhere along the line, you may be in for a rude shock on expenses, unless you have worked your entire budget all the way through. For example, an inventor who had a cardboard toy along the general lines of a jigsaw puzzle got $750 backing for his patent and the necessary art work, plus a promise from a printer to do the press work for a share in the deal. It looked like a perfect step-by-step calculation of the budget, but one item was overlooked; $3500 for four-color printing plates, which nobody was prepared to underwrite. Loss: $750.

In another example, a big banker decided to go into the fishing tackle business as a hobby. He bought a patent for $500 cash and a 5% royalty, then spent $800 on a die for injection molding. The die maker had a few samples run off just to prove the die, and that is as far as the thing ever went. The banker was real peeved at the public because it didn't beat a path to his door. He was in production, wasn't he? What in heck did people expect him to do? Advertise? Well, if they did, they had another think coming. Advertising is absolutely worthless, he said, as is easily seen in the fact that few banks will lend money to anybody for an advertising campaign. Loss: $1300.

When the invention is a large machinery item, time and costs can be extremely high. Even on a small item it is easy to forget what sales and promotion costs will be.

Promotion Costs. The minute you show an invention to friends, they usually exclaim, "This is wonderful! *Everybody* will want one!" But, let's face it, everyone will *not* want one. If it's really hot, a lot of people may want one when they see it, but how are you going to enable them to get a look at it?

Obviously, one way would be to display it in stores. Yet, actually visiting the 1000-odd important selling centers in the country is a giant task. And, while you may get some orders, you will also get an idea of what "sales resistance" means, and exactly what you face when you start talking to a retailer whose money is already tied up in 500 or so different lines which, he was told, "everybody" would buy on sight. You'll find even your local retailers less than wild about the tion which may or may not sell.

So remember this rather general rule: T smaller your item, the bigger your sales co A big item like a bread-wrapping machi can get off the ground on a promotion budg of $25,000 because as soon as one baker h installed the thing, the others in his commu ity are almost forced to follow suit.

On the other hand, it will take a fat prom tion budget to sell a million 25c toys, for e ample, because the stores are so full of the Your best bet here is to try selling to a through independent agents.

What About Mail Order? New produc are sometimes introduced and sold by m order with splendid results. But this is an u predictable business where even the exper expect to lose their shirts several times f every killing they make.

While you can test out some mail order a vertising for about $500 to $1000 in a reaso ably representative cross-section of magazin and newspapers which have a reputation f "pulling," if the test fails, it may not mea anything at all about acceptability of yo product. Perhaps your ad got a bad positio Perhaps the public was upset at the mome over the international situation. Perhaps yo headline or copy wasn't right, copy lacke punch, or the price or terms were wron With so many variables, you can knock you self out testing.

But this can be said in favor of mail orde If the thing does prove to be a hot "mail ord item," you can use that fact to the utmost selling to dealers, for it is generally accepte (though not always true) that if an artic will sell by mail, it will sell even better ov the counter.

You can always try mail order; and $1 worth of classified may put you in busines It's being done all the time.

QUESTION

Why Don't Manufacturers Bite?

Q. I made a contract with a patent attorne to sell my invention, and part of the contrac provided that he was to contact at least 10 manufacturers. There have been only thre replies. How come?

A. It may be that the invention is no goo the list of manufacturers is not particularl good, or the attorney's method of approach i not good. Chances are that the list of man ufacturers had to be stretched out might thin to make 100, and they may have bee taken from a commercial directory rathe than from a list of known patent buyers.

Few patents attorneys have really goo buyer lists; the patent brokers, on the othe hand, make a specialty of it.

in which they might be improved, there is no point in making changes unless and until our customers demand them."

And now let's hear from the president of an old and very good-sized chemical house serving the food industries, who said: "At one time we were considered very aggressive, and we still operate our experimental laboratory. However, we have added only one new product to our line in 30 years, in spite of the fact that we know how to do it, so it is hard to imagine any new invention that would interest us. We cater to a conservative class of trade that prefers the old-fashioned methods, and our business continues to grow. Last year was the biggest in the history of our company."

Which brings us back to a truism of mine: "When a manufacturer is making money, it is very difficult to get him to make anything else."

In case that sounds discouraging, don't give up hope. You'll find there are smaller companies interested in new devices, and sometimes they are very much interested, indeed. But, the bigger ones too often seem to feel they can get along quite well without any great deal of outside assistance. Take what recently happened to an inventor who submitted a new and unpatented gadget to one of the biggest makers of electrical goods.

The company (and this is unusual, believe me) not only sent his drawings back, but enclosed photographs of their own unpatented version of the same invention, with the comment that they weren't interested in commercializing the idea, and he could have it with their blessing. They said they thought



it was pretty good, but not good enough for them to want to go to all the trouble of putting it on the market.

This brings us around to a consideration of another aspect of the attitude of many big companies toward ideas from the outside: They don't want to see them or hear about them for the very reason that their own people may be working on those same ideas, and they don't want to be accused of stealing the ideas from the outside inventors.

It's Tough, Even with a Patent. Of course we are talking about unpatented inventions. If you have a patent, it's routine to send a

pective buyer. How much good this may d you depends on such factors as whether th patent is any good to that company an whether the time is ripe for the device to b marketed.

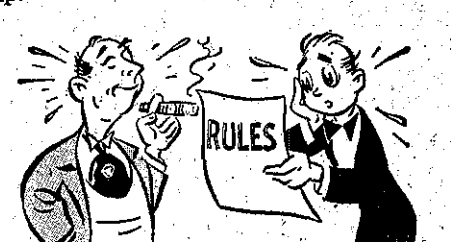
Here, again the free-lance inventor is at serious disadvantage, due to changing marke conditions and the time-lag in the Patent Of fice. At the time he actually invents an aut accessory, for example, there may be a rea need for the device, but by the time the pat ent issues three or four years later the auto mobile designs may have changed to such a extent that the invention is useless. I sav this happen in the case of a certain rear-viev periscope which was a good idea for cars witl tiny back windows, but of no utility at all o the present-day goldfish-bowl models.

Patent May Be Ignored. Yet another haz ard faces the inventor who may have a ver good patent on a very good invention. Thi is the problem of being ignored by the in dustry until the 17-year life of the patent i ended. In an industry like the auto field where most cars are good cars, and continu to sell, it would be an easy matter to ignor a patent for many years before bothering t make use of its subject matter.

Indeed, the U. S. auto industry did ignore number of excellent European development for many years after they had become com monplace in fine cars abroad. While this ma reasonably be attributed to the exigencie of mass production at low cost, it shows tha the big industries are not always involved i any mad scramble for improvements.

To sum up, your chances as an outside in ventor of selling a patent to a big busines are remote.

Now let's look at the great national spor of trying to sell unpatented inventions to th great corporation. This game has been goin on for so long it has developed a highly or ganized set of playing rules, with the rule usually favoring the corporation. The firs part of the rules has to do with the establish ment of the so-called "confidential relation ship."



Such a relationship may be set up as fol lows: I write to you, offering to submit, in confidence, an idea which I think will benefit your business, and which I wish to sell you.

What Trademarks Will and Won't Do

By ALAN MONTAGUE



THE average individual inventor has no business fooling around with trademarks, slogans, and the like. For, a trademark (1) is not going to protect your invention; (2) is no good unless you use it; and (3) to be worth a whoop in a whirlwind, must be backed by thousands of dollars spent in advertising over a long period of years. Even then, unless you are careful, it is apt to become "generic" and pass into the public domain as being the only name by which the product can be identified.

This happened in the case of "aspirin." The actual name of the stuff is something along the general lines of monoacetiacetate of salicylic acid, give or take a few syllables, and Dr. Bayer decided that "Aspirin" would be easier to say. He was so right that, when his patent ran out, the courts decided his trademark had run out, too, and that "aspirin" had become a common word that had passed into the public domain where anybody could use it.

If the Bayer aspirin people couldn't make it stick, what chance do you have?

Don't Waste Your Money. Many an inventor pays out good money for the preparation of a trademark application on the mistaken idea that he will get registration, and that it will somehow protect his invention—which it won't. Or he thinks that some coined word he has dreamed up for a product is a good idea, and submits it to a patent attorney for a search.

The attorney makes the search, figures there is a reasonable chance of getting registration, and so reports. The inventor then coughs up $50 or $100 for a drawing and application. This is duly prepared and forwarded to the inventor along with a request for samples of the mark as used in interstate commerce.

The inventor obviously has no samples—he isn't even in business, let alone in *interstate* business—and so reports back to the attorney. The attorney then writes back and says what a shame, and there the matter rests. The inventor is sadder, possibly wiser, and certainly poorer. And he gets neither a registration nor any protection on anything.

Unfair Competition. Trademarks do play a role in the series of laws and regulations intended to protect the goodwill of a bus ness. They protect both the owner of th business and that portion of the public whic desires to do business with him, against third party who tries to "muscle in."

For a simple example, suppose there is a artesian well of good water in your tow open to the public. You decide to bottle th water and sell it to business firms for the water coolers. You buy a lot of green bottle fill them at the well, put on a white suit, an start peddling.

At first, it is tough going. You have t convince the businessmen you call on tha your water is the real McCoy. You have t pass out free samples to get started. You hav to convince your customers that your servic is reliable, that your bottles are sterilized, an that your price is reasonable. After a lot c work, you build things up to a point wher many of the businessmen have told thei switchboard girls to "buy that water in gree bottles from the guy in the white suit wh calls every Tuesday."

Then comes Joe Blokes. Joe sees that yo have a good thing, and decides to horn in Joe buys green bottles. Joe buys a whit suit. Joe fills his bottles at the public wel

So one fine Tuesday you make your regula rounds. At the first stop the girl says, "Ca next week, we got plenty of water." Yo wonder why, but hurry along to the nex stop.

On the next call, the gal tells you, "W bought from your pardner yesterday."

"I ain't got a pardner," you howl.

"Well, how am I supposed to know? Thi fellah about your size in a white suit, come in with the water in the green bottle, so figure he's your pardner and tell him t

CLASSIFICATIONS

1. Symbols—such as three interlocking circles, a leaping stag, an arm-and-hammer, etc.
2. Coined words—such as "Kodak," "Annite," "Pepsi-Cola," etc.
3. Portraits of people—such as "Denby" for cigars, or the "Smith Brothers," or "The Seven Hoffmanns," etc.
4. Combination of words—like "Swan's Down," "Blue Bonnet," "Blue Ribbon," etc.
5. One or more words—which without describing the merchandise, may be suggestive of its good qualities such as "Holeproof," or "Seampruf" for hosiery.
6. Historical or mythological names—such as "Ajax," "Hercules," "Venus," "G. Washington," "Marlborough," etc.
7. Personal or company names—when distinctively displayed.

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nothing in the law to compensate you for that. You can't get protection on what you might have done or what you hoped to have done, but only on what you did. Unless you have established, or are energetically striving to establish, a certain goodwill, then no mark, however beautiful or unusual, is of any value.

How the Mistake Arises. I think some false ideas about trademarks arise as the result of a false analogy with patents. If you get a good idea, you can make a sketch and description, have a lawyer file a patent application, and actually secure a patent without ever building a model or selling any products. Once you get the patent, you don't have to do anything with it. You can sit around until somebody infringes on it, and then collect damages from him and force him to pay royalties until the patent runs out.

But with trademarks, you have the opposite situation. Here you first have to use the thing; keep on using it steadily; and *then* get registration . . . after which your right does *not* run out. Theoretically, a trademark is good forever, *as long as* you keep it up.

So let's say that: A patent confirms a new right for a limited period, whereas a trademark confirms an old right for an unlimited period.

If You Do Want a Trademark. Assuming that you are starting a business, or are already engaged in one, and feel the need of a protected trademark, here are a few words of advice. You don't have to be a manufacturer in order to use and protect a mark; as a jobber, retailer, or house-to-house salesman, you might find it advantageous, as showing that the goods you sell have been inspected by you and are backed by your personal integrity.

You also don't have to be engaged in interstate commerce and secure federal registration, as I mentioned above. Most of the states have their own trademark laws—some of them much more effective than the federal law.

State Registration. If you are making sausage or potato chips, or have wagon routes selling pickles, pretzels, peanuts, packages of sardines with crackers, or some new products, you may do yourself a lot of good by registering your mark in your own state. One of the nicest features of many state laws is the fact that infringers may be thrown in jail, whereas under federal law, your only recourse is a civil action.

How to Select a Mark. Dreaming up a new and different trademark is a tough job. To begin with, forget about such terms as: "AAA," "Imperial," "Royal," "Apex," and "Crown." These words and dozens like them have been registered for every conceivable class of merchandise.

Coining words is also almost impossible. Practically every pronounceable four-letter combination has already been registered.

Use a simple attractive design, proportioned to fit in with other art work and be easily applied to your product. If you are really serious about going into business, call in one of the big label or carton manufacturers and let their art department specialists do the job. *But be sure to pay for the art work as a separate item,* so that it will become your property. Also, before printing, see your lawyer about having it copyrighted with yourself as proprietor. This is important even though it has nothing to do with trademark registration.

For the idea of using a misspelling, "Omaha" is no escape from "Omaha." Such deviations as "Bief," or "Beaf," or "Beeph" would not get around "beef." Distinctive colors and shapes of containers are usually not of much account.

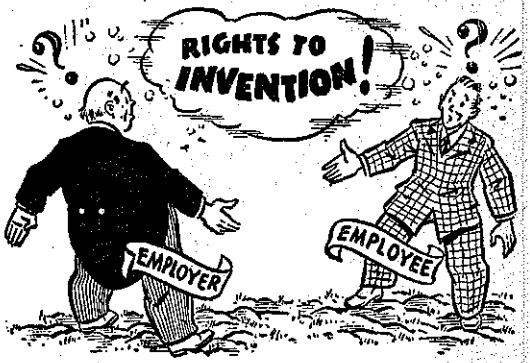
Avoid anything that may convey the same mental impression as some mark already in use—a picture, for instance, of someone resembling a person used to promote someone else's product—like the familiar and distinctive Aunt Jemima. And don't try to pull a funny like getting some farmer by the name of Packard to enable you to make Packard automobiles; this was tried, and it didn't work.

You may use your own name, however, where your intent in using it is not to confuse your product with a more familiar one. But unless your name is already well known to the public it is no great asset at the start, and it must be built up by extensive advertising.

A good field to consider is that of arbitrary numbers and designs. "Chanel No. 5" is an excellent example of a successful mark. The same goes for "Velvet" for pipe tobacco. (In this case they get across the idea of "smooth as velvet" without actually saying it.)

Ownership of Inventions—Employer vs. Employee

What rights employees have in their inventions; captive inventors; shop rights; joint inventions



DURING this year, an estimated quarter million persons will make an invention of one kind or another. Some 90,000 of these will file applications for patent, and approximately 50,000 patents will actually be granted. About half of all the inventions made will be by employees under some sort of contract with their employers concerning inventions.

What Right Has an Employee in inventions made by him? This question does not apply only to persons working in corporation laboratories, on general or specific development projects, but also arises when an employee, not hired for such a purpose, works out an invention on the company's time.

What are the rights of the parties in a case where the inventor is not hired at all, but someone simply furnishes him with money or materials, or "backs" him? What about the agreements companies make their employees sign, saying they will turn over to the company all or certain kinds of inventions they may make?

A look at one copy of the Official Gazette of the U. S. Patent Office shows that more than half the 813 patents granted during that particular week were assigned, mostly to corporations. No statistics are available, but a good estimate is that 40% of all patents currently being granted are developed by "captive" inventors—that is, people hired by individuals or corporations to carry out general or specific research and development work. According to the latest (1958) survey of the National Science Foundation, private American industry maintains 11,800 research and development setups, at an annual cost of $8.2 billion.

Agreements or No Agreements. In general, the rights of the inventor and his employer are governed, above all, by any contract or agreement they may have entered into—express or implied, oral or written, as long as the agreement is not unreasonable or against public policy. The courts seem to lean on the side of the inventor where ownership of the invention is the issue.

The most elementary common situation, however, is the one in which John Doe, the employee, is a general workman, hired without any thought of his inventive capacity, and with nothing expected of him save routine service. Let us assume that John has entered into no contract with his employer regarding any inventions he may make.

It is a general rule of law that, unless the nature of one's employment or an express contract forbids outside work, the employee's time outside of his work hours is his own. If John develops an invention outside the establishment and the working hours of his employment, the invention and any patent he may obtain on it are solely his own.

Shop Right. If Mr. Doe, in developing his idea, used any of his employer's time, materials, or facilities, the company acquires what is called a "shop right" in the invention and any patent issued thereon. The term "shop right" means a non-exclusive license on the part of the employer to use the invention in the normal course of its business, without payment of royalty to the inventor, in equitable return for use of its time or facilities. The patent remains the property of the inventor, and the company, of course, cannot license others under its shop right.

Most research workers are hired because of scientific or mechanical ability to make any improvements that their genius or skill may hit upon. In such a case, an invention would, of course, result from use of the company's time or facilities. Here, again, in the absence of any contract to the contrary, the inventor holds legal title to the invention and patent, and the employer has a shop right.

U.S. vs. Dubilier Condenser Corp. was the 1933 court case which settled the matter of shop rights. It grew out of the work of Dunmore and Lowell, two men employed in the radio section of the U.S. Bureau of Standards, with no express contract as to any inventions they might make.

er will be entitled to a shop right.

A reverse situation arises when an inventor induces someone to finance or "back" his invention. A backer has no legal interest whatever in an invention or patent thereon, except as agreed to by specific contract. Sometimes the backer takes a mortgage on some property of the inventor as security, or the inventor assigns to his backer a percentage interest in the invention and any prospective patent.

Government Employees. The federal government employs more research personnel than any field of private industry. These technicians appear in nearly every governmental department and bureau; the Department of Agriculture alone has a research staff of some 17,282 people, 5,856 titled research scientists.

While the government could, like private industry, enter into a specific contract with its employees as to their rights in inventions, there appears to be no uniform policy. In those departments where an agreement is made between the government and the employee to the effect that all rights to any inventions shall inure to the government, the employee signs a dedication of his invention "To the people of the United States," or else assigns his patent to the head of the department as "Trustee for the people of the United States."

Where there is no such contract, the Supreme Court has held (in the Dubilier case discussed on p. 97) that: "The United States is entitled, in the same way and to the same extent as a private employer, to shop rights." An act of Congress passed in 1883 provides that in the case of an invention made by a government employee using government time and materials, where the government obtains a shop right or other interest, Patent Office fees may be waived.

Enforcement of Contracts. How far will the courts go in enforcing contracts regarding inventions made by employees? These contracts have uniformly been held not unreasonable, unconscionable, or against public policy, and the courts will enforce specific performance of an express agreement to turn over patents to an employer.

Implied contracts must be clearly proved, and it is essential in such cases that the inventor has been engaged for the specific purpose of inventing for the sole benefit of the employer, or to further the business to the limit of his ability, with a corresponding consideration in salary. The fact that the inventor was president of the company does not give the company ownership of his inventions if there was no contract to assign.

For what length of time can the employer tie up the employee in such agreements? The common form of contract specifies that "all

term of his contract of employment" shall be vested in the employer; some contracts cover all inventions made during the period of employment or a designated period thereafter. The courts have even gone so far as to sustain a contract in which the employee agreed that any improvements invented by him "while in the employment of said company or at any time thereafter" would be for the exclusive use of the company.

In a Joint Invention, each party must contribute material elements of the conception or mental process leading to the invention. For example, if one person furnishes the ideas or plans and another person the labor, the latter is not an inventor; likewise, if one person supplies the ideas and another the money, they are not joint inventors. Joint inventions usually follow discussion by the inventors, with each making material suggestions and pooling effort in the inventive thought.



When a patent is issued to joint inventors each can manufacture, use, and sell specimens of the invention to any extent he pleases, without accountability to the other inventor or inventors. He can even let licenses to others to practice the invention and neither he nor his licensees can be enjoined from continuing such exploitation. In effect, in the case of a joint patent each of the inventors holds a duplicate patent in his own name.

The joint inventors may enter into an agreement as to the extent each shall work the invention and the division of the profits from the patent. Sometimes joint inventors convey the patent to a trustee to exploit the

Design or Mechanical Patent?

IF YOU'VE ever had much to do with patents, you probably know that the U.S. Patent Office grants two basic kinds of patents: mechanical and design. Now, just what is the difference between these two types, how much protection does each afford you, when should you try to secure a mechanical patent, and when would a design patent be what you need?

Mechanical Patents, which cover processes, electrical and mechanical apparatus, and chemical compositions, protect the basic physical structure and principles of inventions. They run for 17 years, and the grant includes drawings showing all the structure of the invention, together with an elaborate specification fully explaining the invention and its scientific principles.

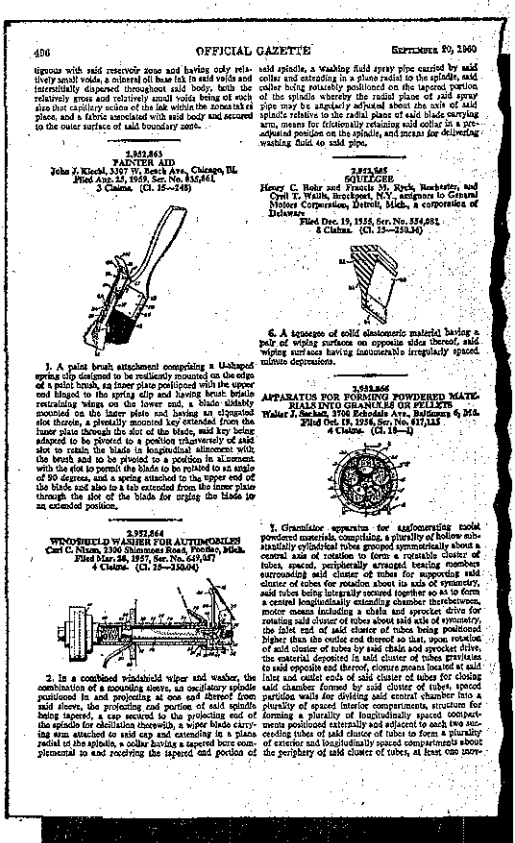
Each mechanical patent also includes claims defining precisely what is covered by the patent. Appearance alone is important only when it serves a functional purpose, as in a drill bit, where the shape of the bit may govern its cutting efficiency, or in an airfoil, where the curvature or shape may affect its lifting or aerodynamic property. Outright ornamentation plays no part whatever in mechanical patents. As mechanical patents are by far the most important kind of patent, in numbers granted and in commercial value, the term *patent* is commonly used alone at the equivalent of what is actually a *mechanical patent.*

Design Patents, on the other hand, are predicated upon the appearance of one thing patented, rather than the basic physical structure and principles of operation. They comprise, roughly, 1/10 of the total weekly issue of patents. Where the invention is subject to a design patent, this form offers several marked advantages: the application is simple compared to filing for a mechanical patent; the patent can be obtained with relative promptness; and the government fees for a design patent run only a fraction of the cost for a mechanical patent.

Under the law, "any person who has invented any new, original, and ornamental design for an article of manufacture" may obtain a design patent on it, subject to the same general conditions that govern issuance of mechanical patents. Three aspects of the law just quoted warrant special emphasis.

(1) Ornamental. The beauty and ornamentation required for design patents is not confined to the so-called "esthetic or fine arts" of painting and sculpture, but in general extends to all types of manufactured articles.

The word *ornamental,* used in connection with a manufactured article, means that it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tiguous with said reservoir zone and having only relatively small voids, a mineral oil base ink in said voids and interstitially dispersed throughout said body, both the relatively great and relatively small voids being of such size that capillary action of the ink within the zones takes place, and a fabric associated with said body and secured to the outer surface of said boundary zone.

2,952,865
PAINTER AID
John J. Kiechl, 2107 W. Rosh Ave., Chicago, Ill.
Filed Aug. 22, 1960, Ser. No. 51,661
3 Claims. (Cl. 15—248)

1. A paint brush attachment comprising a U-shaped spring clip designed to be resiliently mounted on the edge of a paint brush, an inner plate positioned with the upper end hinged to the spring clip and having brush bristle restraining wings on the lower end, a blade slidably mounted on the inner plate and having an elongated slot therein, a pivotally mounted key extended from the inner plate through the slot of the blade, said key being adapted to be pivoted to a position transversely of said slot to retain the blade in longitudinal alinement with the brush and to be pivoted to a position in alinement with the slot to permit the blade to be rotated to an angle of 90 degrees, and a spring attached to the upper end of the blade and also to a tab extended from the inner plate through the slot of the blade for urging the blade to an extended position.

2,952,864
WINDSHIELD WASHER FOR AUTOMOBILES
Carl C. Nixon, 2305 Commanche Road, Pontiac, Mich.
Filed May 26, 1957, Ser. No. 661,487
4 Claims. (Cl. 15—250.04)

2. In a combined windshield wiper and washer, the combination of a rounding sleeve, an oscillatory spindle positioned in and projecting at one end thereof from said sleeve, the projecting end portion of said spindle being tapered, a cap secured to the projecting end of the spindle for oscillation therewith, a wiper blade carrying arm attached to said cap and extending in a plane radial at the spindle, a collar having a tapered bore complemental to and receiving the tapered end portion of said spindle, a washing fluid spray pipe carried by said collar and extending in a plane radial to the spindle, said collar being rotatably positioned on the tapered portion of the spindle whereby the radial plane of said spray pipe may be angularly adjusted about the axis of said spindle relative to the radial plane of said blade carrying arm, means for frictionally retaining said collar in a preadjusted position on the spindle, and means for delivering washing fluid to said pipe.

2,953,505
SQUEEGEE
Henry C. Rohr and Francis St. Kyck, Rochester, and Carl T. Walsh, Brockport, N.Y., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 19, 1955, Ser. No. 554,081
8 Claims. (Cl. 15—250.34)

6. A squeegee of solid elastomeric material having a pair of wiping surfaces on opposite sides thereof, said wiping surfaces having innumerable irregularly spaced minute depressions.

2,953,866
APPARATUS FOR FORMING POWDERED MATERIALS INTO GRANULES OR PELLETS
Walter J. Sackett, 3706 Eshedale Ave., Baltimore 6, Md.
Filed Oct. 18, 1956, Ser. No. 617,115
4 Claims. (Cl. 18—1)

1. Granulator apparatus for agglomerating moist powdered materials, comprising, a plurality of hollow substantially cylindrical tubes grouped symmetrically about a central axis of rotation to form a rotatable cluster of tubes, spaced, peripherally arranged bearing members surrounding said cluster of tubes for supporting said cluster of tubes for rotation about its axis of symmetry, said tubes being integrally secured together so as to form a central longitudinally extending chamber therebetween, motor means including a chain and sprocket drive for rotating said cluster of tubes about said axis of symmetry, the inlet end of each of said tubes being positioned higher than the outlet end thereof so that, upon rotation of said cluster of tubes by said chain and sprocket drive, the material deposited in said cluster of tubes gravitates to said opposite end thereof, closure means located at said inlet and outlet ends of said cluster of tubes for closing said chamber formed by said cluster of tubes, spaced partition walls for dividing said central chamber into a plurality of spaced interior compartments, structure for forming a plurality of longitudinally spaced compartments positioned externally and adjacent to each two succeeding tubes of said cluster of tubes to form a plurality of exterior and longitudinally spaced compartments about the periphery of said cluster of tubes, at least one incre-

Sample design patents which have been granted, as shown on this reproduction of one page of the Patent Office Official Gazette.

must present a pleasing appearance. Since individual tastes vary, some people may think the article looks grotesque, bizarre, or even ludicrous; and yet it can still be ornamental within the meaning of the statute. Impressions imparted by the design may be complex or simple; thus, one design may leave in the observer a mingled impression of gracefulness and strength, while another design may leave the impression of strength alone. But whatever the impression, it must convey to the observer a sense of uniqueness and character to be a patentable design.

In the majority of designs patented, the attraction rests upon the general lines and contour of the article, of which automobile bodies and vacuum cleaners are typical. Surface ornamentation, as in pictures and carvings, occurs primarily in connection with such things as jewelry, dishes, silverware, wall paper, and coffins, and represents but a minor portion of current design patents.

(2) Invented. As with mechanical patents, design patents must be predicated upon in-

ould be patented."

Since the Hadden decision, design patents ave been issued covering office buildings, uonsets, airports, bridges, stadiums, and lams. So the engineer and architect in lanning constructions must now be careful o avoid infringement of design patents. However, the validity of design patents on uilding structures up to the present has ever been passed upon by the U.S. Supreme Court.

Patent Applications. A typical page of design patents, as published in the Patent Office Official Gazette, is reproduced on p. 101.

The essentials of an application for a design patent are: (1) the specifications; (2) drawings clearly showing all items of the design; (3) the oath (in general corresponding to that for mechanical patents); (4) the filing fee.

The specification consists of (a) a preamble, stating the name and residence of the applicant and title of the design; (b) a description of the figures of the drawing, such as to say that certain views are in plan, elevation, etc.; and (c) the claim. The specification must be signed by the applicant.

Applications for design patents ordinarily contain no description other than to state the title and nature of the article. But where a description would give a better understanding of the design or article to which it may be applied, such description is permissible and should follow the description of the figures of the drawing.

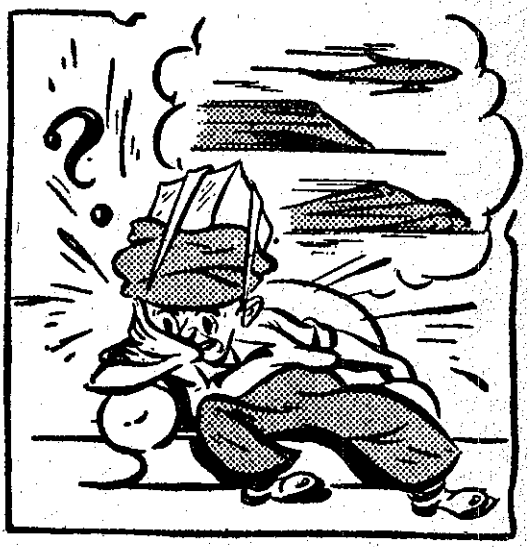
Only One Claim Permitted. Whereas the claims in mechanical patents must define by words the structure and scope of the invention, and usually compromise several recitations of the invention, only one claim is permissible in a design patent. Since it would be impossible to paint a word picture of a complex design, the claim in a design patent takes the invariable form: "I claim the ornamental design for a (name of article), as shown." Since only the design "as shown" is covered by the patent, it is important for the application drawing to show clearly and precisely every detail of the design.

Applications must be filed with the Commissioner of Patents, Washington, D. C., and are examined in the order of filing. A thorough check is made by the Patent Office experts against all prior patents, catalogs, and available literature to determine the patentability of the design for which a patent is requested. To be patentable, the design must be new; it must be ornamental; it must involve invention; and the article incorporating the design must be of a kind likely to be encountered in commerce and of a nature that makes its appearance important.

If the Patent Office finds prior articles of in the application, it advises the applicant of its refusal to grant the patent, giving all the facts upon which such denial is based. The applicant thereupon may request reconsideration and present his side of the story. If the Patent Office still refuses him a patent, channels for review and appeal are provided to safeguard the rights of the inventor.

Because of the scrutiny to which all applications for patents are subjected by the Patent Office, design patents, as well as mechanical patents, carry a presumption of validity. Courts will grant injunctions on the strength of a patent. The burden rests upon one who denies the validity of a patent to prove its invalidity.

Since design inventions often apply to objects whose popularity passes with the changing mode, the Patent Office strives to keep its work on design applications current. Normally an application for design patent can be obtained within a year or less, whereas me-



chanical applications commonly require at least two or three years to clear the Patent Office. Where articles are likely to represent a passing fashion, such as the style of a dress, inventors usually regard the shorter term patent as sufficient protection.

Duration and Fees. Design patents are granted for terms of three-and-one-half, seven or 14 years, as the applicant chooses. The total government fee for the shorter term design patent is $10; for the 7-year term, $15; and for the 14-year grant, $30. There is no "final fee," as in mechanical patents.

The usual practice is for the applicant to apply for a patent for the shorter term with the $10 fee; and, if the subject matter of his application is found patentable, amend the application and pay the additional sum necessary to cover the longer grant. So, the

Which Should You Do— Patent or Copyright?

BACK when Winston Churchill's ancestor, the Duke of Marlborough, was winning the Battle of Blenheim, some other of ueen Anne's merry men won another battle : much farther-reaching importance by assing the first Copyright Act. Yet, even oday, some 250 years after the passage of the opyright Act, few people know what it's all oout.

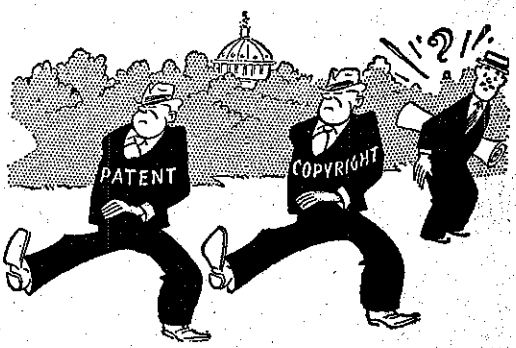
The fact remains, however, that Winston hurchill and a lot of other people are mak- ig money on copyrights; so let's review hat is known about them, and how they ompare with patents in providing protection or your ideas.

To begin with, you cannot get a copyright n an invention. True, you can get copyright egistration on a set of blueprints showing ow to construct an invention; but this copy- ight protects only the blueprints, and not the nvention itself. Thus, while you can sue an nfringer for reprinting your blueprints, you an't sue him for making the invention itself.

The copyright protects only the *form* in hich you make the *drawings,* and does not over any *use* which may be made of the *tructure* which is revealed by the drawings. herefore, if you have a mechanical inven- ion (which is what we usually mean by "in- ention"), then a copyright on the drawings ot only does not protect the invention, but nay even bar you from securing a valid atent unless you apply for your patent with- n one year from the publication of the copy- ighted drawings.

Patents vs. Copyrights. To draw a distinc- ion between patents and copyrights, it may e oversimplified to state that a patent pro- ects the idea, while a copyright protects the orm or manner in which the idea is pre- ented. Thus, if someone infringes on a pat- nt by copying the basic structure of the nvention, he will still be infringing no matter ow much additional ornamentation or mech- anism he may add. On the other hand, he may be able to evade a copyright by adding enough original frills and furbelows of his own.

For example, if there were a patent on the lever, he couldn't re-patent it merely by hanging a weight on it to provide more leverage. But try this: First, hum the tune of "Somebody Stole My Gal" in its regular fast tempo. Then hum it very slowly and you will find that you are doing "I'm Going to Max- im's" from the "Merry Widow." Here's a case where the same basic tune—give or take



some notes here and there—can form a "new" musical composition.

A patent covers substance, while a copy- right covers form. Thus, if there were a basic patent on the wheel, you would be infringing by making a cogwheel. But if there were a copyright on a print of the wheel, and you printed a drawing of a cogwheel, you would not be infringing.

Copyright on Drawings. One problem in- ventors are always bringing up concerns the copyright of drawings. Let's start with this simple fact: What you draw is your own; and, by common law, you actually have it in copy- right. This means that I can't peek over your shoulder and copy it. And it means that if you first bind me to secrecy and then show it to me, I can't copy it. And, further, if I agree to pay you to use the idea set forth in the drawings, then I can't use the idea with- out paying.

Now, since copyright registration gives you nothing but a ticket to sue for infringement on your drawings, and since what you (as an inventor) seek is the right to sue for infringe- ment on your idea, a copyright is of little practical value.

For example, if you invent an apple-polish- ing machine which is of such size and com- plexity that it can only be produced by a big manufacturer, then it doesn't do you any harm to have people reprint your drawings (and may even do you some good through publicity). What you need in this case, is not a copyright, but a patent so that if anyone starts making your polishing machines, you can sue him for infringement.

Furthermore, with or without a copyright and with or without a patent, there are many instances in which, if a manufacturer agrees to pay you for using your idea, you have a contract with him and can sue him if he

As these examples indicate, there is a wide use in securing a copyright as a substitute for a patent. If what you have is not patentable, then try to set up a contractual relationship with a potential buyer or user, whereby you will be paid for your services in bringing the idea to his attention. You can definitely sue on a contract of this type, even though the idea may be old.

No Novelty Search in Copyrights. A fundamental difference between patents and copyrights is that the Patent Office makes a search to determine whether or not your invention is "novel" (new), but no such search is made when you apply for copyright. Thus, while you cannot obtain a patent on something already invented by somebody else, you may be able to secure a valid copyright on the same thing already copyrighted by another, provided what you have done is actually your own work, and not a theft.

Take the case of Sulsinger et al. vs. Grossman et al. The plaintiff had bought a good printed copy of an old Hebrew prayer book which was in the public domain. He had some Hebrew scholars go over it to correct the accent and cantillation marks, and then published the book by the lithographic process with a suitable copyright notice duly inserted and recorded.

The defendant then bought a copy of this corrected book, and proceeded to bring out his own edition (again by lithography), assuming the work was in the public domain and the copyright was not valid. The court held that the copyright was valid, since valuable scholarship had been added through the corrections of accents and cantillation marks. But the court also noted that, if the defendant had employed his own scholars to make the corrections, and they had come up with the identical result the first group of scholars achieved, then this second work would not have been an infringement.

That is the situation in copyright. But remember that it does not apply in patents. If someone else has patent on an invention, and you produce the same thing, you are liable for infringement, no matter how innocently or by what means you may have developed the idea.

Copyrights on Three Dimensions. The original idea of copyright law was to protect the author of a written work—a book—against piracy by unscrupulous printers and publishers.

In practice, this protection has been broadened so that you can now get a copyright on a work of art. The amount of "art" involved may be very slight, indeed, and the purpose to which it is put may make no difference. Thus, you can get a copyright on a statue. And, by extension copyrights have been registered on such other three-dimensional objects as ash trays, fish bowls, casse-

chandeliers, book ends, clocks, lamps, and other objects, which have a utilitarian purpose. You see how complicated the picture begins to get.

Equal to Design Patent? When you start thinking this through, the question immediately arises: Why should I spend $100 to $200 and months of time trying to get a design patent for a 14-year term when, for $4 I can get a 28-year copyright without fuss, muss, or bother—and then renew it for another 28 years when it has run out?

The idea sounds attractive, but the court decisions on the subject have been a jungle of contradictions. In the case of Rose O'Neill's Kewpi doll, the copyright was upheld, while in the case of Billy deBeck's horse, Sparkplug, it was turned down. But a Supreme Court decision a few years ago established a precedent that puts more beef into copyright protection. Here is what happened:

A designer named Stein created two statuettes—male and female Bali dancers. He sculptered models in the usual way, made molds, and proceeded to cast the statues in quantity. Two copies were deposited in the Copyright Office, and copyright protection was granted.



Stein and his associates then proceeded to fit the statues with electric cords, switches, sockets, and shades, and sell them to the trade as lamps. When these lamps began selling like crazy, the inevitable happened—a number of other lamp manufacturers began to make and sell copies and imitations.

Whereupon Stein started to sue these competitors wherever he could catch them. Suits were filed in Maryland, Illinois, and California. The lower courts handed down different verdicts, so the litigation went into the Supreme Court of the United States.

Interferences and Protests

What happens in the case of two inventors with a single thought

MOST people assume that the first man to file gets a patent. They also assume that the man who gets the patent automatically has the full and final protection he needs, and no one else can do anything about it.

These assumptions generally hold true, but there are some mighty important exceptions.

A Copied Invention. Let's suppose you decide to go into the candy business, and put a taffy-pulling machine of your own invention and construction in operation in your store window. You are not interested in entering the candy machinery business, and are quite content that your wonderful apparatus draws customers to your store.

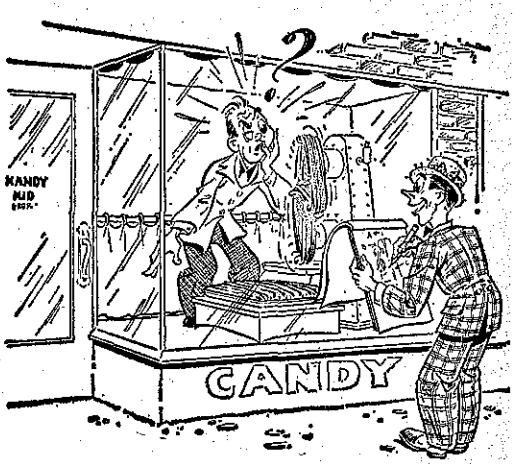
But, alas, a villain in the crowd, named Joe Doakes, sees and admires your operation, opens up for business next door to you, copies your machine, and then hangs a big "Patent Pending" sign on his copy.

This is your cue to dash to a lawyer, who will file with the Commissioner of Patents a "petition for the institution of public use proceedings." If the petition is granted, you and other witnesses will have a chance to testify that the taffy machine claimed in Joe Doakes's application was in public use for more than one year. This testimony may then be used by the examiner in denying one or more of Doakes's claims.

Of course, you don't have to follow this particular procedure. You may prefer to let Doakes get a patent, and then tell him to jump in the lake if he threatens to sue you for infringement, on the theory that his patent is not valid. But fighting such a suit could run your attorney fees up into enough dollars to ruin your business.

A Letter of Protest. What you really should have done with your taffy machine was to apply for a patent, even though you felt you had no immediate use for one. Then Joe Doakes would likely never have caused you any trouble to start with. That's water over the dam, however, and you and your lawyer still have another way in which you can fight.

To avoid the trouble involved in applying for and going through public use proceedings, you may write a letter of protest to the Commissioner of Patents against the grant of a patent on an application you believe to have been filed. Such a letter will go to the examiner in charge of that kind of inventions, and he may use it to prevent the granting of a patent. There will be no hearing or taking of testimony, as in public use proceedings; but neither will the Patent Office require you to bear any expenses.



A Patent Application. If you are within the one-year limit, you have still another method to use. If Joe Doakes set up shop after you and your taffy machine had been in business for six or eight months, you could file your own patent application before a year of public use has elapsed, thus bringing Doakes into interference with you in the Patent Office. Then, assuming your evidence of prior invention is good enough, you would get the patent, Doakes would not, and you could sue him for infringement.

The law tries to award the patent to the first diligent inventor—and not necessarily the first person to apply. Therefore, the Patent Office may declare an interference if (a) two or more applications or (b) one or more applications and one or more patents *less than a year old* are found to contain common patentable subject matter in their claims.

Two Minds, One Thought. The average inventor has most to fear the situation in which he collides with some other fellow who has thought of the same thing at the same time.

Because knowledge gets around very fast these days, people of similar training and interests tend toward the same lines of thought and the same conclusions at about the same time. As soon as the mathematics of the atom had been published, the idea of the atomic bomb occurred almost simultaneously to at least a dozen scientists all over the world.

Consider the case of one Jim Doakes—not to be confused with his crooked brother, Joe—who "invented" the flying wing. This happened back in 1930 when, after reading a new book on the principles of aerodynamics, Jim saw that a craft without empennage, and employing an airfoil of generally crescent-shape

you have no priority on the claims brought into interference, you may file a disclaimer, a concession of priority, or a notice of abandonment respecting those particular claims, and continue with the *ex parte* prosecution of your remaining claims.

If the invention is complex, you may want to admit Joe Doakes (or whoever) was ahead of you on a few points, and concede them, in order to get on with the rest of your original case (which may otherwise be held up entirely until the interference is decided).

Other side-steps may be the filing of a divisional application (if the invention can properly be divided), or the filing of an entirely new application.

In some cases, none of these may be needed, because the Commissioner may order the *ex parte* prosecution of your application to be continued concurrently with the examination of the interference.

The point is that if a delay might damage your commercial interests (as where a fast-acting competitor is cleaning up while you are being held up) there are technicalities by which a good attorney can keep things rolling.

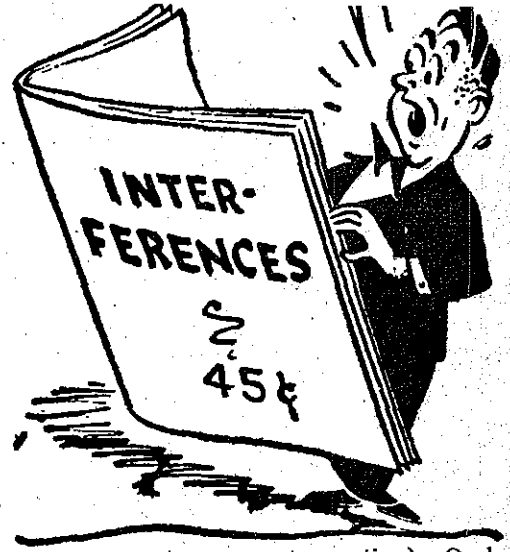
Preliminary Statements. Now come the real "guts" of the interference—the point at which each party to the controversy must file a statement setting forth: (1) the date of the first drawing; (2) the date of the first written description; (3) the date of the first disclosure to an outsider; (4) the first date of an act or acts (other than the above) which would, if proven, establish conception; (5) the date of the actual reduction to practice (if any); (6) the date after the conception upon which active exercise of due diligence began.

Your preliminary statement is filed in a sealed envelope and may only be opened by an Examiner of Interferences. Everything contained in the preliminary statement should be accurate and provable, of course.

When the preliminary statements are opened and compared, if the junior party's earliest date of conception does not precede the senior party's filing date, the case usually ends right there, and the senior party is declared the winner. The junior party does receive notification, however, and there are some alternative courses open to his attorney.

Alternative Actions. The attorney for the junior party can file a motion to dissolve the interference entirely on the basis that the claims in issue are not patentable, anyway. This is a little screwy, because there would be no interference in the first place, if the primary examiner had not said they were patentable.

Be that as it may, the attorney can also move to amend the interference to put into issue more claims (to which the opposing party may enter a counter-motion). Or he may make a motion to bring into the record some earlier application or patent of his client's. Or, finally, he may bring a motion to shift the burden of proof on the ground that the opposing party is not entitled to the date of some earlier application of which he has been given benefit.



Trial of the Interference will cost a pretty penny, and many a man with a trivial invention has won an interference only to discover that he has lost his shirt. Since comparatively few inventions repay the several hundred dollars it ordinarily costs to get a patent, it should be clear that fewer still are likely to repay the many thousands of dollars an interference can cost.

If you do want and can afford to fight all the way, however, now is a good time to review the type of evidence you will need to keep as you develop your invention.

Always keep a continuing record, dated and witnessed, of all activities connected with the development of your invention. As soon as you think of an idea which you really intend to develop, buy a diary or other blank book, and put on its pages a sketch and description of your invention. Date this, and then have two or more reputable witnesses (preferably not relatives) sign the pages. From day to day, as you develop your invention, make notes in your diary, and have these also signed by witnesses. Be sure your witnesses know what they are signing, as they may have to testify for you in an interference.

File your patent application as promptly as you can.

By following these steps you may avoid interference entirely, and even if you don't you will have a solid body of provable evidence to back you up.

tive date of one's invention, all proof must be corroborated by at least one reliable witness, so the effective date actually is that established by the witnesses. It is not enough that the witness simply sign and date a sketch. He must understand the structure portrayed on the sketch, how it works and what it does; otherwise, the inventor might alter the sketch after it was witnessed. A model, even a working model is merely evidence of conception, when properly corroborated ("Keep Your Records Straight," p. 78).

In regard to this proof of conception, should the need arise, prospective applicants are showered with all sorts of forms for recording evidence of conception. No special form is required. Of the 400 patents taken out by Henry A. Wise Wood, one was conceived while on a subway train, recorded on the margin of a newspaper, and witnessed by one of his fellow passengers!

While the date of conception is in effect the date of one's invention, the invention is not completed in the eyes of the law unless it is reduced to practice. Accordingly, the inventor must "proceed with reasonable diligence" to do this. The relative diligence of rivals is of no moment. If one be reasonably diligent and the other an eager beaver, the latter gains no ground thereby. If while one loiters in completing his invention, another enters the field and completes his invention first, the loiterer loses out, even though he was the first to conceive. Once the invention is reduced to practice the requirement of diligence ceases, and the inventor thereafter may take the full time provided by statute to apply for his patent.

Reduction to Practice may be accomplished either by building and successfully operating a practical embodiment of the invention or by filing a formal patent application. One method is as good as the other. Working models are merely evidence of conception.

Each of the 976 members of the Patent Office examining corps is a specialist in his particular field. These examiners are ever alert for conflicting application. The last step before approving any application to become a patent is to make an "interference search," that is, a thorough check of all pending applications to determine whether another applicant is claiming the same subject matter. Should a conflicting application of a rival inventor (or inventors) be found, the examiner will prepare applications for "interference."

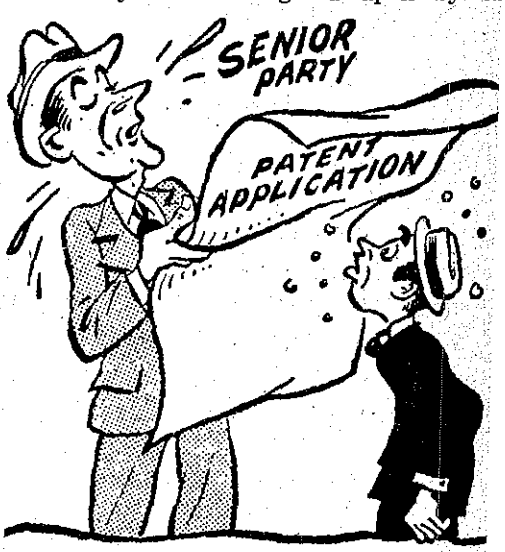
He then forwards all conflicting applications to a special section of the Patent Office called the Board of Interference Examiners. The sole work of this board is to determine which of rival inventors is the true and first inventor and thus entitled to the patent. All members are engineer-lawyers who make a career of this work. They are particularly

ping the first inventor.

The Interference. If a review finds the conflicting applications in order, the board declares the interference by notifying the rivals and giving them the names and addresses of the other claimants. No information about serial numbers or the filing dates of rivals is given at this time. The board requires each contestant to file a sworn statement giving the date on which the first drawing or sketch was made, the date of the first written description, and the date of reduction to practice. If the sworn statement of any junior party fails to antedate the earliest filing date for the several conflicting applications (viz., senior party), such junior party is ruled against and dropped from the contest.

Assuming at least two contestants survive the board proceeds to set times within which each party must testify in proof of the date of his invention. Time is likewise set for rebuttal testimony. The junior-most party is designated to take his testimony first, and the senior party, by reason of the presumption in his favor, may offer his testimony last, or not at all, if he deems it unnecessary.

Testimony may be taken wherever each party deems most convenient, upon ample notice to all rivals, and they may be present and cross-examined. The testimony is recorded by someone agreed upon by the



parties involved or designated by the clerk of the nearest district court. Rules prescribing how the testimony is to be transmitted to the Patent Office.

When all testimony is in, the board sets a period within which briefs must be filed, and an oral hearing may be had by any party making such a request. In these, the parties may attack such things as sufficiency of proof or diligence of opponents, or inconsistency of testimony by witnesses.

Can You Thief-Proof Your Invention?

Stealing of patent not nearly as much of a threat as legitimate loss to another inventor through failure to meet conditions

WHEN you get a good idea—especially if you have done a lot of work developing it—there is nothing more natural than to seek protection for it. But can you make it absolutely thief-proof? Can you guard it against everybody who might steal it?

Many an inexperienced inventor labors under a constant fear that "someone will steal my invention." From a practical standpoint, this is pure fiction in the sense that someone spies on or otherwise learns of another's invention, and then applies for, obtains, and enjoys a patent on it. One might as well try to kidnap the President.

Actually, deliberate stealing is a remote possibility, but the few known attempts to do this have been foiled. The risks are much too severe to make stealing worthwhile, whether by one of the general public, a patent attorney or agent, or Patent Office employee.

The only way you can be completely sure no one will have a chance to steal your idea is to keep it inside your head. Don't tell anybody about it, don't make drawings or models, lock yourself in your room every night, and wear a gag so you won't talk in your sleep.

Of course, you won't become famous or make any money with your self-contained idea. And the prospect of spending a lifetime being suspicious of all your fellow men won't do your ulcers any good. This brings up the main point—if you want to sell your ideas to other people, you have to trust them, just as you trust your wife not to put strychnine in your coffee in the morning.

Legitimate "Stealing" is a fairly serious threat, however, to the inventor who wants to keep everything to himself. He is by no means safe against the man who may have already filed a patent application on the same invention. Between 600 and 800 interferences are declared in the Patent Office every year, which means roughly, that some four to six earnest inventors are being shocked every day to learn that somebody else was thinking of the same thing at the same time. And, when the perfectly honest fellow in Omaha, Oshkosh, or Okinawa who never heard of you or your work, makes a similar invention at the same time, there is no question of stealing at all—it just seems so to you.



Undeniably, some inventions have been frittered away. Perhaps the inventor did not regard his idea as of sufficient value to warrant applying for a patent, or maybe he lacked the money to defray the expense of drafting and filing an application. Possibly he delayed filing longer than the law allows. A valid patent may be issued only to the true and first inventor, provided he does not abandon his invention through lack of diligence or failure to comply with conditions.

Applications Take Three Years, on an average, to process through the Patent Office to the point of patent issuance. The office first checks all prior patents and calls the applicant's attention to patents most closely resembling his own invention. Assuming that someone had stolen an idea and patented it the true inventor would thus be informed.

Normally, at any time within a year after a patent is granted, a rival inventor may assert his own right to the invention of the patent. Also, when an application reaches the state of being ready for issuance of the patent, the examiner's last act is to check it against all similar pending applications to determine whether one claims substantially the same invention. If he finds your application in conflict with those of one or more other parties claiming the same invention, the

nan apply "a little black box" to the well and ake down the readings of a needle. His testiiony was rejected as having no probative ralue since he did not know what was in the box nor how it worked, and the junior applicant awarded the patent.

Clearly there is no great premium on being irst at the Patent Office. The courts often advise against rushing there before taking reasonable time to perfect an invention or considering reasonable alternatives and equivalents for it. The only advantage the first to file has is that he is presumed first to make the invention until a junior party proves otherwise.

Falsehood a Serious Offense. Any sensible person should quake on making a false patent application or giving false testimony in an interference. The applicant must take an oath "that he does verily believe himself to be the first inventor, and that he does not know and does not believe the invention was ever known before his invention thereof."

A section of the law known as U.S. Code 1001 declares that any person who knowingly makes any false statement in a matter before the U.S. Patent Office, whether as inventor or witness, is liable to a fine of up to $10,000, or to imprisonment up to five years, or both.

Any patent subsequently marred by the discovery that it was obtained through fraud would be ruled invalid. Whenever apparent fraud is detected by the Patent Office, the matter may be turned over to the Department of Justice for investigation and action.

When asked to cite instances where someone tried to steal an invention, patent experts may recall cases where two or three persons working together could not agree as to who made the invention or decide whether it was a joint creation. Then there is the inventor who went to a draftsman to have drawings made and the latter exercised such ingenuity in his work that he thought he made the invention.

In such situations, there is always a reasonable justification for a party to believe he was the inventor. Still, inventing is a mental act, and one who furnishes the ideas in detail is the inventor.

Filing Your Own Case. To keep things as secret as possible, some inventors prepare and file their own applications. You may be able to handle the whole job successfully—if you have an engineering education, are a good draftsman, and have a pretty fair knowledge of patent law and Patent Office procedure. (See article, "Preparing a Patent Application," p. 52.) While this has been done, however, grave doubts always exist even after a grant as to whether the best possible claims have been secured.

There's always the question as to whether a broadly-experienced patent attorney or

obtain better protection. There's also a good chance the Patent Office will find your application defective in so many respects that you would have to hire a patent attorney to start over from scratch.

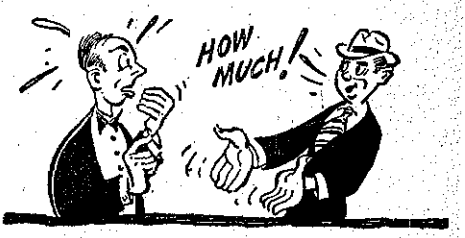
Trusting Your Attorney. The question "How can I be sure my attorney can be trusted?" often comes up. The best answer is: You might as well trust him, because if he *wants* to doublecross you, he can do it so painlessly that you will never know what happened. He can easily wreck the value of your patent by putting in just one word too many. You would not know the difference at the time and, later, when it was too late for a reissue, you wouldn't be able to prove anything other than that the attorney had said what you told him to say. But why should he try to cheat you, thus risking his professional career against disbarment or worse upon a highly speculative idea that might pay a modest income?

Among other things, registration of a patent attorney or agent requires that he "shall establish to the satisfaction of the Commissioner (of Patents) that he is of good moral character and high repute and possessed of the legal, scientific, and technical qualifications necessary to enable him to render valuable service, and is otherwise competent to advise and assist" inventors.

He has had to pass an examination on patent law. Due to his practice before the Patent Office, he is well aware of the thoroughness of investigations in interference proceedings. Among numerous rulings designed to protect the inventor, one stipulates that any improvement that an attorney or agent thinks of or develops concerning his client's invention is considered as part of his hire and must be turned over to the client.

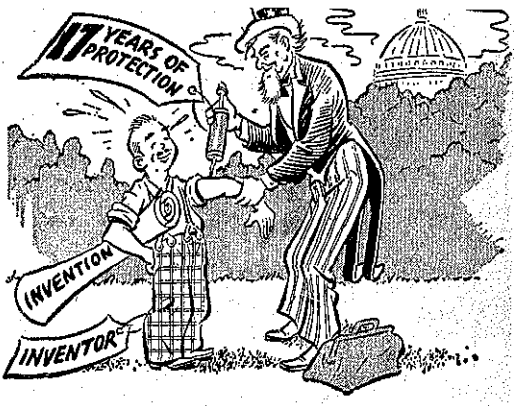
In an interference between an inventor and one who has served as his attorney, every presumption favors the client and every doubtful fact is resolved against the attorney. His failure to conform to ethical and professional standards makes an attorney or agent liable to suspension or disbarment.

So, there is no use in being a wiseacre when dealing with your patent attorney. Put *all* of your cards on the table and then ask him to get you the broadest possible claims taking the time he will need to do it.



How Does Your Patent Protect You?

Rights conferred by a patent; conflicts with the Sherman Act



OCCASIONALLY you hear the remark that "a patent amounts to nothing more than a right to sue infringers." This is true as far as it goes, but it does not tell the entire story.

In the language of the patent statute, "Every patent shall grant to the patentee, for the term of 17 years, the exclusive right to make, use, and vend the invention . . . throughout the U.S. and the territories thereof." The term "exclusive right" simply means the right to exclude others from practicing the invention.

The U.S. Supreme Court has ruled that "the government does not confer on a patentee the right to make, use, or vend his own invention. All the government confers by a patent is the right to exclude others from making, using, or vending his invention." The inventor may be stymied by prior patents granted to other inventors, which dominate his invention. Later, we'll discuss some cases in which this has happened; but first, let's see how the breadth, scope, and effect of a patent are measured.

A Patent is a Contract between the inventor and the government or the people. The inventor agrees to explain his invention fully, so that the people will be able to construct and use the invention; and the government, in payment for this explanation, agrees to guarantee to the inventor for 17 years the right to exclude others from using his invention.

In line with this simple principle, every patent contains a specification or explanation of the invention, usually with reference to drawings, and also states one or more claims, defining just what is new in the invention and protected by the patent. The claims are the most important part of a patent, as they define its bounds and scope; they are as definite as the stakes and markers setting out boundaries of a piece of land.

The term "the invention," as used in patent parlance, always refers to what is recited in the claims of the patent. A patent is restricted to the specific device shown to the extent that its claims limit themselves by details: in other words, a claim which specifies such details as a chain drive and members bolted together is not infringed by a corresponding machine having a belt drive and members riveted together.

Windshield Wipers. The basic idea of a pneumatic motor connected to the intake manifold of an automobile engine for swinging a windshield wiper arm was patented in the early '20s by Fred and William Folberth. Their patent disclosed a piston type motor with rack and pinion connection between the piston and the wiper, but its basic claim covered *any* type of motor operated from the intake manifold for swinging the wiper.

A man named John R. Oishei hit upon and patented the idea of using, in the Folberth organization, an arcuate motor, having a swinging vane directly connected to the wiper arm. As compared with the Folberth design, the Oishei motor could be stamped out cheaply, and the rack and pinion structure was eliminated; the vane type motor would also deliver more driving power to the wiper arm than did the piston motor.

However, Oishei was stymied: he could not manufacture without infringing the Folberth patents, and the Folberths refused to license him. He finally had to buy the Folberth patents in order to market his own invention. Likewise, all subsequent inventors of improvements in pneumatically driven windshield wipers have had to obtain licenses under these and other patents, as long as they were in force.

On the other hand, the earlier patentees regardless of the breadth of the claims in their own patents, have no right to adopt the improvements of their successors. The Folberths, for example, could not adopt the Oishei motor without infringing the Oishei patents. There may be numerous improvement patents which continue to dominate certain aspects of a field long after expiration of the basic patents.

An Infringement Search. A high percentage of patentees will find themselves in

nipulation of a patent will subject the owner to criminal indictment.

Attempts to Expand Patents. From time to time, the courts have found it necessary to curb patentees in their attempts to expand the effect of their patents. Shrewd attorneys have attempted to enlarge the domain of patents, but in the end their efforts have been foiled.



One tack was an attempt to extend the patent monopoly to embrace unpatented products. The patentee of a camera or moving picture projector might seek to make the purchaser also buy films from him. Mimeograph and typewriter outfits have tried to get a cut on the paper used in their machines by requiring that it be purchased from the manufacturer of the machine.

This series of attempts to expand patents was finally terminated by the U. S. Supreme Court decision some 30 years ago in the Dry Ice case. The inventor of a paper package usable in transporting frozen foods, such as ice cream, was attempting to force purchasers of such packages to also buy dry ice from him. The ice itself was common in commerce prior to the invention of the package.

The court ruled that the owner of a patent "may not exact as condition of a license that unpatented materials used in connection with the invention shall be purchased only from the patentee. Control over the supply of such materials is beyond the scope of the patentee's monopoly."

Attempts at Price Control. Inventors have likewise tried in vain to make use of patents as a means of maintaining a fixed price for their products, in both original and re-sale transactions.

The owner of a patent may, of course, deal desires, simply lease the apparatus of his invention for such time and under such terms as are agreed upon by him and the user. This is a policy followed by telephone, shoe, and business machine corporations. Sometimes, however, the courts have construed such so-called "leases" as being in fact sales.

Once a patentee consummates a sale, as by delivering his patented article for a gross consideration, the purchaser can do anything he likes with the article: he can use it 24 hours a day, re-sell it at any price he pleases, or even give it away. The patentee cannot exercise remote control over a product once he has sold it. These principles were established by the U. S. Supreme Court about 30 years ago in connection with attempts of a phonograph manufacturer to establish fixed prices on his products.

The rights conferred by a patent are threefold: that is, the exclusive rights to (1) make, (2) use, and (3) vend the invention. The courts have ruled that in selling rights under the patent all three phases must be included, so that the invention may be fully enjoyed by the grantee or licensee. In other words, the patentee cannot let to one person the right to make the invention only, and to another person the right to use it only.

The Sherman Act was passed by Congress in 1890. The purpose of the act was to assure free, competitive enterprise. Chief Justice Hughes described it as a "charter of freedom" . . . a charter which guarantees to the public freedom from domination of monopolies and freedom to engage in business on a fair and equal basis. On the other hand, patents at once bestow a monopoly upon the patentee. Obviously these two great laws, one dedicated to free competition and the other granting



Patent Protection in Foreign Countries

THE holder of a U. S. patent is protected only in this country. There is no such thing as an international patent. You must file a separate patent application in the patent office of each country where you desire protection.

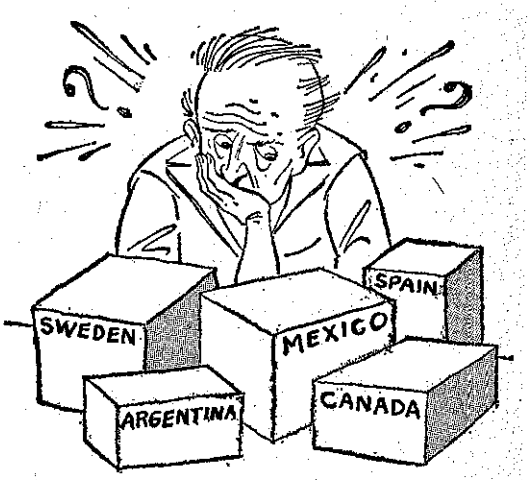
Laws of many countries differ from those of the United States, and even from each other. In most lands, publication of the invention before the date of the application will bar the right to a patent. Also, many fees are due after the grant of the patent. They are usually annual and increase in amount each year.

A common requirement is that the patented invention must be manufactured in that country after a certain period—usually three years. If not the patent may become void or be subject to the grant of compulsory licenses to any persons who may apply for license.

In the case of inventions made in the U. S., you should obtain a license from the Commissioner of Patents before applying for a patent in a foreign country. Such license is required if the foreign application is to be filed within six months of filing an application in the U. S. Your request for a license may be a simple letter referring to the U. S. application if one has already been filed.

After six months from the domestic filing, a license is not required unless the invention has been ordered to be kept secret. In the latter event, consent to the filing abroad must be obtained from the Commissioner of Patents as long as the order of secrecy is in effect.

In addition to these hurdles, application for patent in a foreign country depends upon the



commercial possibilities of your invention there. It would be silly to apply for patent on a coal mining machine in a country like Sweden which has little or no coal deposits. A patent on a paper-making machine may be important in Canada or the Scandinavian countries, but of no practical value in Spain. Some devices like TV, watches, typewriters, etc., have sales potential in almost any country. Another factor to consider in taking out foreign patents is the expense. It costs as much, and sometimes more, to obtain a patent in Canada, for example, than it does to do it in the U. S.

The U. S. Patent Office cannot assist in filing foreign applications. However, a number of patent attorneys specialize in this work for American clients.

In general, an inventor should satisfy himself that he could make some profit from a foreign patent or have a particular reason for wanting it before he makes application.





The Bugaboo of Infringement

What infringement really is, and what to do about it

A PATENT bestows upon the inventor and those taking title under him the right to exclude all others, for a period of 17 years, from making, using, or selling the invention covered by the patent within the United States and its territories.

Every patent concludes with one or more claims defining just what is new in the invention and, therefore, protected by the patent. Invasion or violation of the rights secured by such claims is termed "infringement." To the manufacturer the fear of infringement constitutes a prime bugaboo.

Under the Patent Act, the owner of a patent may sell rights to his patent. Against those to whom he has not transferred rights, he may (1) obtain an injunction to prevent infringement or the continuance of infringement: he is also entitled to (2) an accounting of profits made by the infringer, and (3) recovery of damages sustained by the patentee.

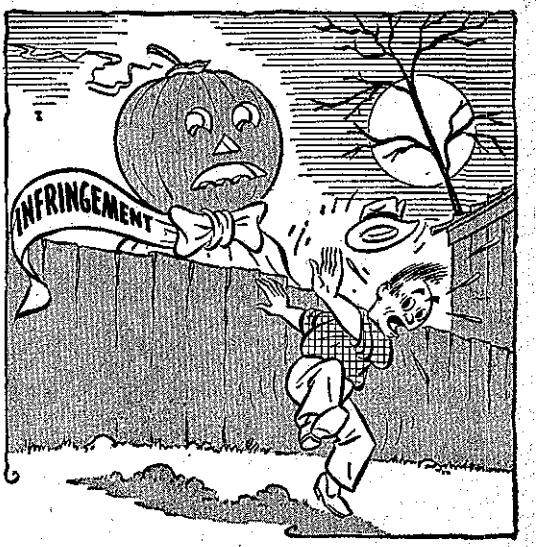
In cases of overt infringement, the court is empowered to allow punitive damages to the point of triple the actual damages. Also, where suit for infringement is decided in favor of a patentee, the defendant is charged with all the court costs—but not lawyers' fees.

The Law Imposes Obligations upon the patent holder to guard the public against unknowingly invading his domain. He is required to "give notice to the public" by marking each article produced under the patent with the word "patented," together with the number or date of issue. When from the character of the article this cannot be done, he is required to attach to it or to the package containing it a label bearing equivalent information.

If the patentee markets the article covered by the patent without proper patent notice stamped thereon or attached thereo, no damages can be recovered for infringement during the period when the article was sold without such notice, except on proof that the defendant was duly notified of the infringement and continued after such notice to make, use, or sell the thing patented. Even if the patentee properly marks his articles, failure to give notice of an infringement, when known to him, precludes recovery of damages suffered prior to giving notice, or instituting suit.

Falsely marking an article "patented" is punishable by a fine of "not less than $100 for every such offense." Manufacturers may continue to stamp their products "patented" after expiration of the patents, but this has no legal effect.

Owner Enforces Patent. As long as the patentee has fulfilled his duties under the law, it is of no consequence that the defendant was unaware of the infringement—he can be held liable. But patents are not self-executing, and the owner must always be on the alert to enforce his rights. This should be attempted, in the first place, by direct negotiation with the alleged infringer; if an agreement cannot be reached, the patent holder may resort to the courts.



Patent applications and "patent pending" notices have no legal effect, and cannot support a charge of infringement. There must be a valid patent to sustain a suit, and the infringement must have occurred during the life of the patent.

If your patent is infringed, it is futile to write letters to the Patent Office, since the function and jurisdiction of the office is solely to grant patents. Once a patent is granted, the Patent Office authority ceases. All further matters concerning the patent must be taken up with the courts. For example, those concerned must take responsibility for infringement searches and validity searches.

Infringement and Validity Searches. Do not start to manufacture anything—not even a device for which you have been awarded a patent—until you are sure that your product avoids the claims of all unexpired patents: otherwise you are exposing yourself to injunctions and a possible suit for infringement.

When you contemplate marketing a new product, have a patent attorney make an infringement search at the Patent Office to ascertain whether the product will infringe any

ses.

Claims to articles, machines, and combinations may be regarded as but word pictures the physical structure, revealed in varying tail and giving degrees of protection to the tentee, with one claim emphasizing each ature. Compositions of matter and chemils are generally set out in the claims by eir technical names or by structural formu. Varying proportions of ingredients do t evade infringement of chemical compound tents.

In contradistinction to patents upon unitary vices such as a meat chopper, some patents e granted to cover combinations of devices, me or all of which may be old individually, ovided the combination produces a new sult—or an old result in a more facile or icient way.

A claim might tie together (1) an oil burner any standard type, (2) a thermostat, also common design, and (3) a novel interntrol system between the thermostat and e burner. Obviously, any type of burner thermostat may be substituted in the comnation, and such is within the purview of e invention. Where a combination of eleents is recited in a claim, omission of any aterial part of the combination claimed will oid infringement.

Process and Improvement. A claim to a ocess is infringed by anyone who, without rmission from the owner of the patent, uses



bstantially the procedure recited in the aims of the patent. Since a process or methd concerns procedure only, the fact that one es not employ the apparatus disclosed in ie patent is of no consequence.

A process claim is not infringed if one of lent step is substituted, there is infringement. Where the process is performed outside the United States and the thing produced is brought into this country, there is no infringement of a process claim: but a patented *article* made abroad can infringe when brought into the country.

The fact that the infringing device is an improvement of material consequence over the patented article is of no moment in the matter of infringement. Nor is it significant whether the improvement arises from a reorganization of the patented device, an addition to it, or omission of parts of it. If the manufactured device falls within the boundaries set out in the claims of the patent, there is an infringement.

Avoiding Patent Claims. Rival manufacturers sometimes evade a patent by altering the structure or design of the product so as to avoid claims. This is a perfectly legitimate practice. But it should be remembered that changes must be substantial, and that difference in form or appearance will not ordinarily avoid infringement; nor will transposition of parts, nor change of proportions.

The courts recognize that one should not be permitted to imitate a patented invention and avoid liability for infringement simply because he has departed from the patent by means of trivial changes. To prevent the stealing of the benefit of an invention by such means, the courts have adopted the "doctrine of equivalents." However, the courts will not give a claim an enlarged scope that was expressly denied it by the Patent Office; and where the patented device has never been commercialized the courts tend to interpret claims strictly.

Under the doctrine of equivalents, in a case where the inventor of a printing press inadvertently recited "grippers" to lead the paper through the press, a copyist who employed well-known "pins" for the same purpose was held to infringe the patent. What constitutes equivalency must be determined from the context of the patent, the prior knowledge and practice in the art, and the particular circumstances of each case.

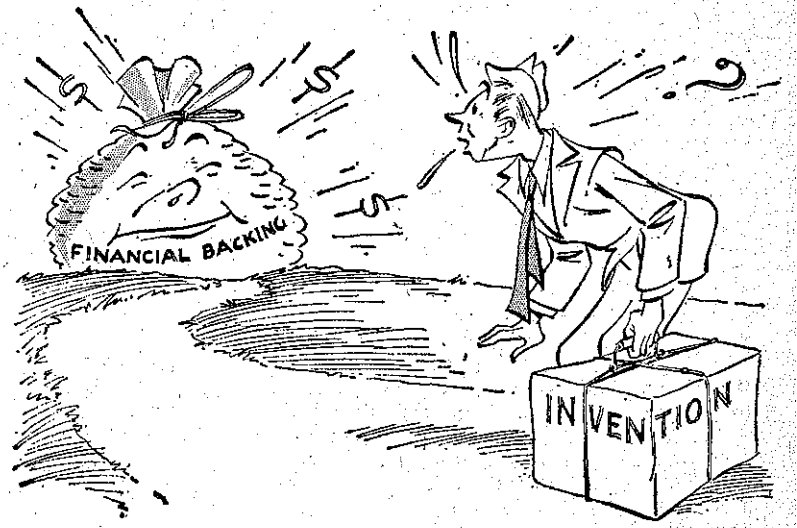
In one case the inventor of a welding flux recited in his claim that it included a combination of "alkaline earth metal silicate and calcium fluoride." The rival formula included "silicates of calcium and magnesium." The U.S. Supreme Court held that the substitute materials did not avoid the patent.

Contributory Infringement. Another situation where the courts will hold one guilty of infringement, even though the claims of the patent have not been invaded literally, is in so-called "contributory infringement." If a person sells all the parts of a patented machine in knocked-down condition, knowing that the buyer will assemble it into the pat-

Securing Financial Backing

he fine art of nailing down that elusive haracter—the backer—and closing the deal

ly ALAN MONTAGUE



HOW do successful inventors finance their inventions? When they are short of cash, who supplies the backing? Do inventors who have models made of their ideas feel that the model helps them secure money needed to develop and sell the invention?

To bring you solid answers to such questions, we surveyed 840 inventors who have succeeded in lining up financial backing.

That 840 may sound impressive, but actually it represents only a fraction of the number of inventors who secure cash each year to cover development and sales costs. On an average, the Patent Office records about 30,000 assignments and other conveyances every year, indicating that a substantial number of inventors are either securing backing or selling their inventions outright.

The answers we obtained in our survey may help you in your search for financial backing. We present them here in the order in which the questions were asked, so that you can get the complete picture as to the inventor and his idea, the type of man he found would back him, and what he used to sell the backer on putting up the necessary funds.

Occupation of Inventor? The inventors surveyed represented a wide range of occupations. Quite a few were machinists and mechanics, as might be expected. But the group also included farmers, carpenters, and plumbers, a building contractor, a smelter maintenance man, a vice-president in charge of engineering, an apartment house superintendent, a machine developer, and an occult scientist, to name a few.

In general, the inventors seemed to have come up with plans connected with their respective trades or professions. They saw a need for a device and developed it.

Did the Inventor Make Drawings? Over 81% of the inventors replying to our survey either made drawings of their ideas, or had them made. A few were apparently unable to make drawings or have a draftsman prepare them; others, whose inventions were formulas rather than mechanical in nature, did not need to have drawings made.

Most of those who did have drawings made knew enough to make sure they were sketches rather than blueprints. Sketches or illustrations which play up the new and presumably patentable portion of the invention do a better job of selling the prospective backer and helping the patent attorney to understand the invention. Blueprints or working drawings are a nuisance to patent attorneys, and the Patent Office will not accept them; also, the manufacturer who buys an invention prefers to develop his own blueprints.

Are Models Worthwhile? Some 50% of the surveyed inventors made their own models, and another 31% had professional models made of their inventions. Some who had models made for them reported model costs ranging as low as $10 to $85. These seem like extremely modest figures until you realize that the inventions involved were very simple. The $85 model, for example, was of a new type of plumb bob. If an invention is at all complex, the model-making costs on it can easily range from several hundred up to several thousand dollars.

Over 50% felt that a working model was necessary. But many emphasized that a poor model was worse than no model at all when dealing with a manufacturer or a prospective backer. To sell, the model must be sturdy, work well, and look attractive. If you can't



aws, he would have no trouble getting fi-
ancial assistance. Of course, it is best to con-
ıct those who are mechanically inclined so
ıey can understand what you are proposing."

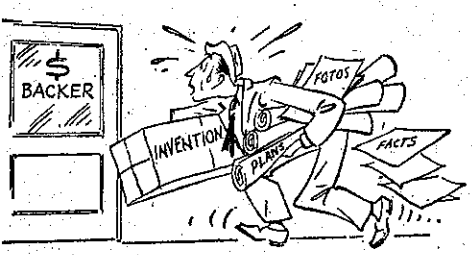
Why Does the Backer Back? How did the
ıventors convince their backers it was time
› open up the checkbook? Did they talk
ıem into coming in on the basis of helping
ıt the struggling inventor? The answer is
resounding no.

Only one backer of the group of inventors
e surveyed provided the money to help
ut, and that was for his own brother. In
ıe rest of the cases (including the 56% who
›t their money from outsiders *and* the 25%
ho got it from relatives), the backers put up
ıe money because they wanted to make
ıoney.

That should indicate that backers are prac-
cal men. It should also provide you with
›me clues as to the best way to approach
ıem—with as many sound facts and figures
›out your invention and the potential market
›r it as you can obtain.

The Approach. First, you have to decide
hether you want to march in "cold turkey"
ı your prospect or wait until you have gotten
"build-up" through the medium of a mutual
:quaintance. The first method keeps the
ıatter reasonably confidential; the second
uilds confidence and helps pave the way.
ur surveyed inventors used both methods,
ıe actual choice in each case apparently de-
ending on how effective they felt the build-
p would be, and how confident they were of
ıeir own sales ability.

On the latter point, always remember that
you have a good invention it is worth just
; much as the other man's money. Most in-
ıentors who are convinced of the value of



their inventions surprise themselves by find-
ing out they are better "cold turkey" sales-
men than they thought.

One thing became clear from an analysis of
the responses we obtained from these success-
ful inventors: Once you are sitting across the
table from your prospect, you must have the
facts—all of them—and be ready to go into
detail answering questions. You'll find that
the prospective backer will ask a lot of ques-
tions before he will be willing to part with
any cash. So have handy your search report,
either drawings of the invention or a model,
and some sort of commercial survey, if
possible.

A Commercial Survey. Many an inventor,
once he gets his big idea, tends to leap to the
conclusion that "everybody will want one"
of his wonderful widgets. The truth is that
a lot of people won't want it, and many
of them couldn't care less what you have
invented.

So, when your prospect for financial sup-
port springs the question, "What makes you
think a lot of people will want to buy this
widget?" you will need to have some ammu-
nition to fire back at him. Here is where a
commercial survey comes in. It can be an
elaborate survey of consumer reaction to
your invention conducted by a firm which
specializes in such work. Since this would
probably cost more money than you are
seeking to obtain from your backer, however,
it would not be likely to serve your purpose.

Instead, you can conduct your own survey.
If you have invented a household gadget or a
toy, you can get a couple of helpers to ring
doorbells and ask housewives what they think
of the device, and what they would be willing
to pay for it.

At the same time, you can go to dealers,
jobbers, wholesalers, and others in the line
of business to which your invention relates.
Ask them whether or not they think it is an
improvement over other articles designed to
serve the same purpose, get their estimates
on what the demand is likely to be, the cost
and discount structure, and at what price the
item could move in the competitive market.

Make Notes of all the information you ob-
tain, so that you will have it down in black
and white. And when you note down a man's
opinion, also record his name and address. A
favorable cross-section of expert opinion on
the commercial value of your invention will
be a big help when you approach a prospect,
so have it neatly typed and attach it to your
search report.

Incidentally, if you plan to do your own
survey work and don't know where to start,
talk over the situation with the secretary of
your local chamber of commerce, or with
local bankers or lawyers. These men will be
able to tell you where to go, and who to see.

One word of warning: If you haven't filed

would turn over all rights and claims in return for a Collins (KW) kilowatt transmitter and receiver, plus a small percent of royalties. I don't know how to raise money or contact any big shots. What suggestion have you?

A. Well, your offer to trade the invention for a radio transmitter is novel, but it is doubtful whether any hams will take you up. Our surveys on this subject (we have made three) all indicate that your best bet is to seek a partner among the local business or professional men. You have played it smart thus far in getting a search made: you have favorable correspondence from your patent attorney, and this is all to the mustard.

Now you should make (or have an artist or draftsman make) some good, clean, intelligible drawings, and get somebody with a typewriter to prepare a description. Put these into a file folder and carry it around to a local banker, or the secretary of the nearest chamber of commerce. One of them can probably put you in touch with some business or professional men with funds to invest. When you get a backer, have a local lawyer draw up partnership papers. Do not assign a portion of the invention to your backer, as an assignment can lead to all kinds of trouble. Go into partnership, instead.

Backer's Percentage

Q. I am not financially able to apply for patent. If a backer puts up the money to get one, what percentage should he demand?

A. There are no established schedules to cover your question. Usually, in such a case, the percentage is reached by negotiation, based on the various factors and risks. First, you have little better than a 50-50 chance of even getting a patent. Other considerations include the amount of money your backer has to shell out, the likelihood of your invention being hamstrung by infringing prior patents, and the sales and profits to be expected. As a blind estimate, it would seem that a backer could demand at least a half interest.

Confidential Relationship

Q. My problem is that I have a humdinger of a toy for kids, but no money for a patent. I will have to try to sell it unpatented to some company, but is there any way I can keep them from stealing it?

A. First try to get a local partner who would pay patent costs in return for a share in the profits. If you cannot do this, write "feeler" letters to manufacturers, getting them to ask to see your drawings or models. When they ask to see your stuff, it sets up what is called a "confidential relationship" wherein, if they use your idea, they owe you for services rendered regardless of patents or patentability.

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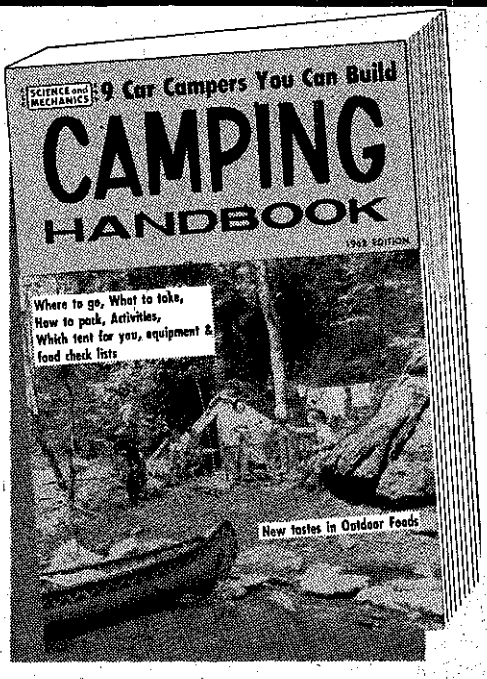

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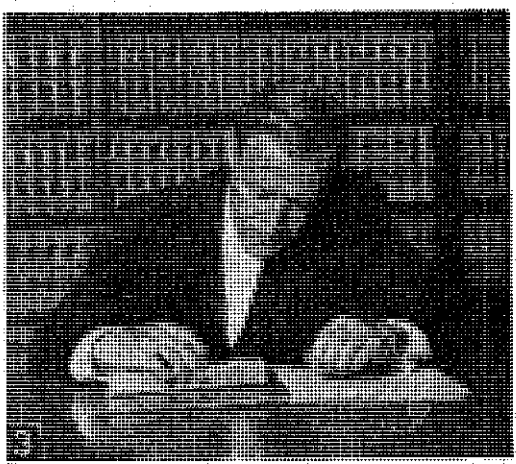
Martin Pollak (left) and Jerome Feldman, founders of National Patent Development Corp., discuss some of the items they're handling.

ers—Jerome Feldman and Martin Pollak -heard about a unique kind of plastic. It ıoked and felt like sponge rubber and would ɔak up large quantities of liquids from ink ı floor wax, then give them back a little at time when squeezed. Among other things, could be used to make a rubber stamp that ould make over 50,000 impressions and still e going strong without refilling. (The stamp now marketed in parts of the country.)

Feldman and Pollak, intrigued by the idea nd brimming over with thoughts about uses ɔr the substance, got in touch with the com- any that owned it and offered to buy the atent. The company refused to sell but greed to let the partners discuss licensing ıe invention to other manufacturers. They rst got in touch with a leading cosmetics ıaker who was interested in the spongy ma- ɛrial as a lipstick applicator. Trouble came hen the owner of the patent and the cos- ıetics firm each told Feldman and Pollak to ɒ to the other party for their commission.

A Whetted Appetite. With no prospect of etting paid for their trouble, the partners ɛt the deal drop. But their appetite for the atent business has been whetted. The U. S.



Here's the talking book. Text is under left hand of Michael Samek, National's vice president in charge of sales. To hear what is on book's sound track, put reader in place and press button on top, as Samek is doing. Current version is much smaller than this early model.

Uncle Sam Needs These 244 Inventions—and More

How the National Inventors Council works to bring your idea before the proper branch of government

ALTHOUGH an estimated 150,000 Americans are bitten by the invention "bug" each year and some 50,000 patents are anted, the United States government at this oment is looking for appropriate solutions over 800 problems that up to now have umped the experts.

Well over 225 of these urgently needed ventions are briefly described on the list the following pages. Let's suppose, now, at you have invented one of these items, have a sound idea for solving some prob- m on the list. What do you do about it? You'll want to know what government ency would be interested in your idea or vention. You'll probably wonder whether ou should submit a description of your idea wait until you have secured a patent on it. Then there's the big question: Will the overnment actually buy your idea or inven- on, or will it expect you, as a loyal citizen, donate it?

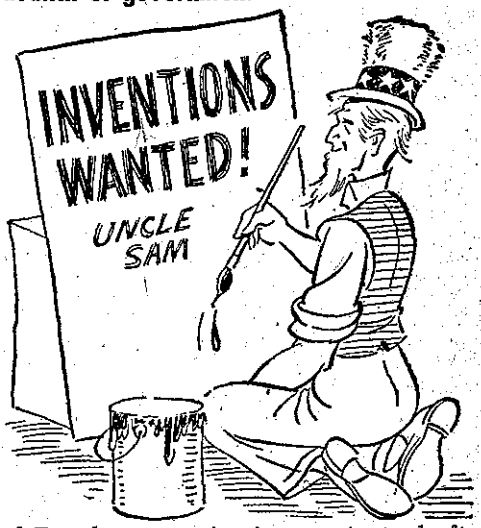
Suppose we consider these questions in verse order by tackling the big one first. ne answer is that the government does not ıy patents or ideas in the sense that they ould buy a piece of merchandise at a store. ne only way you can be *sure* of collecting is get a patent on your idea, and then, if the overnment is using it, sue the government the Court of Claims.

That sounds like a tough procedure and, in actice, it isn't always necessary. Since all e boys in the government do not have full own horns and a tail, they will frequently ork out a pretty fair deal for you.

Here's an example of such a deal concern- g an Army land mine detector. Because the ventor had a patent, it was a fairly easy ing for Army authorities to urge upon con- actors that they do right by the inventor. Right" in this instance added up to pay- ents of about $30,000 to the detector's in- ntor.

In other cases, inventors were brought in ıd put on the government payroll as con- ıltants. How highly the recipient would gard this type of compensation would de- nd entirely on his personal situation. It ould look like a bonanza to one man; an sult to another.

Under war conditions, it sometimes worked ıt much to the benefit of the inventor. A fugee French engineer, for example, got a od job with the Navy's Bureau of Research



and Development. An Army private drafted out of engineering college made a worthwhile suggestion and was rewarded with a transfer to Wright Field where he ran up an impressive record while engaged in aeronautical research.

Again, a consulting engineer from New Rochelle, N. Y., invented and *patented* the mercury dry cell used in walkie-talkies. While the record does not show what kind of a deal he made, he did report the remuneration from the contractor as "satisfactory." He also received the Certificate of Appreciation—a sort of one-man "E" award.

This man's experience is probably typical of the steps that you should take. First, he found out from the National Inventors Council what to invent. Second, he invented it. Third, he got government approval on the idea. Fourth, he applied for a patent. Fifth, he sold the patent to a manufacturer who then obtained a government contract for supplying the item.

In short, as things stand, there is still no substitute for a patent.

What Is the National Inventors Council? This might well be your next question. It is a civilian agency of the government established in 1940 by the Secretary of Commerce to pass on inventions of potential value to national defense or the national welfare. Prior to that time, inventors had to search out the particular government agency that might be interested in their patent, and many

(Continued on page 140)

Problems That Have Stumped the Experts

Abridged from "Inventions Wanted" cumulative list compiled by National Inventors Council

ELECTRICITY AND ELECTRONICS (continued)

22. Counter Enemy Jamming Transistors Over 50% Efficient as UHF Oscillators
99. High-Angle Direction Finding Techniques
74. Broadband Maser Amplifier for Microwave Region
76. Reliable Long-Life Cathode (100,000 hrs.)
00. Transmission of Speech on Teletype Circuits
24. High Power, Broad Band Solid State RF Amplifiers
57. Solid State Microwave Oscillators
64. High Power Instant-Tuning Resonant Circuit for VHF
69. Machine to Seal Glass-Enclosed Crystal Units
77. Transistor to Operate Well in Excess of 250° C.
01. Radio Noise Elimination Without Distorting Signal
46. Automatic Transmission Equalizer
57. Smaller RF and Video Cable Connectors
71. Millimeter Wave Generators and Amplifiers, 10 Watts
11. Low-Energy, Reliable Switching Device
91. Audio Signal Completely Different from Present Sirens, Horns, etc.
1513. Fast Linear Recorder for Echo Sounding
1540. Electrocardiogram Electrodes, Non-Irritating
1572. 25-*kc* Frequency Spacing for VHF Communications

Fuses, Detonators

818. New Energy Source for Firing Rockets
827. All-Weather Fuse for Initiating a Projectile

Light and Infrared

588. Light Source of High Brightness (3000 candles mm²)
648. Infrared Transmitting Materials
731. More Sensitive Infrared Detector
744. Electromagnetic Radiation Receiver
825. Radiation Source in Infrared and Visible Spectrum
950. Aircraft Carrier Deck Lights
1375. Repetitive Light Source for Night Aerial Photos
1493. Continuous Low-Level Light for Family Shelters

Power Supplies

536. Efficient, Compact, Light, and Quiet Power Source
741. Constant Frequency, Variable Speed ac generators
1324. High Energy, Long-Lived 24-Volt Power Supply
1327. Efficient Transmission of Power Through Space
1398. Electrically and Acoustically-Silent Battery Motor

Radar, Tracking, TV

896. Underwater Target Detection Other Than Sonic
575. Supersonic Radome Immune to Dust, Rain, Ice Erosion
597. New Tracking Methods of Test Vehicles in Space
656. Radar Performance Measurement Above 10,000 *mc.*
660. Three-Dimensional Device to Show Missile Projectory
723. Method to Overcome Radar Line of Sight Limitation
914. Electronic Distance Check
1358. Lightweight Housing for Radar Beacons
1511. Surface Navigation System Accurate to 1000 Ft.
1568. Pilot Warning System to Prevent Mid-air Collisions

Miscellaneous

909. Absolute Time Synchronizer for up to 1000 Miles
1444. Erasable Magnetic Tape with More Storage Density

INSTRUMENTATION, TESTING, AND MEASUREMENT

Aviation and Missiles

113. Simple Indicator to Determine the True Vertical
95. Odor Measuring Devices for Military Aircraft
48. Method for Measuring Gross and Net Thrust in Flight
50. Airborne Wave Height Indicator for Seaplanes
66. Simple Altimeter to Measure Height to 500,000 Ft.
29. Continuous Jet Fuel Contamination Detector
70. Single Device to Simplify Flying by Instrument

Computers and Data Systems

944. Digital Telemetry Transducers for Guided Missiles
379. Low Speed Field Data Printer, Pocket-Size

Materials Testing

572. Pre-Stress Measurement in Nut and Bolt Assemblies
573. Non-Destructive Adhesion Tester for Bonded Joints
301. High-Temp. Strain Gauges
396. Flaw Detector in Ceramics
107. Corrosion Test for Protective Finishes
157. Non-Destructive Test for Bond Strength.

Meteorological

593. Fast Measurement of Water Content of Clouds
594. Sensing and Measurement of Atmospheric Moisture
607. Non-Radiating Device to Measure Wind Velocity
716. Probeless Atmospheric Sounding System
993. Non-Radiating Wind-Finding Device for Reconnaissance
1062. Automatic Cloud Height Recorder for Weather Radar
1517. Humidity Measuring Device (Simple, Light, Accurate)
1519. Maximum and Minimum Air Temperature Checker
1520. Device to Measure and Telemeter Snow Depth

Optics and Photographics

705. High Speed Film for Exposures in Light of Full Moon
748. Underwater Observation Device for Turbid Water
912. Automatic Mapping System from Aerial Photography
972. Reusable Photographic Storage Medium
1090. High Speed, Large Frame Cameras
1376. High Speed Shutter, Between-the-Lens Type
1547. Camera to Operate in Temperature Up to 2000° F.

Misc. Tests, Measurements

709. Dry Battery Tester to Predict Life Under Load
788. Quick Way to Determine Deviation from Plumb
819. Electronic Timer, 0.1 micro-second to 0.9999999 second
933. Moisture Indicator for Concrete Sand Mixture
1048. Device Warning of Infectious Particles in Air
1098. Instant Air Purity Meter
1248. Device to Measure Pulse Rate and Send by Radio
1392. Automatic Fuel Contaminant Sensor and Separator
1425. High Temperature Feedback Potentiometer for Missile Servo Systems
1452. Field Strength Meter for High Level RF Fields
1458. Electromagnetic Radiation Warning Device
1463. Quick Test for Moisture in Solid Propellants
1479. Recorder to Measure Shock Applied in Any Direction
1512. Ocean Bottom Analysis, No Depth Limitation
1514. Deep Sea Current Measuring Device
1531. Liquid Propellant Mass Flow Rate Meter
1541. Blood Pressure Test Not Entering Body

METALLURGY AND METAL FABRICATION

Metals and Alloys

317. Lighter Gun Metal to Reduce Weight of Barrel
353. Low Alloy Steel for High Strength Gun Tubes

Coatings

562. Protective Coat for Magnesium in Marine Environment
628. High Temperature Protective Coat for Stainless Steel

Processes and Fabrication

1466. High Temperature, High Stress Materials
1471. Fabrication Techniques for Refractory Metals

NUTRITION, MEDICINE, AND CLOTHING

Clothing, Equipage, Tentage

194. Device to Protect Head and Face Against Cold
505. Self-Adjusting Clothing Insulation
509. Waterproof Case Liner for Clothing
511. Protective Materials Against Flame
586. Cold Weather Field Sleeping Gear, Frost-Free
027. Cold Weather Rocket Fuel Handler's Clothing
1188. Light Personnel Tentage for Multi-Field Operations
1189. Portable Maintenance Tentage for Trucks, Tanks, etc.
1190. Expendable Tentage for Mobile Combat Situations

Environmental Protective Research

726. Personal Cooling Device for Use in Protective Suit
1198. Improved Military Footwear Design
1208. Improved Ways to Estimate Relief and Average Slope
1212. Means to Predict Energy Requirements of Soldiers

Personnel Armor and Protective Devices

1044. Resuscitator Quick-Connect Device to Gas Mask
1046. Eye Armor Against Flash Blindness from Explosion
1053. Protective Garment Barrier Against Toxic Fumes
1186. Clothing Protection from Thermal Radiation

ork has been so highly constructive that the my, Navy, and other branches of govern- ent now regularly submit to it lists of those oblems to which they are seeking solutions, d definitions of those areas of invention in ich they wish to seek out any develop- ental work that has been accomplished.

During the World War II years, the Na- nal Inventors Council was largely respon- le for the fact that 208,975 inventions and eas were evaluated and 13,887 interviews ere conducted with inventors or their rep- sentatives. Of this total, 8615 of the ideas ere considered of sufficient value to place the classified files, while more than 5000 ere sent to the armed services or war encies for review.

Further sifting by tecbnical experts in the rvices reduced the number to 757 which ere considered worthy of further investiga- n, development, and testing. By the end June 1946 a total of 106 items were actually production, while at least as many addi- nal items were still under investigation. ese are but the known figures. Many other eas were undoubtedy used, but security asons prevented public disclosure of any formation about them.

How the Council Helps Inventors. A cur- us inventor might well wonder why he ould deal with the council instead of di- ctly with the government agency which ight be interested in his idea. There are ree very good reasons:

First, the staff of the council has good per- nal contacts throughout the government. hey know "the man to see" and can get rious consideration for your invention, here you might just get chased from one erk to another.

Second, the council will—if your idea looks od, of course—go all over the government ith it. The mere fact that both the Army and avy might turn down an idea could easily ake an inventor drop his idea, but the coun- l will not necessarily take no for an answer.

One example will show how this can work. arly in the war, a young officer of the Coast rtillery came up with the idea of equipping ght planes with hooks so that they could land" on a stretch of wire between two sup- orts. Both Army and Navy vetoed the idea, ut the council thought otherwise and con- nued to shop around other government de- artments.

Nobody wanted the idea until the council ok it to the super-secret Office of Strategic ervices. There it was an instant hit. It was ast the thing the cloak-and-dagger boys eeded to get spies in and out of enemy ter- itory. They took the idea immediately and ne other services subsequently made use of .

Third, by dealing with the council you are papers relating to your invention are safely filed in one place. If you start writing all over the lot to various government agencies, the stuff may get lost, or at least filed where it will never do you any good. On the other hand, if you have everything on file with NIC, you can get certified copies which may be of great value in subsequent cases of interference or infringement.

How to Submit Your Invention. In examining the list of needed ideas accompanying this article, remember that these are all problems that have "stumped the experts." There are many numbers missing from the list in addition to those merely omitted for lack of space. This means that hundreds of such seemingly "hopeless" problems have already been solved or by-passed. So, if anything on the list looks like an opportunity to you, write to the National Inventors Council, U. S. Department of Commerce, Washington 25, D. C., and ask for the following free material:

1. Information Bulletin,
2. Technical Problems Affecting National Defense, and
3. Disclosure Form.

This material will help you to organize things. There is no legal requirement that you use the disclosure form, but you might as well, in that it will set the matter up in a form familiar to the personnel of the council, and consequently smooth out the consideration of your case.

While you could and should use the disclosure form, you should bear in mind that it gives you no legal protection. Accordingly, it would be wise to have your patent attorney prepare and file a formal patent application for you in the usual manner, and then attach a copy to the council's disclosure form. If you don't file a patent application, you have no legal basis on which to seek remuneration from the government.

In addition to your application, attach copies of all pertinent blueprints, descriptions, arguments, suggestions, etc., that you may have. This is a *selling* job, not a formality. And, if you have or get an actual patent, send in a copy.

What If Your Idea Is Not Worked Out? If all you have is an idea, write a letter to the council telling what problem you seek to solve and how far you have gone. The matter will be referred to the proper agency (Army, Navy, or Air Force) to get you more information on which to work. Clearly enough, the council is not inviting boob inquiries, but it has declared that "an intelligent inquiry will get an intelligent answer."

No special forms are required for submitting ideas, NIC points out, nor is it necessary to engage an attorney. Each proposal should be submitted separately, in English and preferably typewritten. Make each description as

Idea to Market

Quick answers to 101 leading questions

HERE are brief answers to the questions most likely to come up at some time or other during the period between the riginal idea and sale of an invention. Use iem as a quick means of checking your own nowledge of the inventor's problems. For iore detailed information, please turn to the age indicated at the end of most answers.

. Exactly what is a patent?

A patent is a grant from the U. S. governient to the inventor, giving him the right o exclude others from making, using, or elling his invention for a period of 17 years. *More on p. 11.)*

. Is a patent a monopoly?

No. A patent is simply a limited right in ne particular invention, for a limited time. Vhen patents are misused as part of a conpiracy to create a commercial or industrial ionopoly, the federal courts may break it up nd force the guilty parties to issue licenses r reasonable terms to all who seek them. *More on p. 119.)*

. Can I protect my invention with a opyright?

No. Copyrights are intended, in general, to over printed matter only. If you print and opyright a plan or description of your in-'ention, you may lose all rights to your nvention itself, and be left holding the bag vith nothing but the worthless right to your rinted description should you fail to follow ip by filing your patent application within ne year from the date of publication. There s one exception: If your invention is of an rtistic nature (a sculptured lamp-base, for xample) copyright protection may be avail-ible, and may be very valuable. If you are i sculptor or industrial designer, take this up n detail with a good copyright attorney. *More on p. 105.)*

. How about getting a trademark?

Trademarks don't protect an invention. Instead, they are intended to protect a manufacturer's goodwill when his merchandise is listributed in commerce. The inventor should waste no time or money on trademarks, nor should he wrack his brain trying to think up some fanciful name for his invention, until he is ready to manufacture and market his device. *(More on p. 93.)*



5. How can I protect my invention without a patent?

You can't. There is no provision in American law for protecting an invention by anything except a patent. Of course, you may keep your invention a secret. Some people have done so successfully—as in the case of a machine which may be operated in a locked room by the owner himself, or a condiment or soft drink where the owner can drop a secret ingredient into the mixing vat. But if someone else thinks of the same machine or same ingredient and goes into competition, you have no way of stopping him. *(More on p. 115.)*

6. Well, how about getting some temporary protection?

Again, the answer is no. Years ago you could file a "Caveat" in the Patent Office. This was a sort of preliminary outline of your invention, the idea being that it would give you a priority date and then give you time in which to develop your invention in detail. Caveats no longer exist. *(More on p. 47.)*

7. As a practical matter, what can I do?

Keep a carefully dated and witnessed record of your work on your invention, and be sure to work on it steadily. File your patent application just as soon as you feel that you have your invention perfected in all important particulars. Then, even if somebody beats you to the Patent Office, your dated and witnessed record may prove your priority and be instrumental in having the patent awarded to you rather than to the other party. *(More on p. 78.)*

nything that has been previously used for the same purpose—and, furthermore, to possess novelty over the prior art, these differences must be rather startling. Small advances or improvements that would be obvious to a person reasonably skilled in the art are not considered inventions capable of being patented.



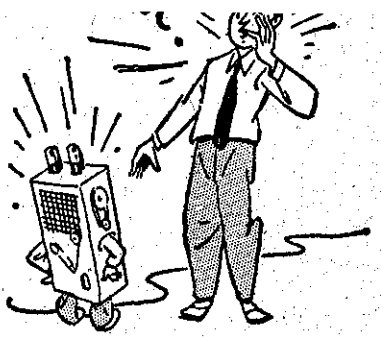
15. If it is not on the market, then isn't it patentable?

Over and over again inventors say, "I have studied the Sears and Ward catalogues, shopped Kresge's and Woolworth's and Western Auto Supply and can't find my idea anywhere. Since nobody is making or selling it, can't I get a patent?" The reasoning behind this question is pretty good. In some foreign countries you can (or at least could) get a "work-patent" which gives you a monopoly on a new product as long as you produced it in adequate quantity at a fair price.

This seems to be a worthwhile idea, but there is absolutely no provision for anything of the sort in American law. On the other hand, of course, this is where the trademark comes into play: If you put something exclusive on the market, and plug your trademark with heavy advertising, you may in effect build yourself a virtual monopoly. But, getting back to our original point, remember that mere absence from the market is no guarantee of patentability. *(More on p. 67.)*

16. What is the difference between an idea and an invention?

The words "idea" and "invention" are often used interchangeably, but in patent parlance there is quite a distinction. An idea is merely a mental concept of something that ought to be done, or could be done. An invention is a definite way of doing it. Thus a patent could not be granted on the broad idea of making marks on a sheet of paper, whereas patents have been granted on the invention of the pencil, brush, fountain pen, ball-point pen, or other writing instruments. Another way of saying it is that patents are not granted upon



the purpose to which a device is to be put, but upon the structure of the device. *(More on p. 33.)*

17. Who may apply for a patent?

Anyone, whether or not a citizen of the United States, may apply for and secure a U. S. patent, so long as he be the true and original inventor. If the inventor be dead, the application may be filed by the administrator of his estate, and if he be insane, it may be done by his guardian.

Note that only the true inventor, his administrator, or his guardian may apply. A person other than the inventor who applied for a patent would be guilty of perjury, and the patent would be void.

If two or more persons make an invention jointly, they may apply as joint inventors. Both parties, however, must actually make real inventive contributions; the mechanic or draftsman who contributes his technical skill, or the backer who contributes his money cannot sign the application as a joint inventor.

The financial backer's interests should be protected by means of a separate partnership agreement or contract. *(More on p. 11.)*

18. What is the first step to take toward obtaining a patent?

First make a sketch and description of your invention, sign it, date it, and have it witnessed by several people who fully understand it. A full understanding is desirable since these people may have to take the witness stand if your application runs into interference with another in the Patent Office. *(More on p. 112.)*

19. Are blueprints necessary?

No. Much time and money can be wasted in the preparation of blueprints at this stage of the game. They are even of doubtful value at any time, because the Patent Office has no use for them, while the manufacturer to whom the invention may be sold will probably want to prepare his own engineering drawings. *(More on p. 53.)*

The specification is a written description
f the invention and of the manner and proc-
ss of making and using it, and is required to
e in such full, clear, concise, and exact terms
s to enable any person skilled in the art to
hich the invention pertains, or with which
is most nearly connected, to make and use
ne same. Observe how this requirement
arries out the purpose of the law: It enables
ne public, after your 17 years are expired,
nd for all time thereafter, to understand
nd use your invention. *(More on p. 54.)*

30. What do you mean by the claims?

The claims are short groups of words stating precisely what you have invented. They are not advertising claims or functional statements. Thus, in the case of the better mouse trap, you would not be allowed to say, "My invention is the greatest thing in the world for catching mice." Instead, you would say something along the lines of this: "A base stirrup swiveled thereon, a spring actuating said stirrup, and means for releasably engaging said stirrup."

The writing ("drafting," as they call it) of claims in a patent application has been referred to by the Supreme Court as "one of the most difficult of all legal requirements to draw with accuracy," which is why this is a job for an experienced patent attorney or agent. *(More on p. 55.)*



31. Can't I at least make my own drawings?

Probably not. Blueprints will not be accepted, and ordinary mechanical drawings usually fall far short of the mark. Official drawings are definitely not working drawings. Instead, they are illustrations. Thus, there are no dimensions given, and many parts may be drawn all out of proportion in order to illustrate them better. Finally, the Patent Office has many specific regulations as to paper and ink, size of sheet and margins, character of lines, hatching and shading, etc. It is best done by a man who specializes in patent drafting, under the supervision of a patent attorney. *(More on p. 53.)*

Due to the fact that most divisions in the Patent Office are heavily overloaded with work, it usually takes from 1½ to 3 years. In special situations, where it can be shown that the applicant is suffering from the delay, faster action may be taken. Otherwise, action is taken in the order in which applications are filed. *(More on p. 47.)*

33. Why can't I get an immediate yes or no?

For three main reasons. First, you cannot expect the examiner to drop everything and give you preferred treatment. Second, the examiner must go through a whale of a lot of record-searching and skull-scratching before he can reach a decision. Third, because your attorney—if he is any good—will have asked for more than you are entitled to just to be on the safe side. This last will force the examiner to make a wide search, and cite a great deal of art which will then enable your attorney to get a better picture of just where you stand, and how much protection you may be entitled to. The examiner's first "action" and your attorney's response institute what is known as the "prosecution" of the case. *(More on p. 67.)*

34. What do you mean by prosecution?

Well, it's nothing like prosecuting a criminal. Actually, it is a polite exchange of letters (in highly formal, technical language) between the examiner and the attorney, in which the two of them try to shape up a set of claims which will give you exactly the protection to which the novelty of your invention entitles you—no more and no less. The examiner's letters are usually called "actions" and the attorney's letters are known as "amendments." *(More on p. 70.)*

35. Suppose I finally get turned down?

If your application goes under final rejection by the primary examiner, you may appeal to the Board of Appeals in the Patent Office, and from it to the federal courts. The examiners are usually pretty good so that ordinarily, their decisions will be upheld. Thus, in cases involving gadgets and small tools, appeals are generally a waste of time and money. However, in extremely important matters, appeals may be justified and may be resolved in favor of the inventor. *(More on p. 73.)*

36. What is an interference?

Occasionally two or more applications are filed by different inventors, claiming substantially the same invention. Since a patent can only be granted to one of them a proceeding known as an "interference" is instituted in the Patent Office to determine who is the

re be put in the hands of a patent attorney ho specializes in such matters. *(More on p. 3.)*

5. My patent is expiring; can I get it xtended?

Possibly, but it will take a special act of ongress to do it; there is no administrative rocedure by which a patent can be extended. ery few extensions have ever been granted, ut if you can make a strong enough case, nd if it is really worthwhile, then you should et a good lawyer to take it up with your ongressman.

6. Can I re-patent an expired patent?

This question often comes up: "I have a well idea for a gadget which is not on the arket, and which would be a world-beater. he original patent on it expired in 1920. an I get a new patent on it before I market ?" The answer is, definitely, *no*. The subect-matter of an expired patent is public roperty, and may not be patented again. *More on p. 128.)*

7. Well, what can I do about an expired atent?

Where you see a good basic idea in an old atent, try to up-date it by redesign and/or mprovement. By engaging the services of an rtist or industrial designer to assist you, it nay be possible to produce something very ttractive which can be covered by a design atent or copyright. *(More on p. 101.)*

8. Can I get a patent on a miniature?

Changing the size of an article will not rdinarily entitle one to a patent. Nevertheess, as in the instance of novelty jewelry, it night be worthwhile to get an attorney's pinion in your particular case. Copyright nay be the answer. *(More on p. 105.)*

9. Can I get a patent by using differnt materials?

A change in the material of construction, or a mere substitution of one material for another, is normally not patentable. However, if some new and unexpected result is achieved, it may be possible. *(More on p. 49.)*

50. Can I combine several old things to get a new patent?

Yes. In a sense, all mechanical patents are granted on combinations of old elements, such as gears, ratchets, cams, shafts, etc. It is, however, becomingly increasingly difficult to secure such patents, since the field has been pretty well covered by previous patentees. Further, the patent examiners are taking a very critical view, holding that such combinations are "obvious" and do not involve what is termed an act of "invention." *(More on p. 67.)*

tion?

There is no real yardstick by which this may be measured. It is more of a philosophical than a factual or legal question, and usually revolves around the point as to whether the item under consideration is the result of mechanical skill or inventive genius. Is it something utterly unexpected, or is it merely what "anybody" would have expected? Is it obvious? And, if it is so all-fired obvious, why didn't somebody think of it before? The annals of the federal courts are richly ornamented with philosophical discussions and decisions touching upon all phases of the question, and illuminating different viewpoints. Some have held that for "invention" to be present, there must be a "flash of genius." Some have held that a long history of failures, culminated by ultimate success, proves the presence of "invention." Others have taken the opposite attitude—namely, that if it took so much work, the element of "invention" must have been lacking. Presently, the law is that the means by which one arrives at an invention are not to be considered in determining whether "invention" is involved or not. *(More on p. 16.)*

52. How does the definition of "invention" affect me?

While the definition of "invention" may be essentially a philosophical question, you will find it extremely practical if you are denied a patent on the ground that there is no invention present in what you have illustrated and claimed in your patent application. Thousands of times each year, patent examiners turn down applications on the basis that they present "mere aggregations" in which "no invention" is involved. *(More on p. 70.)*

53. Just what is meant by abandonment?

Abandonment may be either actual or constructive. An invention may be actually abandoned by intention, such as words or deeds to abandon it; by lack of diligence or unreasonable delay in applying for a patent; by keeping a practically perfected process secret for many years. Constructive abandonment may be found in (a) public use and sale for more than one year before filing, or (b) failure to definitely claim the part or improvement which the inventor asserts to be his discovery. Where most inventors are apt to prove deficient is in thinking that it will be smart to delay filing an application until commercial conditions have created a more favorable atmosphere for the reception of the idea—only to find that some other inventor, more knowledgeable or more daring, has beaten them to the punch. *(More on p. 51.)*

54. If my invention hasn't been patented before, can't I get a patent?

Not necessarily. As has been already noted

rong. A registered letter mailed to yourself corroborated by witnesses, is evidence of e date of conception, but its value is en-ely contingent on the degree of diligence hich you demonstrate in getting your pat-nt application on file. The date on the letter ay even work against you by proving that ou indulged in unwarranted delay. There absolutely no substitute for a patent appli-tion. *(More on p. 78.)*

4. Is there a prize for a perpetual mo-on machine?

No, there is no prize offered by anyone for perpetual motion machine. A perpetual otion machine is one which will run by self and deliver additional useful power and is is virtually a contradiction in terms. Of ourse, a cannonball suspended from a long ire will swing back and forth forever, due the rotation of the earth underneath it, but is commercially useless and unpatentable. *More on p. 35.)*

5. Can't somebody steal my invention y making a little improvement?

No. If you get a patent and a second party ien gets a patent on an improvement, the econd party must obtain your permission efore he can manufacture the improved in-ention. *(More on p. 120.)*

6. Can a piece of clothing be patented?

Yes. The article to be patented need not e a machine or tool. New developments in ants, coats, vests, headgear, and shoes are ll patentable. *(More on p. 49.)*

7. Can I get a patent on a game?

Yes, although they are rather tough to get owadays, and as far as we have been able to ee, worthless commercially. Worthwhile atents are hard to obtain because the art is ery highly developed, even over-developed, ith hundreds of variations on all the basic heories. The large manufacturers of game oards and equipment have reduced the heory of gaming to a science, and it is a illion-to-one shot that you can come up with nything that will interest them.

8. Is a new kind of barbecue sauce atentable?

Possibly. Patents do exist on cooking reci-es, but are virtually impossible to "police." ou would have to have a spy in every itchen in the country to collect a royalty very time a housewife or commercial food rocessor used your recipe.

9. I am in jail and can't make a model. What to do?

As previously noted, models are not usual-y required by the Patent Office. All you



need to send out is a sketch and description of your invention. A friend, relative, or attorney on the outside can handle everything for you. The only thing you must do yourself is sign the application papers. *(More on p. 110.)*

70. Can I get a patent attorney to buy my invention?

Probably not. Few, if any, patent attorneys will take an interest in an invention, handle a case on a contingent fee basis, or assist you in selling your invention. Patent attorneys and agents stick strictly to the technicalities of patent procedure; it is your responsibility to dig up the money and conduct the commercial negotiations. *(More on p. 86.)*

71. Can I rely on a patent attorney to tell me whether my invention is good or not?

Any registered patent attorney or agent will tell you whether in view of the previous patents found in the preliminary search, you stand a reasonable chance of getting a patent. But no attorney will guess at the possible market value of an invention, for two reasons: 1. If he tells you it will be a world-beater and it turns out to be a flop, you will want your money back; 2. If he tells you it is no good and somebody else gets a patent and makes a fortune, you may claim that he lied to you deliberately. *(More on p. 38.)*



ome and, if the invention proves successful, he rewards will be so great as to make it a vonderful investment. *(More on p. 129.)*

11. What qualifications should a financial backer have?

The best type of backer or partner has business experience and business contacts, so is to be able to contribute more than money. Many inventors take in a personal friend or ellowworker, which is all right as far as it goes, but such people—when it comes to business negotiations—may turn out to be more of a hindrance than a help. The ideal backer would probably be a salesman or advertising executive or the owner of a business—someone qualified to talk easily with top-level, front-office people. *(More on p. 130.)*

32. Should I give my partner an assignment?

This is not advisable. An assignment is a very curious legal right, and is in no sense a partnership, as many inventors have discovered to their sorrow. An assignment, regardless of any "percentage" of interest which may be mentioned, actually gives the assignee an entire right in your invention. This means that he can negotiate on his own, making a sale and refusing to pay you a penny. Of course, you can do the same, but the situation is essentially an unhealthy one which does not reflect the original intent of the parties, and which may lead to serious trouble later on. *(More on p. 82.)*

83. How should a partner be protected?

By means of a partnership agreement which will provide that title to the patent is to remain in the inventor, but that the profits are to be split. The agreement should be drawn up by a local attorney.

84. Can I sell an invention without patent procedure?

Yes, inventions are sometimes sold from a mere sketch and description before a patent application has been filed. You should, of course, at least have a favorable search report as to the patentability of your invention, so that you will have something specific to offer for sale—but even so, there is the danger that you may get kicked around, and possibly robbed. *(More on p. 75.)*

85. How may I be robbed?

In two ways: 1. More or less deliberately, in that the prospective purchaser's engineers may scoff at you, allege there is nothing patentably new in your invention, and then use it anyhow. 2. Innocently, in that they may truthfully tell you there is no immediate market for your invention, and then, long gotten, use the idea because of changed market conditions. Your only real protection is a patent, unless you can get the prospect to agree in advance to pay for the idea, if he uses it, regardless of patentability. This is done with a fair degree of frequency. *(More on p. 118.)*

86. Is there no other kind of protection?

Yes, the law recognizes what is known as a "confidential relationship" in which you may be paid for your "services." If you can get a company to agree in advance, in writing, that they will pay you for your services if they use your idea, then you have an enforceable contract. A mere letter agreeing to examine your idea, may be enough to set up a confidential relationship. A good way to get such a letter is to write, stating that you have an idea, and asking the name of the company executive to whom you should submit it. *(More on p. 35.)*

87. What about the release forms some companies make you sign?

These things are strictly poison, in that you simply sign away all your rights, and throw yourself on the mercy of the company. They are specifically designed to prevent the establishment of a confidential relationship. *(More on p. 92.)*

88. Don't the big companies want new ideas?

With few exceptions, the really big companies wish outside inventors would quit pestering them. They have big engineering staffs, with more ideas in work or on the shelf than they can possibly use. They know more about their particular line than the Patent Office does and seem to feel that your chance of suggesting anything really new to them is slim indeed. *(More on p. 90.)*

89. How about smaller companies?

These are your best bet. Once, when an invention was submitted to a big company, they replied by mailing back a photograph of their model of the identical invention, saying that they could not see their way clear to bother with it. But they urged the inventor to apply for his own patent, and sell it to a smaller company. *(More on p. 92.)*

90. Are there different ways of disposing of a patent?

Yes, a patent may be sold or mortgaged; it may be bequeathed by a will, and it may pass to the heirs of a deceased patentee. It may be assigned in whole or in part or on a territorial basis, and it may be licensed on various bases in return for lump sum payments or continuing royalties. *(More on p. 83.)*

91. What is the best deal?

From the standpoint of the average inventor with a gadget, tool, household item, or



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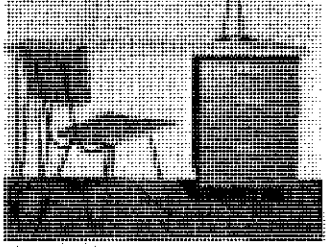

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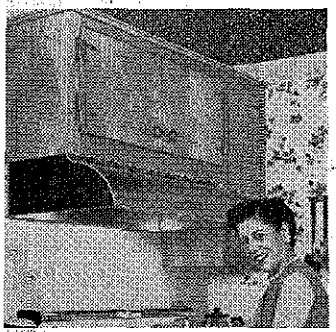

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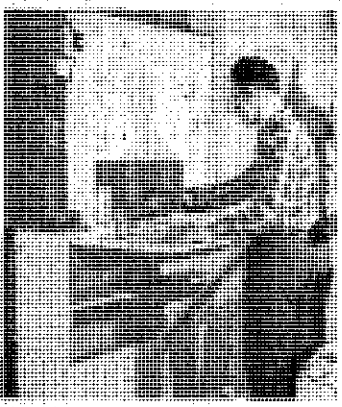

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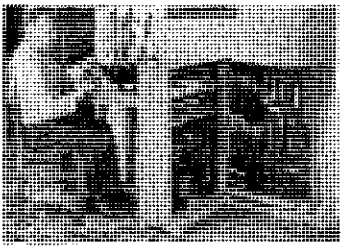

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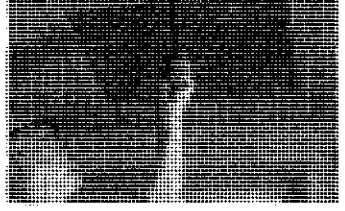

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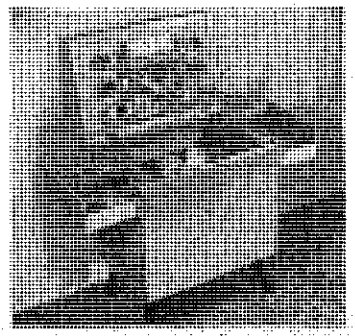
ventilator, this plan will show you how to build it. Explains the basic needs for each type of ventilator and which one will give you the best results. Enjoy the added comforts a kitchen ventilator will give your family by installing one now. $2.00

living room. Yet, it contains two half-length, tray-drawers at the top, a lid



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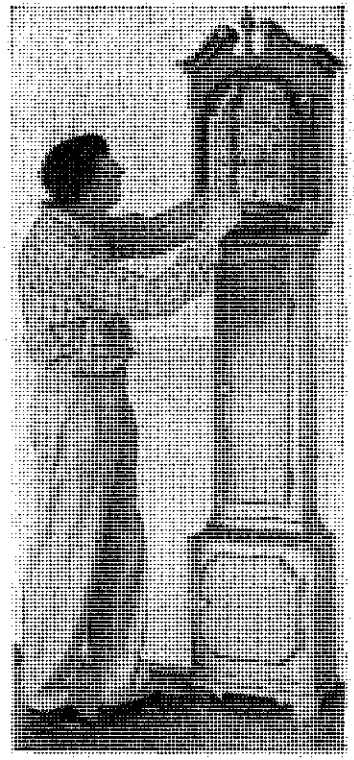

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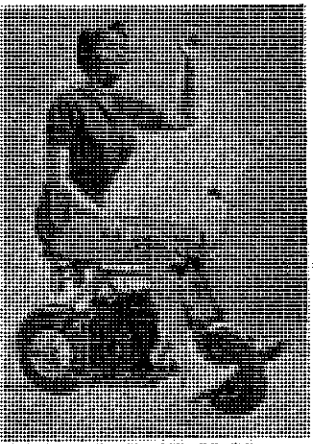
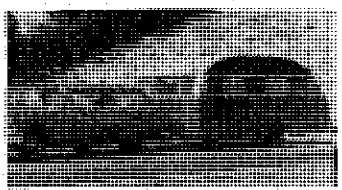
FOLDING CAMP TRAILER. Camp- out can now be a pleasure. With ndy Andy," you can carry your tent you (taking about 10 minutes to set in a light trailer that tows easily also carries your boat. Inside there's ping room for three adults or two its and three children. You also have e for cooking in bad weather. With 20 in. road clearance, you can haul dy" any place you can drive a Jeep or -up truck—right back to where the it are hungriest. Two large plan sheets w you how to build this trailer. $2.00

SUITCASE-SIZE POWERCYCLE. an errand runner or for short distance muting, this midget motorscoot would hard to beat. Designed so that the dle bars fold down and the foot pedals in, this powercycle will easily fit into the trunk of your car. You can build this pint-size powercycle for about $110.00. Commercial powercycles regularly sell for over $200 to $400 and none of them fold up the way this one does. Three large plan sheets showing all necessary parts in full size, plus the step-by-step construction details simplify the building of this project. Nicky Frances, the famous clown, has featured this powercycle on the famous Super Circus Television Show. Build one! You'll have hours of fun and enjoyment. $2.00

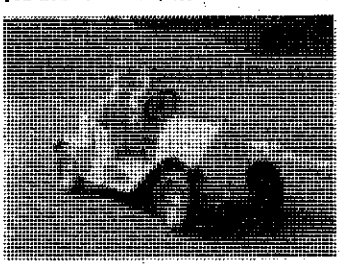




Vacation Trailer—No. 238—**$2.00**

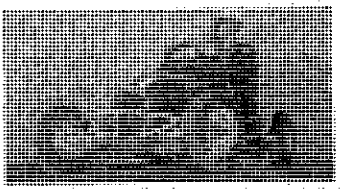
238. VACATION TRAILER. You'll save money in two ways by building your own vacation trailer. First, because you can save one-half the cost of a comparably built and equipped new factory trailer. Second, because the two largest vacation expenses, lodging and meals, for you and your family will not be much more than if you stayed at home. The plus feature of having a vacation trailer is that even summer week-ends can become short-trip, fun-packed vacation days. You'll find real comfort, too, because this trailer provides sleeping, cooking and eating accommodations for a family of five, yet it is small enough to be towed by a modest family car. Plans provide for a 14 ft., 16 ft., or 18 ft. trailer. All construction details are explained, including electrical wiring, insulating and completing the exterior and interior. Sources of supply are given for all materials and parts to simplify construction. $2.00

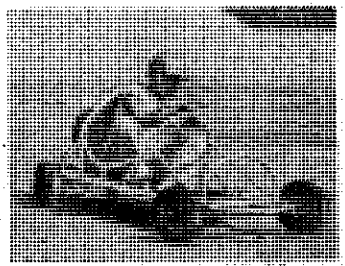
247. BUILT-INS FOR TRAILERS. These project ideas will add extra pleasure and convenience to trailer life and help put valuable space to use which may otherwise be wasted. Ideas include trailer name signs for identifying the occupants of trailers and the parking lot number, cupboard retainers to keep foodstuffs from toppling over or falling off the shelves while the trailer is in transit and a utility cabinet that holds toiletries and serves as a vanity. Drawings and photos show you how to do it. $2.00



Stutz Bearcat—No. 280—**$2.00**

280. STUTZ BEARCAT. Your youngster will be the happiest and proudest kid in the block when he drives this gasoline-engine powered, half-scale version of the 1914 Stutz Bearcat down the street. What's more, it's a two-seater, so he'll be kept busy giving all the other kids in the neighborhood a ride. Designed with the emphasis on safety, top speed is 10 mph. (And you can reduce this maximum, if you wish; instructions are given in the plans.) Amazingly accurate in detail, the "Bearcat" requires chiefly plywood, standard lumber and standard steel stock to build. $2.00





Parking Lot Go-Cart—No. 303—**$2.00**

303. PARKING LOT GO-CART. Built-in speed control and steel framework that surrounds the driver make this cart safe for youngsters 12 years old and under. Stock size electrical conduit, angle iron and bar stock are used to build this cart, and the only power tool you will need is a drill press capable of boring up to a ½" hole. $2.00

305. FOLD-UP VACATION TRAILER. Five minutes after you reach a camping site, you can have this trailer set up to provide indoor sleeping or eating accommodations for six people. When it is folded down for traveling, there is plenty of space in the trailer body to store all vacation items that otherwise clutter the car and take up usable seating space. The design has been carefully worked out in sub-assemblies so the amateur builder can use his garage or carport to assemble the parts out of the weather. You will save several hundred dollars by building this yourself. $2.00



Fold-Up Vacation Trailer—No. 305—**$2.00**

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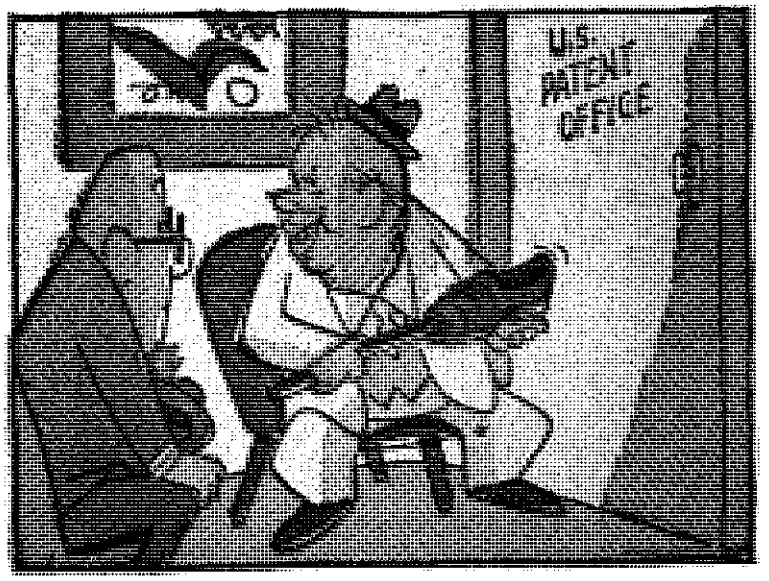

... to look in at her. The glamor girl, too paralyzed to move, kept staring at the man on the ledge.

"Watcha lookin' at?" he finally asked. "Aintcha ever seen a window-washer before?"

A grimly determined inventor, undaunted by a series of grisly failures, kept working away on a long-range automobile powered by electricity instead of gasoline. He dashed triumphantly into the Explorers' Club in New York one evening and cried, "I've done it! All the way here from Mexico City without a single mishap!"

Pressed for a report on the cost of the trip, the inventor replied, "Exactly $3955.88—three dollars for electricity, and $3952.88 for the extension cord."

A California home-owner, using his new outdoor barbecue for the first time, was whistling away happily. Turning the roasted chicken on the spit, he whistled louder and longer as the bird grew browner. A passing drunk, ... the happy sounds, staggered to the gate and watched the happy ... away.

... inebriate yelled approvingly, "but you're burn-



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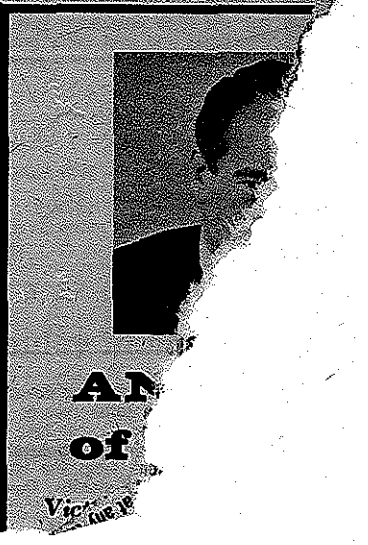

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mplete as possible. They might include, for ample, a reference to the principles under- ing the invention, discussion of any experi- ental work or tests conducted, and points of velty or superiority of the invention as mpared to existing techniques or devices.

You are requested to submit any sketches drawings to supplement your description, t they need not be professional. Be sure to ake duplicate copies of everything submit- d for your records, however, since govern- ent regulations require that all material bmitted and reviewed be retained as a per- anent file.

The council endeavors to notify all who bmit their inventions promptly after any ecisions are reached. If your invention or ea is referred to the armed services or other gencies, you will be so informed. If a tech- ical group to which it is referred wants rther information, it will contact you di- ctly or ask the council to get in touch with ou.

Once an agency wishes to adopt your inven- on, it will communicate directly. If it turns own your idea, it will give its reasons to the ouncil which will relay them to you. How- ver, the council may not always be able to ve you a detailed explanation of the reasons r rejection.

The council has no authority to offer pay- ent to an inventor. That right is given only the branch of government which may egotiate with the inventor for the right to se his idea. In rare cases, the government epartment interested in your invention may e willing to finance a patent for you, in re- rn for a royalty-free license. That is some- ing to remember.

National Security. While on the subject national defense, you should know that the Commissioner of Patents is supposed to keep his eye on all applications in order to detect anything involving national security. If it appears that your invention should be kept secret, he will get a ruling on this point from the other interested departments and can, upon their recommendation, withhold the granting (and thus the publication) of your patent for one year. Such withholding is renewable indefinitely for additional one-year periods.

This means, incidentally, that you will have to keep your mouth shut about the invention as long as it is under a secrecy order. If you publish or disclose the invention, or file a foreign application, you lose your rights.

If your patent should be withheld, you would then have the right to apply to the head of the department or agency which caused the secrecy order to be issued, requesting compensation either for damages, for use of the invention, or both. In the event the two of you cannot agree as to the proper amount of compensation, the head of the department can give you 75% of what he thinks is fair. You can then sue in the Court of Claims for any additional amount to which you believe you are entitled.

Selling a Commercial Product to U.S.? The National Inventors Council is interested only in your ideas which may have value to the military agencies or other branches of the government. It is not concerned with inventions of primary interest to a civilian market. If you have a commercial product that you would like to sell to the government, you can obtain detailed information from the U. S. Government Purchasing and Specification Directory. A copy is available for 55¢ from the Superintendent of Documents, Washington 25, D. C.

QUESTIONS

Uncle Sam and Secrecy

. I have devised a system of writing in ecret characters under which, I am satisfied, essages cannot be decoded. The U. S. gov- rnment is interested and indicates it may urchase my system if I will explain it suffi- iently for their tests and evaluation. My awyer says that if I patent my system, my ode must be explained in the patent and it then no longer secret. How should I roceed?

.. You certainly can trust Uncle Sam to eat you fairly and honestly, and there is no oint in withholding the details. On the other and, it is doubtful that your code is pat- ntable, since it consists basically of printed r written matter. Probably the only protec-

Will the U.S. Pay for a Patent?

Q. Can I get Uncle Sam to pay for my patent?

A. The official answer is, in general, "No." However, one inventor recently told me that an officer in the Patent Section of the Army in the Pentagon said the Army might pay for a patent on one of his inventions, provided they decided to use it. One way you can find out is to go to the Pentagon and ask: otherwise, do what everybody else does (and which they wouldn't be doing if it weren't apparently best); file a patent application and submit a copy to the National Inventors Council. This is the best proposition because (a) you are taking legal steps to protect yourself, instead of dealing with some officer who

ontinued from page 137)

id not know how to go about it.

During World War I, one such agency, the aval Consulting Board, looked at 110,000 leas submitted by civilian inventors or ould-be inventors. Out of that total, the gency found 110 ideas that "looked good," ut only one which, in its opinion, "was ood." Yet, despite the implications of such discouraging record, American military inentions have been developed time and time gain by civilians and then used by foreign ountries—sometimes against our own soliers.

The revolving turret warship was invented y Erickson in 1861. The torpedo was inented by Whitehead in 1886. Smokeless owder, invented the same year by Vielle, as used against U. S. troops (who still had lack powder) during the Spanish-American Var. American Browning guns were all made n Belgium. The Kaiser's submarines were nvented by U. S. citizen Simon Lake. merican-invented Christie tanks went to ussia in 1931.

Every one of these inventions were develped by American civilians who apparently ouldn't sell the U. S. government or its ilitary review boards on the idea that a ivilian could produce an invention that ould be able to meet military requirements.

Obviously, what was needed to stop the ow of vital American inventions to foreign ountries was a civilian agency composed of ien who were experienced in evaluating inentions. They should be men of broad interests, wide backgrounds, and optimistic attiudes who would study new ideas patiently —knowing that if one department of governent didn't want them, another one might.

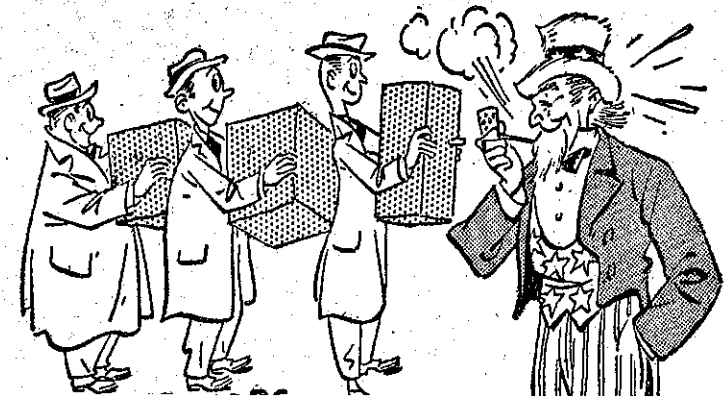
A plan for setting up just such a civilian dea and invention reviewing agency was resented to the government by the well-nown patent attorney, Lawrence Langner. The Secretary of Commerce established it in his department in 1940 as the National Inventors Council. He appointed as members the most eminent civilian technical experts and engineers he could get. The chairman was General Motors' famed "Boss" Kettering; vice chairman was the prominent research chemist, Dr. Thomas Midgely Jr., and Langner was named as secretary.

The council membership included outstanding American inventors, scientists, and industrial research men who had specialized experience in the development and utilization of inventions. They served as "dollar-a-year" men.

To establish good relations and channels of communication with the armed services, a number of retired Army and Navy officers were appointed to membership. These officers were selected for their unusually wide experience in the research and development branches of their respective services. Finally, the Commissioner of Patents and the director of the National Advisory Committee for Aeronautics were added to the membership.

Lightly Treated at First. So little was thought of the National Inventors Council when it started that the $115,000 appropriated for its first year of operation had to come out of the President's emergency fund. During the war years, 1942-46, Congress added another $600,000. Of the combined amounts, the council spent $519,779 and turned back an unexpended balance of $195,221 to the Treasury.

This unusual procedure of actually spending less than the total appropriation serves as a good indication of the actual function of NIC. It is really not much more than a liaison agency or clearing house. It has no real authority to do anything and can only recommend to the various branches of the government that they consider such-and-such an idea or invention.



Uncle Sam Wants the Answers to These

AERONAUTICS, MISSILES, AND WEAPONS

Aircraft, Space Equipment

372. New High Energy Liquid Propellants for Missiles
581. Lightweight Rough Terrain Landing Gear
582. Method to Reduce the Noise Level of Helicopters
675. Airplane Arresting Gear
679. Simplified Rotor Systems for Rotary Wing Aircraft
682. New Means to De-Ice and Anti-Ice Craft in Flight
683. Quick Ice Removal from Aircraft Parked in Open
684. Improved Helicopter Transmission Systems
767. Crash-Resistant Fuel Tank
867. Aerial Platforms—Observation and Missile Launching
810. Air Fuel Safety System.
958. Helicopter Static Discharge System.
1102. Non-Metal Type, One-Shot Missile Structures
1148. New Devices to Airdrop Equipment Loads
1146. Low-Cost Cargo Parachutes
1387. Quick-Removable Troop-Type Parachute Harness
1569. Aircraft Fire-Inerting System
1581. Method to Eliminate Post-Crash Fire Hazard

Guns and Ammunition

848. Means of Reducing Recoil of Cannon
850. Minimum Weight Cannon Muzzle Blast Reducer
1112. High Energy Propellant for Small Arms
1115. Non-Fouling Small Firearm Cartridges
1408. More Effective Fragmentation Warhead
1480. Reduced Smoke, Flash from Small Arms Ammunition
1489. Expendable Magazine for the M-14 Rifle

APPLIED MECHANICS, AUTOMOTIVE, AND EQUIPMENT ENGINEERING

Components

408. Diaphragm to Separate High-Pressure Gas
519. Prevent Carburetor Icing
528. Shock Absorber to Reduce High Frequency Vibrations
530. Dirt-Immune Hydraulic Valves (Hand or Solenoid)
672. Greaseless Ball Bearings for Use Up to 650° C.
673. Guy Wire Anchors for Ice or Cold, Hard Ground
773. High Speed Track for Earthmoving Equipment
922. Underwater Ignition Units
1402. Quiet Hydraulic Pump for Pressure of 1000-2000 psi
1483. Self-Priming Electrical Bilge Pump
1510. Self-Driving Guy Anchor Stake and Ground Rod
1533. Lightweight, High-Pressure Leakproof Tube Fittings

Components

480. Low-Temperature Industrial Adhesive Tape
561. Metal-to-Metal Adhesive For Use Up to 600° F.
1071. Bond for Metal or Plastic for Silicon Solar Cells
1125. High-Strength, Quick-Set Metal Adhesive
1151. Adhesive Cement to Join Coated Fabric Tent Seams

Batteries, Electroplating

387. Miniature Batteries with Longer Service Life
532. Batteries with Long Shelf Life
707. Dry Battery Moisture Seal
710. Low Temperature Battery
844. Better Chrome Plating for Large Cannon Components
977. Dry Battery Performance Capability Indicator
978. Evaluator of Carbon Black for Use in Dry Batteries

Chemicals, Processes

556. Cleaner to Remove Deposits from Turbine Blades
800. Chemical Means to Preheat Vehicles in Cold Climates
884. Method of Decontaminating High Energy Propellants
1058. Method for Compacting Organic Compounds
1559. Removal of Sodium Chloride from Sea Water
1564. Economical, Recoverable Ion Exchange Regenerant

Antenna

824. Small, Rugged Antenna for Projectiles at VHF and UHF
998. Means to Reduce Sidelobes of High Gain Antennas
1065. Miniature Antenna for 6- to

Engines, Power Plants, Drive Systems

749. Turbojet Noise Suppression
775. Silent Engines to Run Generators, Propel Boats
809. Starting Motor Engagement Drive (−65° to 125° F)
810. Automotive Drive System (Generators, Alternators)
811. Constant Speed Generator for Variable Speed Engine
1397. Turbines for Higher Gas Inlet Temperatures
1404. High Torque 50-to-1 Speed Reducers, Quiet-Running
1484. Traction Aid for Wheeled Vehicles
1486. Automatic Track Tension Adjusting Device
1584. Self-Contained Wheel Drive Mechanism

Equipment

455. Rooters Suitable for Loosening Frozen Ground
487. Arctic Transport Supply and Tactical Vehicle
784. Lightweight Earthmover
923. Frozen Ground Excavator
987. Techniques for Mixing Additives into Wet Soils
1219. Field Laundry Equipment Using Less Water, Fuel
1220. Rapid Water Heater for Individual Use
1221. Flameless, Smokeless Tent Heaters and Field Cookers
1334. Dry Battery Heater Using Common Fuels
1396. Oily Water Separator
1414. Gyroscopes for Use in Shor Range Missiles
1423. Equipment for Production of Solid Propellants

CHEMISTRY

1566. Method to Remove Manganese from Water

Coatings, Preservatives

407. Durable Finish for Bearing Surfaces of Cannon
703. Protective Coating for Transistor Surfaces
799. Ice Preventative for Use with Protective Coatings
805. Ten-Year Preservatives for Engine Storage
863. Paint to Resist Heat of 1000° to 1700° F. or More
918. Self-Luminous Paint with No Harmful Radiation
939. Aircraft Paint to Resist Rain Erosion at High Speed
1406. Sea Growth Preventative
1468. Coatings and Preservatives for Hydraulic Fluids
1490. Flameproofing Agents for Cellulosic Materials

Elastomers, Rubbers, Plastics

636. High Temperature Range Plastic or Elastomer
678. High Temperature Resistant Aircraft Tires
777. Frost-Free Transparent Instrumentation Case
889. New Hydraulic Medium Resistant to Leakage
920. Plastic Fiber Reinforced Fire Hose, Lightweight
1459. Elastomers for Thermal and Flame Protection, Clothing
1162. Temporary Field Shelters of Foamed Plastic

Fuels, Oils, Lubricants

740. Lubricants Effective as High as 1000° C.
1031. Additive to Prevent Icing i Jet Fuel Systems
1170. Charcoal-Slat Fuel Unit to Heat Rations Rapidly
1534. Lubricants to Resist Long Exposure to Near Vacuum

Germicides, Insecticides

990. Insect Attack Repellents
1175. Repellents to Prevent Rodent Damage

Miscellaneous

365. New Methods of Making Colored Smokes
589. Self-Luminous, Non-Toxic Material to Glow in Dark
619. Light, Sound-Absorbing Material for Helicopters
625. Non-Corrosive Liquid for Use in Manometer
890. Added Protection for Thos Working with Toxic Agent
952. Runway Marking Material Resistant to Jet Blasts
1026. Anti-Fog Plastic Facepiec
1136. Anti-Skid Flight Deck Material
1177. Paper-Based Disposable Military Clothing
1178. Armor Effective Against Anti-Personnel Munitions
1179. Material to Protect Agains Thermal Radiation

ELECTRICITY AND ELECTRONICS

Reduced Noise Temperature
1504. Short Length Transmitting Antenna for 3-30 *mc* Band

Electronic Components and Systems

541. Microwave Direct Storage

with Homing Heads, Gyros
653. Broadband Detectors 10-4 Times Better Than Crysta
700. Quick-Heating Cathode to Operate Within a Second
712. Heat Dissipator in Electronic Assemblies

Patent Office, they found on looking into the matter more closely, issues about a thousand patents a week, but only a handful ever get into production. They also found that thousands of patent lawyers were in the business of helping inventors find markets. And a few companies made a living tracking down patents for their manufacturer clients. Feldman and Pollak decided to work both sides of the street.

They knew that most large corporations have unused patents sitting on their shelves. The partners figured they might make a deal with companies both to license their unused patents and to scout around for patents in the company's field that it might be able to use. By setting up such a two-way relationship, they also hoped to put themselves in a good position to efficiently place inventions by individual inventors.

For a beginning, Feldman and Pollak wrote corporations all over the country, announcing that they were in business and ready to find manufacturers for unused patents. Over a hundred companies wrote back to express interest. Soon, dozens of large firms had signed up and turned over hundreds of patents to National to license.

Patent Talent Scouts. The firm also notified patent lawyers that it was ready to consider patents. It hired talent scouts—scientists, engineers, and industrial leaders in various parts of the country—to be on the lookout for worthwhile patents in their areas. A branch office was set up in Europe.

With a going business on their hands, the partners suddenly realized they had problems. Because they were attorneys, not scientists, they needed expert scientific brainpower to screen inventions, find out which were really worth promoting, which should be turned down cold. They found expert help in Dr. John H. Troll. As consultant for many of America's leading research organizations, Troll had played an important role in the development of such diverse fields as radar, ultrasonics, computers, optics, and solid-state electronics. He gathered a board of top-flight consulting specialists to look over and test patents the company was considering.

Within a short time, National was receiving so many patents for consideration that it had to install an electronic bookkeeping system to keep track of them.

Lone Inventor Has Role. The country's leading manufacturers—National's clients—are its largest single source of new patents. Scientists in research labs are constantly inventing things their companies can't or don't want to produce. Bell Helicopter engineers, for example, recently invented a new type of boat that rides above, rather than on, the

ever, isn't a boat builder and didn't want to set up a boat division. So National is negotiating with several companies that want to take on the project.

Even though the bulk of its business is concerned with corporation patents, National thinks inventions with the greatest potential over the long run may come from individual inventors.

"If an invention is really earthshaking," Vice President Martin Pollak told me, "a large company will set up production itself. We don't get a crack at it. But we will and do get the ones from individual inventors that really hit the jackpot." Among those National is now negotiating that may be in that category:

- A system for electrically charging rocket hulls to make re-entry easier by repelling air particles and cutting down on friction. It also might be usable for airliners.

- A new process for treating wood pulp to get a much larger paper yield from a given amount of pulp. This one could revolutionize the paper industry and be worth a fortune to its inventor.

- A completely new type of engine. No details are available, but if claims are true, it would be a tremendous advance in engine technology. Its inventor holds several basic propeller patents, under which most propellers made today are licensed.

Want Patents, Not Ideas. How about patents that National's experts feel have a bright future but are not quite ready for production? The booming young company has worked this out too. It has signed contracts with the Franklin Institute of Philadelphia and the Battelle Memorial Institute of Columbus, Ohio—two of the country's leading research organizations. They'll undertake further work where needed on inventions accepted by National.

"Can the individual inventor with no prior record of sales get a hearing at National?" I asked Pollak.

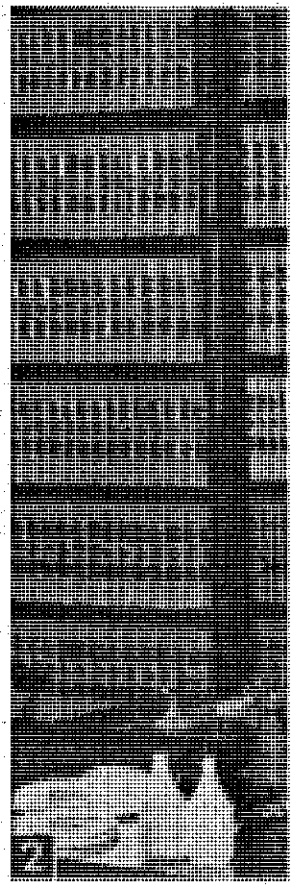
"Absolutely," he answered. "Organized team research in a big company laboratory is wonderful, but we know from experience that many of the really valuable ideas come from guys in basement workshops who don't know that something is impossible, so they go ahead and invent it.

"There is only one restriction on what we'll look at," he continued. "We are developers, not patent attorneys. We want actual patents—either issued or applied for. We are not equipped to handle unpatented ideas.

They Turn Unused Patents into Cash

Here's a New York company that makes a business of getting patents off the shelf and into production

By KEN GILMORE



MEL HARRIS first came up with the idea for a new kind of bottle cap four years ago. He knew it would re-seal bottles of anything from pop to champagne, keep the contents fresh and sparkling even six months later. But Mel, a New York artist, couldn't get a manufacturer interested.

Then, last summer, he heard of a new firm called National Patent Development Corp. and took his gadget to them. The result: You can buy Harris's bottle cap all over the United States. And he, at long last, is collecting royalties on a patent he had begun to think was worthless.

Harris is not the only inventor helped by National. A physics professor named H. E. Kallman bundled up eight of his unsold inventions and knocked on National's door. One of his gadgets was a book with strips of magnetic tape attached to the pages. With the book comes a tiny transistorized reader that runs across the page on its own track and reproduces the sound on the tape (Fig. 3). Although National has had the talking book for only a short time, a major publishing house already has taken an option on it while studying it further. The company plans to publish, among other things, a self-pronouncing foreign-language dictionary. Manufacturer interest also has been shown in five of Kallman's other patents.



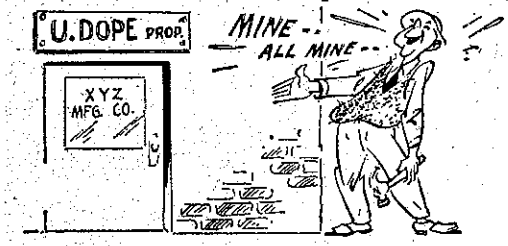
Nine of Eleven. Ben Grady, another frustrated inventor, took 11 of his brainchildren to National. The company accepted nine, including a new type of megohmmeter, a new kind of voltage regulator for automobiles, and a cheaper, easier-to-build printed circuit.

The idea for National Patent—a company designed to get valuable patents off the shelf and into the hands of manufacturers—was born in 1958, when two New York law part-

a patent application, it is not a good idea to try to discuss your idea with manufacturers, particularly big ones. Many big manufacturers will not permit their people to look at a new idea unless it is in the form of a patent, or at least a patent application. They don't want to get mixed up in what is called a "confidential relationship" and have to pay you for an idea closely related to something they themselves are trying to develop.

Wholesalers, retailers, and, of course, housewives, are usually safe enough to talk to because they are not in the manufacturing business.

What to Do with the Money. Several of the inventors we surveyed were themselves businessmen who proceeded to incorporate and form their own manufacturing concerns with substantial local capital. Others, who were not businessmen, reported that they



had obtained sums of money up to $20,000 and were starting concerns to manufacture the patented articles. While I admire their courage, I wouldn't recommend the procedure, and many of the inventors surveyed would agree with me.

Most inventors have no experience in business management and the multiple headaches associated with it. Also, the tax structure makes it extremely difficult for any small business to stay afloat, let alone make money.

If you feel, however, that you or your partner could manage a business effectively, and you want to try it, chew the matter over with the secretary of your local chamber of commerce, a good accountant, and the nearest field office of the Small Business Administration of the Department of Commerce. They can give you sound advice; and they may also line up some other patents you could buy or lease, if you have a big enough shop and enough capital to tackle additional production. You can also round out your business with sub-contract work for big manufacturers.

Most inventors are well advised to stay away from manufacturing their own inventions. Their best bet would be to find a backer to foot the bills through the stages of securing a patent and selling it to an established manufacturer.

Closing the Deal. Once you have sold the prospective backer on the idea of going in

nership. An assignee becomes an independent owner, that is, he is just as much an owner as is the inventor; hence, he can go out and make his own deal with a manufacturer without consulting the inventor, and the inventor has the right to do the same.

In a simple partnership the inventor retains complete control of the patent rights, but obligates himself to pay his partner a specific percentage of the profits. I recommend the partnership arrangement, because an assignment tends to cloud the title when it comes time to close a deal with a manufacturer, who cannot be sure that the assignee has not gone off and made a deal on his own with somebody else.

If you take your backer in as a partner, however, make sure you avoid one of the commonest of booby traps, and *do not list your partner as a co-inventor* in your patent application. If you do, and the fact comes out in court in an infringement or validity suit, it may seriously prejudice your case. Remember that a partner is a partner, not an assignee and not a co-inventor.

The actual wording of an agreement between an inventor and a financial backer depends on whether the inventor wishes to sell part interest or whole interest in his invention, and whether or not the invention has already been patented. The inventor may simply wish to work out an agreement for the backer to put up the funds necessary to obtain a patent, in return for an assignment or a partnership deal.

QUESTIONS

Where Do I Get Money?

Q. I need money to patent and perfect my invention. Where do I get it?

A. Unfortunately there is no public agency that will help an inventor, and few banks will make a loan on an idea. The best way to raise money is to first have your patent attorney make a search of U. S. Patent Office records to determine whether or not your invention is likely to be patentable: if it is, you should then get the necessary money from friends or local businessmen, using the favorable search report as a selling tool. This is actually easier than it sounds; it is surprising how many people are willing to take a little gamble in connection with an invention.

He Needs a Financial Backer

Q. My profession is operating moving picture machines, and I have developed a revolutionary new idea in lighting. I have had a patent search made by a registered patent attorney, and he urges me to apply for a pat

afford such a model, your best bet for a sales tool would be to have a commercial artist



make a colorful, dramatic perspective drawing of your invention.

When Should Backing Be Sought? Some 25% of the inventors surveyed sought financial backing right after making the first drawings of their ideas. Another 25% asked for backing after they had completed a crude model; 6% waited until a professional working model had been made. Another 6% did not seek financial backing until the first patentability search had been requested, and 12½% waited until this first search was complete.

Remember that all of these inventors succeeded in securing financial backing, so it is obvious that there is no one optimum time for seeking it. You might as well start as soon as you have completed your sketch or model, although of course the more proof you can provide of originality (such as you would obtain from a preliminary search), the more convincing your case will be.

How Much Did the Backer Put Up? Replies to this question ranged all over the lot, from a low of $120 to a high of $80,000. The man who got $80,000 was a special case, however, a master mechanic who had worked for one company for 33 years. He persuaded his boss, whom he described as being rich, to put $15,000 into his idea as a starter, and then to cough up an additional $65,000.

The median amount supplied by backers was about $250—a very modest sum indeed, but it would very nearly pay the patent attorney's fees in a case involving a simple invention. While some patent attorneys may charge corporation-size fees going into the thousands of dollars, a fee of around $300 has been quite common for simple patents.

Who Supplies the Money? Quite a number of those who put up the financial backing were employers of the inventor, which is not too surprising. One backer was the inventor's business partner, while several owned businesses not related to the inventor's profession. Lawyers, insurance agents, and farmers also proved to be good prospects as financial of doctors and dentists. Previous studies have indicated that the medical profession provides good prospects.

Proving that gold is where you find it, the list of backers also included an automobile mechanic, a tile setter, an office worker, and a "gentleman of means," to use the description one inventor provided.

One question regarding the choice of backer is whether to seek backing from an outsider or a relative. Over 56% of the inventors replying to our survey got their money from outsiders; about 25% tapped their relatives. The rest did not specify.

I recommend a straight business deal with an outsider. If you get money from a relative



and anything goes wrong, you are going to have his wife, sisters, uncles, aunts, and cousins on your neck for the rest of your life.

More About Who. Here's another thought: A farmer may be a fine fellow and willing to put up the dough you need. But he won't be able to help you sell a piece of machinery (if your invention is that) to a large manufacturer. Try to line up a sales-minded backer who is in the business to which your idea applies.

For example, if you have invented a plastic item, you might try lining up as a backer a salesman who calls on plastic fabricators. He would know which of his customers could manufacture and sell your invention, and he would know whom to see in that firm and how to approach him.

If you don't know how to locate such a man, run an ad under "Business Opportunities" in a large metropolitan newspaper, stating that you have a most unusual side line opportunity for a salesman calling on such an industry.

As to the question of whether the best prospect is likely to be one with a great deal of money, only one backer was described in our survey replies as being "rich." This figures. Where the rich man might be more inclined to suspect those seeking money from him because so many are, the moderately fixed are often looking for a chance to invest money.

One inventor answering our survey expressed himself this way: "It is my experi-

nted invention, the seller, as well as anyone ho supplied the parts to him, is a contribu- ory infringer, and is liable for infringement f the patent on the complete machine.

Sometimes an inventor, by substituting or dding a part on an old machine, can so im- rove its operation as to win a patent for the hange. In such a situation, unauthorized anufacture of the part to be added or sub- tituted constitutes contributory infringe- ent, even if a printed warning that the pur- hase is *not* to be installed on such a machine included by the seller.

However, the sale of common articles of ommerce, such as sugar or bricks, can never onstitute contributory infringement, even ough the sugar is to be used in making a atented candy bar or the brick in building ome patented structure. Nor can an in- ringement be construed from the selling of ny consumable material, such as oil, even though it is to be used in a patented burner.

Court Procedure. Once the court has decided as a matter of law that there is an infringement, the usual procedure is to appoint a Master to investigate and report on the extent of infringement and damage to the patentee. The Master, as an officer of the court, can inspect the factory and books of the infringer to determine how many infringing articles were made, the money value of the invention to the infringer, and the profits derived from the infringement. These findings of fact are submitted to the court. The court may adopt or modify the Master's findings in assessing damages.

Where a patentee has reasonable ground to believe that an infringement is being carried on secretly, he can petition the court for a writ appointing a neutral person to inspect the place where the alleged infringement is being committed.

QUESTIONS

Only One Way

. Aside from checking the claims of all rior unexpired patents in the same field, is here any way I can determine whether com- ercializing my invention will infringe one f them?

. Nope. There's no other practical way.

Field Still Open

. I read that some 300 patents have been ranted on the "air car." Do the last 299 of hese inventions infringe the first patent?

. Not necessarily. Some 50,000 patents have een granted in the wake of Alexander raham Bell's invention of the basic tele- hone system. Bell's phone, though, would ransmit only a short distance, and the sound vas fuzzy. Emile Berliner invented the car- on microphone, which added a marked im- rovement to Bell's phone. Now, Bell had no ight to use Berliner's microphone; nor could Berliner, in view of the Bell patent, build a omplete telephone. Result: Bell either had o do without the better microphone or else btain rights under the Berliner patent— which he did.

Point is, until the day arrives that an ap- paratus has reached absolute perfection, in- ventors will continue to make and patent mprovements on it.

How to Avoid Infringement

without infringing on the others?

A. You should have a patent expert study the claims made in the patents of the existing inventions. He can tell you what changes you must make in your inventions to avoid infringing the others. Remember, a patent does not entitle you to make or sell the invention; it only gives you the right to stop others from practicing the invention covered by it. Thus, each succeeding patent is restricted by the rights of prior patentees.

Does Expired Patent Clear the Way?

Q. The Patent Office has turned down my application on account of an old patent which has expired. If a patent has expired, it is no good, so why can't I get my patent now?

A. The purpose of the patent law is not to give you a monopoly, but instead, by means of limited (17-year) grants, to induce inventors to make their inventions freely available to the public. So, if somebody else has already given "your" idea to the public, and his 17-year grant is now exhausted, why should the government give you a grant? If they would, I could get a patent on a pair of pants and make you pay me a royalty every time you got dressed.

A Friend in Court?

Q. Will the Patent Office help me prosecute others if they infringe the rights granted to me by my patent?

A. Afraid not. The only function of the Pat-



unexpired patents. Should this search turn up any prior patent having a claim which dominates the product you contemplate marketing, you must, of course, obtain permission from the owner.

Occasionally a patent is improvidently granted, usually due to an oversight, as where the examiner failed to un-earth an anticipatory prior patent. If the defendant can convince the court that the patent is invalid, the court will so rule and disallow the suit.

In some instances, therefore, where you appear to be stymied by a prior patent and the damages would be heavy, have your attorney make a validity search, to verify the validity of the patent under consideration. In doing this the attorney will go over the same ground the Patent Office did, in search of some fatal error committed by the Patent Office, or some prior patent the examiner may have overlooked and which might invalidate the claims of the patent. The attorney may also explore and run down leads in other fields not consulted by the examiner.

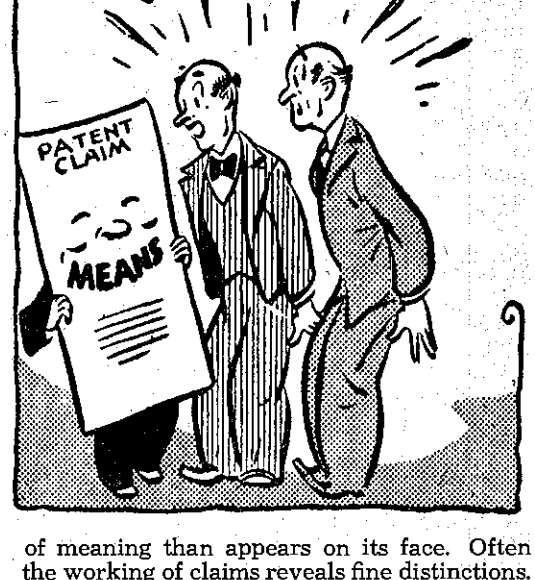
Infringement or No. Assuming that your attorney reports that the patent in question is valid, how do you determine whether the thing you propose to manufacture infringes its claims? Such determination usually requires the skill of a patent expert, and on occasion may be settled only by a court.

In general, however, the scope of patent claims may be understood from a study of the file history at the Patent Office leading to the granting of the patent. The prior patents cited by the Patent Office should be studied to determine the precise contribution made by the patentee; and arguments urged

claims. If the manufactured device falls clearly within the boundaries set out in the claims, there is an infringement.

In patent claims it is common practice to use the word "means" in defining the invention. Its usage is designed to bring all equivalent structures and apparatus within the scope of the claim. When a claim recites only "means," the patent dominates all equivalents, whether known to the inventor or not; it embraces any organization which performs the identical function.

Interpretation of Terms. While the general rule is that each word of the claims is important and means exactly what it says, sometimes a word carries a different shade



of meaning than appears on its face. Often the working of claims reveals fine distinctions.

For example, in connection with one patent, infringement turned on the wording that one part of the apparatus was "fitted" to another. It was held that the word "fit" does not require a tight fit. In another case the court ruled that a "continuous strip" recited in a claim was not restricted to a single, homogeneous strip, but could be several strips welded together.

In connection with still another patent, covering an automobile side-view mirror, in which the claims recited the parts as "integral," the court stated that there was nothing in the history of the application or in the art to indicate that the structure had to be of one piece, and ruled, therefore, that the word "integral" simply meant that all elements of the device were permanently held together.

Types of Claims. Patent claims fall into

QUESTIONS

Apply in Canada?

Q. I am going to apply for a patent in the U. S. Should I apply in Canada at the same time?

A. You will save your Canadian attorney a lot of work, and thus save yourself a lot of money, if you wait until your U. S. application has been allowed. In other words, don't pay for prosecution twice; give your Canadian attorney a copy of the U. S. application as allowed, and he can put it through the Canadian Patent Office like the Devil went through Athlone.

Get a Foreign Patent?

Q. I have a U. S. patent and am wondering about taking out foreign patents. In my opinion these are of no value to the individual inventor, but only to international corporations. What's the real poop?

A. You're right as ham gravy with biscuits. Foreign patents are usually just a pain in the purse. Further, since you already have your U. S. papers, the chances are you are over the time limit in most foreign countries anyow. Foreign patents are a pain because they are usually subject to progressive, destructive taxation, while royalties, if any, may be paid in blocked currencies.

Sale of Mexican Patents

Q. I have several ideas I would like to sell. They are patented in Mexico. I believe the usual procedure is to sign a disclosure with witnesses. How safe a protection is this?

A. If you expect to have anything to sell in the United States, you must get U. S. patent applications on file before your Mexican patents are one year old, so don't waste valuable time talking about selling procedures. Get on file in Washington at once.

Foreign Patent OK?

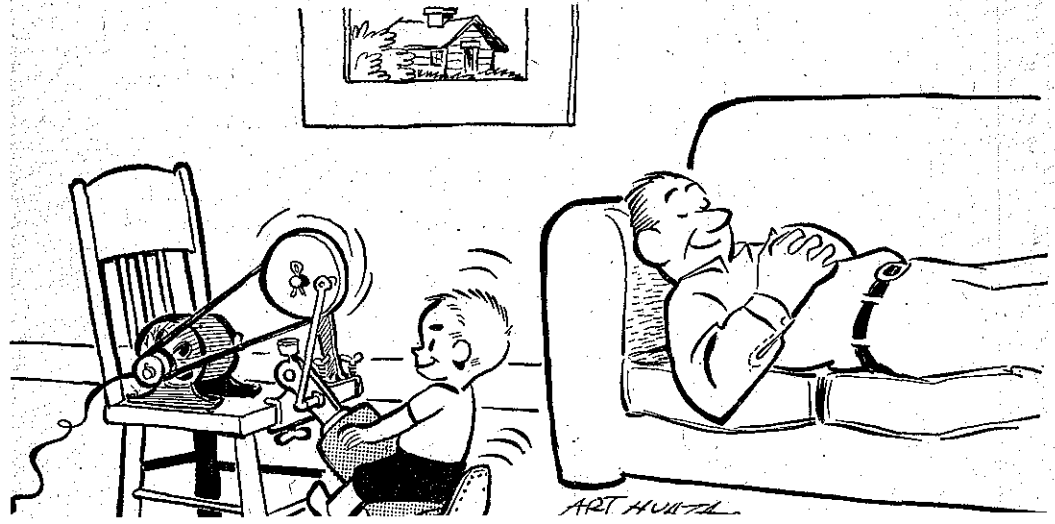
Q. I hear it takes a long time to get a patent through in the U. S. What's to prevent me from getting a patent in South America? The original ball-point pen was protected by an Argentine patent.

A. There is nothing to prevent you from getting a patent in some foreign country, but it would not be worth a tinkers dam in the U. S. I remember that ball-point pen promotion, and what a laugh arose from the pen boys in New York and Chicago when the owner of the Argentine patent threatened them. Please believe me: no patent is any good beyond the borders of the country issuing it.

Value of Canadian Patent

Q. My patent on a new toy is about to be issued and my attorneys want $550 for a Canadian patent. Why should it cost this much, and is it worthwhile?

A. You might shop around in Ottawa for a better price. As to whether it is worth much is another question. I doubt it. If your toy is a success in this country, you can flood the Canadian market (which is relatively small), yet use your U. S. patent to stop infringers from putting a Canadian-made product into the U. S. market. Patent protection in Canada may, of course, be exceedingly valuable in many industrial situations, but where you are gambling on a thing like a toy, you have to be realistic about the market potential.



ıonopolistic rights, are bound to collide from me to time.

The conflict of patents with the Sherman ct is quite technical, and one concerned had est consult an attorney. It may be said, owever, that courts in general look upon atents like any other form of property, and ill not permit patents to be administered as to eliminate competition between actual potential competitors.

A corporation may purchase as many inentions as it need to keep abreast of progss. Likewise, where an art is stymied, as as the case with Folberth and Oishei and ıe windshield wiper, an agreement whereby ıe patents may be pooled or cross-licenses ven is entirely legal.

However, the courts will not permit normal competitors to get together and divide territories, divide fields of activity, and fix minimum sales prices, and then attempt to cover up the shenanigans under guise of a "patent situation." Nor can the domain of a patent be enlarged by setting the purchaser up as a straw agent of the owner of the patent where no actual agency exists.

The purchaser of a patented device is entitled to make reasonable repair thereon without infringement of the patent. But where the patented device itself comprises but a unit of or an attachment for another machine, the right to repair may not be extended to replacement of such unit or attachment in its entirety. That would be considered making the patented device, rather than just repairing it.

QUESTIONS

Patent No Prerequisite

. I have devised some fishing equipment hich I propose to manufacture. Is it necesıry that I have it patented before I begin oduction?

. No. Anyone has the right to engage in any ısiness he pleases—unless the business is ntrary to some law or regulation. A patent esn't give you the right to manufacture or ll, but only to exclude others from practicg your invention. Before you start your ısiness, though, better have a registered ıtent attorney check to see if your product ill infringe any unexpired patents.

Foreign Infringers?

. When I have a U. S. patent, can a foreign anufacturer produce my device in his couny and then import it here and undersell me?

. No. A U. S. patent gives its holder the ght to exclude all others from making, usg, or selling the patented device in this untry. Even if the invention were made road, it would infringe the using and selling pects of your patent.

For Own Use

. May I make a patented device as long as is for my own use only?

. No, you may not. The head of a houseld may make something like 50 gallons of ine for his own use without paying a revıue tax on it, and perhaps this is where ıe idea arose. But it does not apply to patıted inventions. You may not make, use, or ll a patented device without the permission the patentee.

Patent Office Protection?

A. This question arises from the widely-held misconception that the government goes around enforcing patent rights just like the Bureau of Internal Revenue collects taxes. Actually, a patent is nothing but a ticket of admission to a federal court, where you can sue an infringer if you so desire. Naturally, when you sue, the infringer is going to set up a counter-claim that your patent is no good. That's why you should have an attorney to get you as good a patent as possible in the first place, the claims of which will stand up in court.





shei's position. The newcomer should not tempt to practice his invention until he is re that his apparatus avoids the claims of unexpired patents. When a patentee con-mplates marketing the thing he has invent-, therefore, it is recommended that he first ve his attorney make an infringement arch, to ascertain whether his invention will fringe any prior patents.

While the Patent Office makes its own arches to determine the novelty of the in-ntion in connection with its patentability, is not concerned with the probability of in-ingement; and the Patent Office will not ake an infringement search. The inventor his attorney must take the responsibility r this task.

Should your infringement search turn up y prior patents having claims which will minate your invention—and it probably ill—you must obtain permission from the vners of such patents before exploiting your vention commercially, or lay yourself open an infringement suit.

Patent Rights. The patentee, or anyone to hom he sells or conveys his patent, may do ith the patent almost as he pleases. Sub-ct to possible infringement of other patents, may make, use, and sell the invention.

The owner of the patent can, in addition:) sell the entire patent itself; (2) sell grants nder the patent to others, giving the grantee ll and exclusive rights to make, use, and ll the invention in some specified area; or) let licenses, or permission under the pat-nt for prescribed non-exclusive practice of e invention. He can even suppress the in-ntion—put it in cold storage, as it were—nt few would be so silly, for the sensible

patents, as such, but profits derived from a patent are subject to income tax.

A patent also carries a *prima facie* presumption of validity: that is, the courts will accept the patent at face value until an opponent clearly establishes the contrary. On the basis of the patent, injunctions will be granted to prevent infringements or to forestall continuation of an infringement. The patentee may call even the government itself for infringement, by suit in the Court of Claims in Washington.

In patent infringement suits, where the ruling is in favor of the patentee, the defendant must bear all of the court costs, as well as whatever sum the court adjudges reasonable damages for the infringement. In the case of willful infringement, the court is empowered by the statute to increase the award of damages as much as three-fold. The patentee, of course, must pay his own lawyers in any situation where he retains counsel.

To Protect the Public against innocently copying a patented device, the patentee is required by law to stamp the article that is manufactured under patent, or in some other way notify the purchaser that it is patented. The information given must include either the patent number or the date of its grant, so that the public may readily check the scope of the patents involved. The owner of a patent is likewise required by law to notify any known infringer of his patent.

Even though "within his domain, the inventor is czar," he cannot go hog-wild under the protection of his patent. He is not permitted to brow-beat competitors by making unwarranted threats of suit for infringement against them, or by false statements concerning his patent. Where the patentee has so misused his patent, courts of equity will not entertain an action on his patent; and the patentee opens himself to civil suit by persons



Employees of the Patent Office are also parcularly trustworthy. All have been checked y the FBI for character, integrity, and reute. In addition, regulations remove them om interest in any invention.

How Safe Can You Get? Once your applition is on file in the Patent Office, you are out as "thief-proof" as you can get. There e many inventors who then sit tight and ep mum for years while waiting for their tents to be granted. That may be the *fest* thing to do, but there are disadvantages. irst, the inventor does not like to lose three four years before offering his invention for le. Second, it is a fact that many manufacrers like to buy an invention while the patt application is still pending.

If you do expose details of your pending application and the filing date, some thief may *possibly* file a phony application of his own, bring you into interference and possibly defraud you by putting on a parade of perjurers. Possible, but highly unlikely, with the thief and his perjured witnesses risking severe penalties for a speculative profit.

So if you want to stay thief-proof, stay quiet until the patent is actually in your hands. A secret invention is fine—if you can get away with it. But you have no protection against the possibility that some other chap may be just as smart as you are, invent the same machine himself, patent it, license all your competitors, and run you out of business. That's the chance you take.

QUESTIONS

Device Appears After Turndown

. A "certain man" made an invention, ofred it to a company, and refused their price \$10,000. Later, the company made and ld a device much like the invention this an made and on which he had a patent. n't this a case of a stolen invention?

. No. At most, the man's patent did not nbrace what the company later manufacured; or else the man simply did not assert s legal rights under his patent.

Shop Right Not a Theft

. An employee of an ice company suggested the manager some ideas for cutting blocks ice. Using the company's space and marials (and probably company time), the emoyee developed an operative ice cutter. ater the company used the machine the emoyee had built. A stolen invention?

. Again, no. Where a machine is developed an employee using materials, space, or me of the company, the company acquires a op right in the invention; that is, a right to ake the type of machine so developed for e by the company. The patent right bengs to the inventor only in regard to use the invention by outsiders.

Easy as What?

. If I have a mechanic or engineer help me velop my invention, how can I protect myIf against their copying it and even applyg for a patent on it?

. All you have to do to be safe is preserve ur correspondence, sketches, and models id have the sketches witnessed by two reliae people. Most likely you will pay your lpers by check, so hang onto those canlled checks, too. Remember that inventing a mental act, and inventors must often call skilled draftsmen and engineers for aid in ilding a model.

Good Witnesses

A. You should have two witnesses, in case one cannot be located. Age is of no real importance so long as your witnesses are of sound mind and remember seeing the drawings.

Relatives' testimony is usually accepted "for what it is worth," as the courts say—to be carefully examined and usually discounted because of probable partiality. Your best witness would be someone, not a relative, of recognized integrity. And remember, the witness must fully understand the structural details of the invention at the time he witnesses it, and he must be able to give these details on the witness stand.

Guaranty Against Theft?

Q. How can you be sure that nobody will steal your invention?

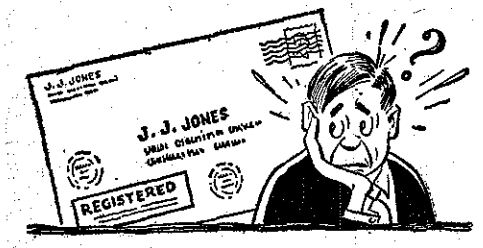
A. You can't be "absolutely" sure. Like the man who wanted to be absolutely sure he would commit suicide. He hanged himself from a tree limb that branched out over the river, drenched himself with gasoline and lit a match. The fire burned through the rope and he fell into 4 ft. of water that put out the fire. Results: A bad burning, a broken leg, and a first-class cold.

In the same way, the inventor who wastes a lot of time writing registered letters to himself, building models in secrecy and hiding parts all over the house, and generally mistrusting everybody, may merely outsmart himself. While he is fooling around, some other fellow out in Arkansas will dream up the same idea and get a patent on it.

Unwilling to Risk Suit?

Q. A man who obtained a patent on an invention later found something like it "listed in the catalog of a big company." The patentee consulted an attorney who advised against filing an infringement suit. Isn't this a steal?

A. The facts show no stealing of an inven-



pplications in dispute (or application and patent) are turned over to the Board of Interference Examiners for decision. Thus, the true inventor is bound to know if he has any rivals for any particular invention. Unless he fails to file an application at all, he cannot be denied the patent until after a full hearing on his rights. Among other safeguards available to you, most are built-in but some depend upon your own action.

Choosing a Witness. Make up your mind that, since a lot of people will have to know the details of your invention before you collect a nickel, you should deal with those (a) who are not likely to be tempted and (b) who would lose more than they could possibly gain by dishonesty. As the late Dr. Lee DeForest said in his "Seven Guideposts to Inventive Success" (p. 21): "In having your drawings witnessed, choose a disinterested party as witness, and one who in addition is in no position to be tempted to copy or encroach upon the idea."

Should a witness be one of your family whom you trust implicitly? The answer is no, and best illustrated by a court decision a few years back. Inventor No. 1 first hit upon the idea on which inventor No. 2 (with no knowledge of No. 1's work) obtained a patent. From records of their work, dates indicated that No. 1 was first to get underway. But—and here was the catch—the records of No. 1 showed a long blank period where there was no disclosure of work being done. Records of No. 2, however, showed a continuous effort to perfect his invention—that is, he pursued it with due diligence.

In court, a brother-in-law testified that No. 1 was diligent in pursuing and developing his invention during the period when no activity showed in his inventor's written records. The court ruled, however, that No. 2 still was the winner, since evidence presented by a close relative was likely to be prejudiced in favor of that relative. So, much as you trust them, it's wise to keep members of your family out of the picture for a strong case in court.

Witnesses you do select—two or three are enough—should be members of your community whose standing and reputation are such that they would never consider risking them tempted by the vague possibility an invention might be patentable and *profitable* a few years in the future.

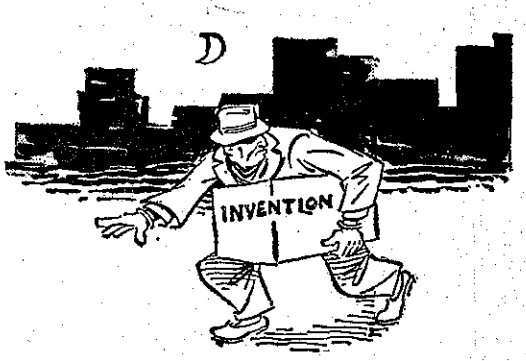
In addition to a man with a reputation for integrity, try to select one who also happens to be a good mechanical man. He could more easily understand an invention by listening to your explanation and looking at your drawings or model. This is important, because if they are going to be effective, your witnesses must be capable of witnessing and understanding your *invention,* not just your signature.

It's wise also to choose witnesses with a life expectancy greater than the patent you seek. You might like to consider that retired college professor who lives across the street but—dead men tell no tales on the witness stand.

To play it safe, you should have witnesses sign and date your disclosure. You may have photostats made for practical use, but preserve the originals. But even though you are thus establishing pretty good evidence of the date of your invention, you are not safe against the man who may already have filed a patent application on the same invention. Your dated, witnessed papers are no better protection than the speed with which the application is filed. Such papers could actually work against you if they showed that you had indulged in an inexcusable waste of time.

Inventions Have Been Lost due to inability of the inventor to present credible witnesses. In an interference, the inventor's own statements are practically ignored. The basic requirement is that he present a witness to substantiate every point.

When a man applied for patent of an oil well drilling instrument which could detect an approach to gas or oil, he found a rival at the Patent Office. Though he had applied



several months previous, he was unable to prove a date of invention before that established by the rival because his witness ad

The party establishing the earliest date of
ıvention by clear and convincing prepon-
erance of the evidence is adjudged the first
ıventor. In due course, the board will decide
/hich contestant is entitled to the patents
/ith a full explanation of its reasons. Provi-
ion is made for a defeated party to carry an
ppeal into court, if he desires. The applica-
on of the winning party is returned to the
xaminer, to be processed into patent.

While the purpose of an interference is to
etermine the question of priority of inven-
on, in many conflicts the question turns on
riginality. Common examples are: An in-
ventor hires a mechanic to build his inven-
tion, and the mechanic erroneously considers
that he made the invention. Again, two men
may be working together and dispute over
whether the invention was the result of their
joint contributions or the sole genius of one.
Similarly, conflicts arise where one person
does the inventing and the other furnishes
the money and materials.

By reason of the travel and time involved
in taking testimony, checking the character
of witnesses, printing of the testimony and
briefs, and labors of skilled counsel, an inter-
ference is an extremely expensive venture.

QUESTIONS

Who's the First Inventor?

. I enclose a sketch of what I call a rotary
ıgine. It consists of a circular housing, in-
de of which is a three-sided rotor. This
vention gives three power impulses per
volution—all in the same direction, for
hich reason it should be highly efficient.
hat do you think?

I am quite certain that it is efficient, be-
use this point has already been established
ith working models, here and in Germany,
hich are almost identical with what you
ıow. Frankly, it is hard to tell whether you
e trying to pull my leg, a thought which
ossed my mind due to the fact that this
ankel engine was made public some months
fore you wrote to me. However, giving you
e benefit of the doubt, and assuming that
u did arrive at this idea independently
specially in view of the fact there is a slight
ference in your transmission means to the
iveshaft), I advise you to file a patent ap-
cation immediately.

Don't waste time on a preliminary search
anything else. Get on file as fast as possible
d save every scrap of evidence which shows
ıen you first conceived this, because it
ıks to me as though you probably are
ıded for an interference in the Patent
ice. The purpose of this will be to deter-
ne who really is the first and true inventor.
may result that all you can get is a patent
im on your transmission, but in the case of
invention with a great future (which this
y have), any claim may be very valuable.

He Held Out a Long Time

During World War II I modeled an inven-
ı, but did nothing with it. Now I see the
n on the market, with a recent patent
nber. Is this patent valid, since I am un-
ıbtedly the first inventor?

From a purely chronological standpoint
ı may be the "first" inventor, but from a
al standpoint your firstness has been oblit-
ted by your failure to take action.
ince the purpose of the [illegible]

as far as anything that you might do or say
would be concerned. If you could prove by
newspaper clippings that you put on some
public demonstrations of your invention 10
or 15 years ago, you might invalidate the
patent. However, you still couldn't get one
for yourself at this late date, so why shoot the
other fellow's Santa Claus?

Bringing a Patent into Interference

Q. I was about to apply for a patent when an-
other inventor actually got a patent. Does
this mean I lose out entirely?

A. Probably, but not necessarily—provided
you take action before the patent is one year
old. If you know that your date of conception
is considerably earlier that the other man's
filing date, and if you have some tremen-
dously good excuse for your delay, then file
a patent application immediately. This will
bring about an interference, and the two of
you can fight it out.

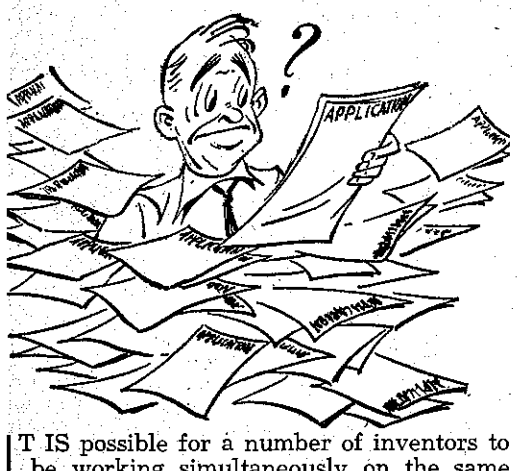
Problem in Interference

Q. I was about to have a patent-search made
on my invention when I came across some-
thing quite similar already on the market,
and stamped *Patent Pending*. Since a preli-
minary search in the Patent Office will not
produce any information on this pending ap-
plication, how can I know what claims it
asserts, and so, whether or not it could be
worth-while for me to go ahead with mine?

A. To start with, you should have a search
made so as to see where you stand in relation
to the patented art. You may find that your
simpler version of the device is already cov-
ered, or that it is the subject of expired
patents which you can use to your heart's
content. The fellow with the pending patent
may have nothing but claims on his differ-
ences, which apparently don't interest you
anyhow. Conversely, you may find that there
is little or no art in the Patent Office, in which
event you may have an attorney file an ap-
plication asserting claims not only to your
particular structure, but to the other fellow's
as well, so as to bring him into interference

How An Interference is Settled

Special Patent Office board determines true inventor in a high court atmosphere



IT IS possible for a number of inventors to be working simultaneously on the same problem and come up with the same or nearly the same answer. With upwards of 90,000 patent applications being filed each year it is to be expected that some applicants will have one or more rivals seeking to patent the same invention.

The Bell telephone offers an illustration. Alexander Graham Bell encountered seven rivals at the Patent Office including Emile Berliner, inventor of the carbon microphone, Thomas A. Edison, Elisha Gray, and Daniel Drawbaugh, the latter a farmer of Milltown, Pa. In the end the contest narrowed down to Bell vs. Drawbaugh, and after various appeals the U. S. Supreme Court declared by a majority of one that Bell was the first inventor.

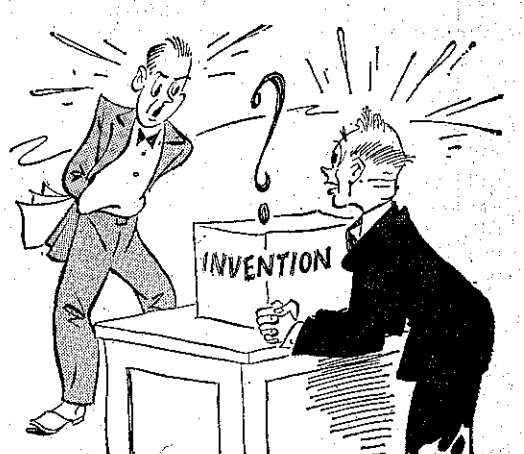
The electrolytic reduction of aluminum, the basic procedure under which aluminum is produced today, was invented on the same day by 22-year-old Charles M. Hall at Oberlin College and Paul L. T. Heroult in France.

There is no available figure on the odds that one will meet a rival at the Patent Office, but our best estimate is that a conflict occurs in less than 1% of applications filed. This possibility has been blown up and exploited out of all proportion. Various blanks have been offered the inventor to be filled in and witnessed in order to "protect" his rights. Here's what happens when two or more inventors apply for patent on substantially the same invention.

True Inventor Wins Nod. Under U. S. law a valid patent may be granted only to the first and true inventor, provided he has not forfeited his right to patent by delay beyond the provisions of the law, by abandonment, or

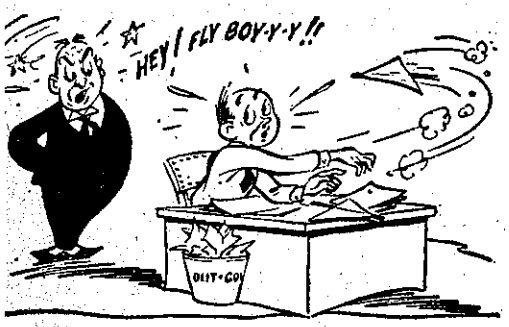
the apparatus (or process) invented, or within 12 months from the date the invention has been patented or described in any printed publication anywhere in the world (either by the inventor himself or anyone else).

Therefore, in a contest of rival inventors there is no great premium on being first to reach the Patent Office. In fact, the courts have admonished inventors not to rush to the office before taking time to test and reasonably perfect their inventions, also to devise and study reasonable alterations or equivalents. The true inventor may apply even after the invention has been patented by another, and still be awarded the patent. In such a case the first-granted patent is held invalid.



Conception. Inventing is a mental act, technically called "conception." The term means completion of the mental picture in the mind of the inventor of the operative structure or procedure constituting the invention. Since conception is mental, it can be proved only by physical evidence, such as drawings, models, or explanation, either written or oral, to others.

Because drawings and models known only to the inventor are but self-serving documents, to which the inventor might attribute a fraudulent date, such proof is of no value unless verified by the testimony of at least one credible witness. From a practical viewpoint, the date of conception is the date when an understandable sketch or model was exhibited, or the date when the invention was



spect ratio, would, theoretically, be ideal. 'aking his trusty scissors to a sheet of good aper (36-lb. rag bond, to be exact), he liced out a flying wing, and had great scienific joy in flying it around the office until an nscientific boss ended his noble experiment.

Not to be put off so easily, he demonstrated is model to an Army aviator, who patted Mr.)oakes's little pointed head and tediously nd patiently explained to him why the flying ving was an impossibility. A year or so later, flying wing was successfully flown.

TV Tables. When television was beginning o boom, turn-top, tilt-top, and raise-and-ower-top table inventions were suddenly a lime a dozen. Hundreds of inventors jumped n these ideas, all at the same time. There nay have been many interferences, provided ny of these contained patentable material.

Suppose at that time you had worked out novel tilt-top table design on paper. Should 'ou have built a model or had a contract nanufacturer prepare samples? Or should 'ou have applied for a patent at once? You hould have applied for a patent just as soon is you were sure in your own mind that your dea would work—knowing, in this case, that nany other keen minds were already workng on the same problem.

The faster you get your patent application n file, the better are your chances of being he "senior" party in any interference which nay be declared. And this status of seniority s valuable, since much of the burden of proof f priority of invention is thrown upon the junior" party in the controversy.

Reduction to Practice. After the conception f an idea, the idea must be "reduced to practice" in order to complete the act of invention. n other words, you must do something about 'our daydream.

But there are two kinds of reduction to ractice: "actual" and "constructive." "Actul" means that you actually build the thing, mploy the method, or create the compound —do what you thought of doing. "Constructive"—construed legally—means to *show how* o *do* what you thought of doing, by means of

Building a working model, especially if the invention is complicated or unpredictable, may work out the "bugs," it's true. It may even result in unforeseeable improvements that will give you a better patent, broader in the degree of protection it provides. But remember that you are gambling against time: and this brings up another touchy question . . .

Diligence. How consistently did you employ your time? How much of it did you waste? How hard did you work? Why did it take you so long? Isn't it a fact that you really dropped the idea and then picked it up again only when you thought others might be interested? How do you explain the fact that there are no entries in your diary for four solid weeks?

Didn't you know enough about it to realize that these experiments you claim to have made would not advance the invention one iota? If you actually bought these parts in June, as you claim, where is the receipt from the vendor? These are the type of questions that will be hurled at you, if by spending time building a model while someone else has filed an application you wind up as junior party in an interference.

While you are trying to sweat out the answers, your opponent across the courtroom is giving you the Big Sneer, safe as he is behind his filing date.

Interference Procedure. You'll certainly need a lawyer to steer you through an interference procedure. In fact, you can prove this to your own abundant satisfaction by investing 45¢ in a copy of Rules of Practice in the United States Patent Office, and trying to read the 27 pages devoted to the subject.

But to give you a general understanding of the procedure, here is how it works: An interference will be declared between pending applications when they contain substantially the same *allowable* claims. The Patent Office then calls on the junior applicant to state in writing under oath his earliest provable date of conception. Naturally, if this date is subsequent to the filing date of the senior party, the interference is ordinarily called off.

Assuming the interference is to proceed, the examiner will send a set of identical claims to each party, with instructions to enter these claims in their respective applications by means of amendment. This causes each applicant to use the same language, so that further argument may be limited to the question of priority.

The applicant must enter the suggested claims: failure to do so will act as a disclaimer. When the claims are entered, the interference is officially declared, all parties (including inventors, attorneys, and assign-

Argument of the Infringers. The basic argument of those charged with infringement claimed that the copyright was no good because the copyright law was never intended to extend protection over utilitarian objects. In effect, they said, "Sure, Stein was entitled to a copyright on a statue, but not on a lamp. If this thing is a work of art, then attaching a cord and a lampshade to it destroys its existence as an *objet d'art.* On the other hand, if this thing is a lamp, and if Stein wanted protection, then he should have secured a design patent." The very fact that Congress saw fit to enact a design patent law to cover this kind of invention must be taken to mean, by inference, that Congress intended to exclude this class of merchandise from the copyright law.

Speaking for the majority of the Supreme Court, Justice Reid said, "The patentability of the statuettes, fitted as lamps or unfitted, does not bar copyright as works of art. Neither the copyright statute or any other says that, because a thing is patentable, it may not be copyrighted. . . . We find nothing in the copyright statute to support the argument that the intended use, or use in industry of an article eligible for copyright bars or invalidates its registration. . . . Nor is the subsequent registration of a work of art published as an element in a manufactured article a misuse of the copyright."

Dissenting Opinion. Justices Douglas and Black wrote a dissenting minority opinion in which they brought up again the basic question as to whether or not a three-dimensional object can be considered a "writing" within the meaning of the Constitution. Perhaps, admitted Mr. Douglas, the majority opinion was right, but he said he did not feel that it was "obviously" right which leaves the door slightly ajar for the benefit of anybody who wants to try to pressure Congress into amending the law.

What the Law Is Now. Whether right or wrong, the court's decision means you can get a copyright on a three-dimensional object, and that the copyright cannot be invalidated by showing that the object has a utilitarian character. Whether or not the copyright could be invalidated for lack of artistic content, the court did not rule. Now, what I am wondering about is this: What happens when some inventor of a train of gears gets turned down by the Patent Office on a charge of "aggregation," and then proceeds to get copyright registration on his model as a piece of modernistic sculpture? Can he support a charge of infringement if some manufacturer uses that particular train of gears?

What It Means to You. From a practical standpoint, the Stein decision may mean that copyright protection may be sought upon all kinds of utilitarian objects such as lamps, electric fans, inkwells, blotter pads, calendars, pitchers, games and game pieces, door knockers, jewel chests, compacts, fountain pens, cuff links, tie clasps, earrings, finger rings, fabric designs, wallpaper, high-style women's garments, and even, perhaps, auto bodies and airplanes.

Actually, because the Stein decision was only handed down in the early months of 1954, definite conclusions as to just how far-reaching it may really be will have to wait until more cases come into the lower federal courts, to see how the rule is going to be applied, and how the law will develop.

If you have an invention with any artistic or ornamental aspects whatsoever, mention the Stein case to your patent attorney and see whether or not he believes that you should apply for copyright—either instead of or in addition to making application for patent. I do not advise you to try to get registration yourself because copyright law is still a hazardous jungle full of pitfalls, deadfalls, and the danger of winding up in the wrong classification—not only for the average citizen, but even for the average attorney in general practice. The thing to do is to work through your patent attorney.

QUESTIONS

Copyright for Math Formulas?

Q. May a booklet containing the derivation of a mathematical formula be copyrighted?
A. Certainly. The registration fee is $4, and two copies of the booklet must be filed with the Registrar of Copyrights. I suggest you write to the Registrar of Copyrights, Library of Congress, Washington, D. C., for a free application form and information about the inscription of the copyright notice in your booklet and when and how you must apply for registration.

Protection on Natural Object?

Q. In making novelty plates and trays I am using natural objects, such as leaves, ferns, etc., which I arrange in a pleasing manner and then spray with a metallic paint. Can I get a design patent on the finished product?
A. You are not only using the natural object itself, but no two arrangements look exactly alike. You can't get a design patent on a simulacrum of a natural object, so it ought to follow that you could not protect the object itself. If you did get copyright protection on one tray or plate, it would not protect the next, since no two are exactly alike.

Stolen Tunes

Q. How can you tell when someone infringes on your copyrighted musical composition?
A. Listen to and compare the other composition with your own. Or compare the scores. In a trial, you may demonstrate the similari-

violates it. But check with a lawyer on this.

Thus, in the case of an apple-polishing machine and in most other cases of patentable ideas, I see no sense in seeking a copyright. It would only be of value as evidence of a date by which you were known to have perfected your invention, but you can get just as good evidence for 25¢ from the nearest notary.

Want to Sell Plans? Occasionally, inventors of unpatentable devices or ideas have made some money by copyrighting their plans and then selling the printed plans to the public for $1 to $5 a copy. For instance, if you developed some nifty "do-it-yourself" gadget which the average home workshop fan might like to make, then there is a possibility that you might make money publishing the plans. In such a situation, get a copyright to protect the plans as such.

I remember another case where a copyright was the only solution. One person asserted that he had "invented" a "method" for locating oil deposits. The method involved getting into an automobile, and taking certain "sights" on natural objects such as trees, rock formations, outcroppings, etc., while traveling



at a high rate of speed. You drove in a quadrangle around a suspected area drawing lines on a map from one "sight" to another. Theoretically, if all your lines converged at some one point, then this point of convergence was the spot to drill for oil.

The inventor claimed he had actually located a number of oil wells using this "method." Whether this was true or not, the idea did not come within the meaning of "method" as used in patent law. It was really not a method, but a surveying system which could not be patented. And even if it

The inventor, however, insisted on some kind of protection, so a copyright was obtained on a description of the system and a couple of sample maps put up in pamphlet form, and printed with a copyright notice. Copies were filed in the Library of Congress, a notice of registration secured, and the pamphlets were put on sale—but with what degree of commercial success I do not know.

Remember that this copyright protected nothing but the pamphlet itself, and could not be used to prevent people from using the system. Thus, when Bill Jones bought a copy of the pamphlet, both the physical pamphlet itself and the idea it contained became his to use. The copyright owner could not collect oil royalties from Jones, nor could he prevent Jones from conveying the information to Smith. In fact, if either Jones or Smith were to take the same basic idea, write a bigger and better pamphlet, give it a more appealing title, write up the idea in his own language, introduce new maps of his own devising, secure a copyright of his own, and go into business—the original "inventor" would have no recourse against this action.

There is always the question of the value of a copyright and alleged infringement or limitation thereof. Jones could not avoid the copyright by merely making a few minor changes here and there. He would have to establish that he had produced something which was peculiarly his own which involved more than making minor changes. Or, as the courts have ruled, there must be a "distinguishable variation"—something more than a "trivial variation."

No Protection on "Know-How." An even sadder example which points up the problem of the person with an "idea" who seeks protection through copyright, is the case of Taylor vs. Metro-Goldwyn-Mayer Studios, et al.

In this case the inventor, Taylor, had devised a system or technique for using colored floodlights and spotlights so as to produce highly unusual and artistic effects, and had secured a copyright on a description of the method. MGM proceeded to use the technique; and, when the inventor sued, they defended themselves on the basis that the technique was not susceptible of any kind of legal protection, and that they had not reproduced any particular scene or picture owned by Taylor.

The court agreed with MGM, and denied damages to Taylor. Thus, even though Taylor may have made some important contribution to the methods employed in the production of color movies, she made a mistake in assuming that a copyright would protect her.

If she had first told MGM that she had a valuable new idea for lighting theatrical sets,

maximum fee for the longest term design patent, covering both the examination and printing of the patent, is $30; whereas the minimum fee for a mechanical patent is $30 upon filing, and an additional $30 if the patent is granted.

Rights and Infringements. The patent gives to the patentee the right to exclude all others from making, using, or selling the article covered by the patent. It does not, however, give the inventor the right to make, use, or sell the article covered by his own patent; for each new grant is issued subject to infringement of preceding patents. Because the claim of all design patents reads the same, in the matter of infringement, and just the contrary to mechanical patents, the claim is ignored. Assuming that one has a valid patent, then infringement turns primarily on whether there is identity of appearance, whether the effect produced upon the eye is the same.

As the U.S. Supreme Court put it in one decision: "We hold, therefore, that if in the eye of an ordinary observer, giving such attention as a purchaser the same, if the resemblance is such as to deceive such an observer, inducing him to purchase one, supposing it to be the other, the first patent is infringed. . . ."

In deciding infringement of a design patent the patentee is entitled to a reasonable range of equivalents with respect to known, prior, unessential details. For example, the striking feature of a certain doll was its eyes. The court ruled that infringement of the patented design was not avoided by painting the doll head to represent hair, or by substituting natural hair for the cotton strands of the design, or by adding a bathing cap, a military cap, "or any other standard form of head dress."

Overlapping Patents and Copyrights. On occasions there may be overlapping of the domain of mechanical and design patents. An invention may present improvements in mechanical structure and at the same time of marked attraction to the eye. Since mechanical structure ordinarily can be varied considerably, often assuming an entirely different appearance from that depicted in the mechanical patent, the inventor may be entitled to both a mechanical and a design patent. Thus, the mechanical concept for a chandelier might reside in the disposition of the several lamp bulbs and their switches, and in constructing such invention the inventor might add ornamentation to the chandelier frame.

There is also an occasional overlapping of the domain of design patents and copyrights. There are some things, such as statuettes, paintings, and needlework patterns, intended to be applied to articles, which may be protected either by design patent or by copyright, whichever the inventor chooses.

The difference between design patents and copyrights is that design patents, while of shorter duration, are usually more valuable, since they are issued only after careful examination by the Patent Office; consequently, they carry a presumption of validity which the courts will not upset unless convincing proof to the contrary is offered.

Copyrights, on the other hand, are registered or recorded without an examination as to their merits; they are, therefore, merely the equivalent of filing a claim to a right. The registration amounts to nothing more than stamping the date of application on the article and filing it away. Copyrights do not carry the legal presumption and weight of patents.

In the event that both a design patent and a copyright were obtained on the same article, the courts hold that the copyright is superseded or in effect canceled in favor of the patent, since the patent is the superior grant.

Copyrights are handled by the Register of Copyrights at the Library of Congress, Washington, D. C. Copyright registration fee is $4; its life is 28 years, and it may be renewed.

QUESTIONS

Each Design Is Separate

Q. I intend to bring out a line of plastic toys for infants, and have two questions: Will I need a separate design patent for each one, and should I try to handle the whole operation myself or have somebody else do the manufacturing while I handle distribution?

A. You will indeed need separate design patents or copyrights on each individual toy. There would not be any way of protecting them as a group. To handle the job, you should engage a lawyer. Turning to your second question, it is the usual practice to let a custom moulder do the manufacturing while you do the promoting. Chances are you will probably have to pay for the moulds or promotional work will add up to a full-time job, so you should not saddle yourself with a manufacturing problem in addition.

What Good's a Design

Q. If a design patent protects the inventor only as to the appearance of the thing patented, what good is it?

A. It can be very good. Appearance is a very real and appealing thing. For years the Packard radiator design was considered as valuable as the company's trademark. Appearance, and thus a design patent, is especially important in household appliances, cars, jewelry, shoes, and any other products where the manufacturer figures his sales depend heavily



ventive ingenuity. The so-called "invention" in designs is more similar to what might be termed the "invention" or originality in a painting or statue, than it is to the invention in a method or machine.

As there is wide divergence of opinion, even among artists, as to just what is ornate and attractive, the courts and the Patent Office take a practical and liberal view as to patentability, keeping in mind the appeal of the design to the eye of the general class of persons for whom the design is intended. The primary consideration is—does the design possess a sufficiently different configuration or appearance from prior designs? If so, and if it is pleasing in itself, presumably a design has been invented.

The working rules laid down by the courts in design cases hold that the inventor must do more than make routine changes, such as the substitution of curved for straight portions, or the mere selection of smart colors for his design. Thus, a design patent for a candle having a square cross-section was declared invalid, the court remarking that the public has the right to make any article round or square or in any other "standard form."

Nor will omitting a few minor details of a prior ornamental design entitle you to a patent on such modification. But the reassembling and regrouping of familiar forms and decorations may constitute a patentable design. Thus, where various items of the design of a hunting knife were shown in several, scattered prior patents, one disclosing the blade, and another the handle, etc., it was held that the combination of these various features resulted in a unitary and ornamental design exhibiting the quality of invention.

household articles and appliances, furniture and furnishings, they can also include hardware and carpentry, machine and garden tools. Design patents granted to date fall under 93 different broad titles or classes of goods, including virtually every article found in commerce. Articles covered by design patents run from simple things like pins, bottles and packages, to automobiles, airplanes, and locomotives.

Though the statute states that design patents may be issued for "any article of manufacture," the courts have imposed several limitations as to just what type of article may be patented. For instance, it has held that a cogwheel, normally covered with grease and hidden in a gear case, is not subject for a design patent; for, by reason of its obscure use, its appearance in no way delights the purchaser. This holds true for a horseshoe and a drill bit for oil wells. But the courts have ruled that a road paving machine has eye appeal and therefore is a proper subject matter for a design patent.

A design patent cannot be resorted to as a subterfuge to protect purely mechanical features. Mechanical structure can be protected only by a mechanical patent. Thus, a design patent on an automobile bumper having special mounting brackets, even though the brackets had a distinctive appearance, was held invalid, since the things that gave the bumper distinctiveness were purely utilitarian. However, a design patent on a license plate holder of attractive appearance was sustained. By analogy to the horseshoe case, design patents for automobile tire treads have been denied as inherently not a subject for design patent, and also because of the mechanical function of the tread; but design patents directed to side-wall ornamentation and overall appearance of the tire have been sustained.

The Hadden Case. In an old court decision, a design patent for a brick water tower was declared invalid on the ground that such structure is real property, rather than an "article of manufacture." On the basis of that decision, for years the Patent Office restricted design patents on building structures to the individual manufactured units thereof, such as designs for windows, doors and casings, and brick.

Then, in 1927, a man named Hadden applied for a design patent on a grandstand. The Patent Office refused the patent on the ground that a grandstand was not an "article of manufacture" but, when Hadden appealed to the Court of Appeals of the District of Columbia, that court upheld him. Mere size or mobility is not the test as to what is an article of manufacture, the court said, point-

patent for them, in which case the trustee usually divides all profits equally among the parties to the patent.

When an inventor sells or assigns a part interest in a patent, the owner of such part interest, however small it may be, obtains the same rights as if he were a joint inventor, in the absence of express contract to the contrary. He can practice the invention freely and license others to practice it. It's wise to look before you leap into selling or assigning a part interest in a patent.

QUESTIONS

Can You Avoid Question Box?

Q. At our plant we have a suggestion system. Do I have to turn my inventions in to the system and take their measly rewards?

A. Not necessarily. The mere existence of a suggestion system does not make it obligatory for you to submit your ideas through it. (See Small vs. Heywood-Wakefield Co., 3 FS 825, 28 PQ 206, D Mass.) Of course, if you have been using your employer's tools, time, or materials, he may have a shop right in your invention. You should understand that an employer's shop right does not prevent you from getting a patent and exploiting it. However, your employer may transfer you to the branch office at Guadalcanal if you license one of his competitors!

Changing Jobs

Q. When I took my present job, I needed work badly and did not blink at entering an agreement not to take a similar job for a period of 10 years after leaving. Well, I'm leaving. But since I'm not taking anything with me, either physical or mental, that I didn't have to start with, do you think they can make this agreement stick?

A. If you actually aren't taking anything—no confidential customer contacts, no trade secrets, no unusual know-how that others in the industry wouldn't have, then a court would probably hold that the contract was in restraint of trade and personal liberty and therefore void. Your employer would have to prove damage or the almost certain danger of damage in order to make it stick. Of course, had you been working on or with inventions or processes of a special nature he might be able to make it stick.

Boss's Rights

Q. I am on straight commission, and the company doesn't take out any Social Security, so I think I am an independent contractor and not an employee. However, my boss wants to pay for a patent on my invention and exercise a shop right. If I don't let him, he will most likely fire me. What to do?

A. You are probably right that you are not really an employee, but from a practical standpoint you had better go along with your boss. He will pay for the patent, do all the model making, tooling up, testing, redesigning, at no cost to you, while you still keep

leaving your boss to exercise his shop right.

Of course, if your boss insists on an assignment, you ought to supplement it with a profit-sharing contract.

Fair and/or Legal?

Q. An airline wants me to sign an employment contract (copy enclosed), one condition of which states that I must turn over to the company any invention I make during such employment or within six months after termination thereof, even though I make the invention during off-hours and at home. Is this fair and legal?

A. This contract specifies that only inventions "having any relation to your employment or the business of the company" are involved. Thus, if you invented a golf club, a clothes dryer, a bottle cap, or the like, the company could claim no interest. Such contracts have often been ruled fair and legal.

By taking a job with the airline, you would be exposed to needs and problems in the air transport field, and the company regards inventions flowing from such employment as part of its hire of you. Bear in mind the fact that if there was no such contract, you might do all the mental steps of inventing at the plant, then claim that it all occurred while you were at home; you could make an invention at one company, and run to a competing company to sell it. The six-months clause merely puts teeth in the contract.

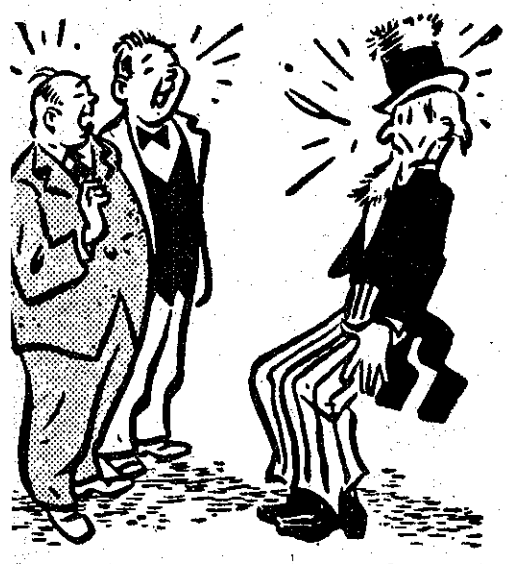
The practice of making special awards (that means money) for valuable contributions such as a time- or money-saving invention is quite general, so the proposed contract is not as severe as you think.

Outside Help

Q. I am working on a pretty complicated machine invention, and to work it all out is just beyond my capabilities, as I am not a mechanical engineer. I need expert help, but if I get it, won't I have to cut the experts in on the deal?

A. No. It is a well-established principle that an inventor has the right to employ the mechanical skill of others without losing any rights to the invention.

On the other hand, if you merely tell a mechanic that you want him to develop a device to serve such-and-such a purpose, and even if you put up the money for his work and materials, this does not make you an



While detailed to work on airplane radio roblems, these men became interested in ubstituting alternate current for the direct attery current of early radio apparatus. hey reported their idea to the chief of their ivision, and were encouraged to proceed, n government time. They solved the prob-em, applied for and obtained patents, and old them to the Dubilier Corp. for a consid-rable sum.

The government brought suit to make Du-ilier turn over the patents, arguing that ince the inventions were made on govern-ent time and with government facilities ey belonged to Uncle Sam. The Supreme ourt ruled that the employment of Dunmore nd Lowell was too general to give the gov-rnment title to the patents, "albeit they were mployed in a field of labor and effort in the erformance of which they obtained patents." n other words, since Dunmore and Lowell ere not hired to nor instructed to develop plug-in radio usable on house current, the overnment acquired only a shop right under e patents.

The Case of the Captive Inventor is one in hich the patent must be turned over to the mployer, even if not specifically mentioned n the contract of employment. The leading ourt case tried on this point grew out of a ontract that stated the employee was to devote his time to the development of a rocess and machinery for the production of e front spring used on the Ford automo-ile." The agreement stated the pay he was o receive, but did not mention title to any atent that might be derived from his work.

After devising the machine, as per the con-ract, the employee applied for and was ployee had only produced what he was hired specifically to invent. In the light of this, the court said, it was unnecessary to state in the contract that the patent belonged to the employer. "One employed to make an invention," the court continued, "is bound to assign to his employer any patent obtained."

Note: At one time, under the Patent Statute of the United States, the patent had to be applied for by the inventor, or his administrator or guardian. The law was changed in 1952 to read as follows: "Whenever an inventor refuses to execute an application for patent, or cannot be found or reached after diligent effort, a person to whom the inventor has assigned or agreed in writing to assign the invention, or who otherwise shows sufficient proprietary interest in the matter justifying such action, may make application for patent on behalf of and as agent for the inventor on proof of the pertinent facts and a showing that such action is necessary to preserve the rights of the parties or to prevent irreparable damage."

A Hired Mechanic. Another situation arises when an inventor, having a concrete idea which he is either unable or disinclined to reduce to practice, employs someone to whom he explains his idea to build the machine or demonstrate the feasibility of his idea. In such a case the employee obtains no rights whatever in the invention, as he has performed no part of the inventive act.

However, inventing, by definition, includes such things as the conception of how the machine is to be designed and the precise arrangement of the parts. If a mechanic, while building an apparatus according to directions from the inventor-employer, develops an entirely new agency, or hits upon an idea sufficiently distinct to amount to a new device, he may hold it as his own property. If he uses the time or materials of his em-



THINGS YOU SHOULD KNOW ABOUT TRADEMARKS

A trademark is any word, name, symbol, or device—r any combination of these—adopted and used by a ıanufacturer or merchant to identify his goods and istinguish them from others. In short, it is a commercial gnature.

To be eligible for registration, a trademark must first e used in interstate commerce. Rights are acquired in mark by the use of it; never by its cleverness or at-activeness.

Registration of a trademark offers constructive notice f the registrant's claim of ownership of the mark. It ives him the exclusive right to use the mark commer-ally to represent the goods or services specified in his ertificate. It also gives him the right to sue infringers ı the U. S. courts, and to prevent importation of goods earing an infringing mark.

An application for registration of a trademark must e made out in the name of the owner and submitted ith a $25 fee to the Commissioner of Patents, Washing-n 25, D. C. Application forms will be supplied free on quest to the commissioner's office.

A Trademark Cannot Be Registered If:

1. It includes any immoral, deceptive, or scandalous matter which falsely suggests a connection with persons living or dead, institutions, beliefs, or natural symbols—or may bring them into contempt or disrepute;
2. It comprises the flag, coat of arms, or insignia (or any simulations thereof) of the United States, of any state, of any municipality, or of any foreign country;
3. It contains a name, portrait, or signature of a particular living individual (except by his written consent), or of a deceased President of the United States during the lifetime of his widow, if any (except by her written consent).
4. It resembles another trademark registered in the Patent Office, or a mark or trade name previously used in the U. S. and not abandoned, so closely that purchasers of goods of the applicant may be mistaken, confused, or deceived.—A. D. M.

Many leading cartoonists set up separate orporations to license out the use of their haracters—such as Mickey Mouse, Sparkle lenty, Dick Tracy, etc. You have to measure p as to the quality of your product in order o get a license and must pay a small royalty, ut you get off to a considerable head start nd capitalize on a lot of prior publicity.

If you want a good trademark, you might ake your ideas to an advertising agency. lake any suggestions you want, but let the oys in the agency come up with about a alf-dozen ideas of their own. These fellows re paid to know something about marketing nd a lot about what will have public appeal, o let them give you their ideas. Then have your attorney make searches to see what chances you have of securing registration both in your state and the U.S. Patent Office.

This should narrow you down to two or three choices, after which the advertising agency can hire some door-to-door interviewers who will show the proposed marks to housewives and merchants to ascertain public acceptance. Then, when you have a mark which is soundly conceived, registrable, and in favor with the public, call in the box and label boys, and let them take it from there.

If you are going into business, good luck. But, if you have an invention, forget everything you have read here, and just remember that nothing takes the place of a patent.

QUESTIONS

Copyright or Trademark?

). My question relates to copyrights. How an I check concerning tradenames?

. You are crossed up. Tradenames and rademarks are handled by the U.S. Patent)ffice, and information must be sought from he public records kept there. Copyrights, ncluding those on prints and labels, are ıandled through the Library of Congress. Washington, D.C., and must be checked there.

Devising a Name for the Invention

A. You can't do anything. This business of calling your invention *Johnson's Little Wonder Worker* or the *Orthoputrid Framistan* is meaningless, confusing, and productive of quite reasonable doubts concerning your good judgment and/or commercial experience. Furthermore, you cannot protect a trade name or mark until it has actually been used in commerce. And, finally, since the buyer of the invention will naturally want to use his own trademark, you should forget about fanciful designations and simply give your invention a sensible descriptive title



l'er up. So what? It's public well water, n't it?"

At the next stop you encounter the boss. e says, "Oh sure, I remember. I thought it as funny, so I says to this guy, you aren't e regular guy with the water, are you? And : says, oh no, I'm Joe Blokes, and I'm new the business, but it's the same water—the al McCoy, right from the public well. And get around on Monday to give better service.) when he says this, I decide what's the fference, and tell him to fill'er up."

There isn't any difference in the water, but e difference is between your getting $68.23 id not getting $68.23—or between eating and t eating. After doing a slow burn, you hot- ot it around to see Joe Blokes, figuring you ill knock his block off.

But one look at Blokes (who was heavy- eight champion of the 31st "Eat-em-Alive" ngle Marauders) convinces you a heart-to- art talk is a better idea.

Joe points out quite patiently that: The ater is free; anybody can buy green bottles; hite suits are worn by lots of people; this a free country, so where is your squawk? doesn't look much like you do have a com- aint, does it?

But here is where the doctrine of unfair mpetition steps in. While every single act Joe's is legal in itself, when you add them l up, they amount to something illegal—the eft of your goodwill through a series of acts hich cause the public to confuse him with ou, and in some cases to actually mislead eople into thinking that they are dealing ith you when they aren't.

A court would slap an injunction on Joe, id the next time you saw him, he would be ddling his water in purple bottles, while he mself dressed up like a fireman, carrying a gn that says "We're the First to Quench our Thirst—Bottled Sunday, Delivered onday."

Joe would now be a legitimate, not unfair, mpetitor. He would be selling his own rvice, not imitating yours. And you could mpete by carrying a sign saying: "You're lways Right with the Guy in White—Ye lde Green Bottle Cools Your Throttle."

The fight would then be based on price and put in bottled water at constantly lower prices, so that both you and Joe would wind up making more money than either of you individually had thought possible.

Thus both of you and the public would benefit from the law of unfair competition.

Without such a law, you and Joe could do nothing but imitate each other, and complain about each other to the customers, until they, the customers, got sick of it all and decided to go back to tap water—thus putting you both out of business and depriving themselves of good well water.

No Registration. Notice in this case that nothing was "registered." There was no "trademark" in the commonly accepted sense of that word. A *court of equity* simply agreed that Joe was doing you wrong, and said to Joe: "If you want to sell water, go ahead, but put it up in containers that don't look like green bottles, and, during working hours, wear any kind of suit you like, as long as it isn't white. Let's not catch you trading on the other fellow's goodwill, or doing anything that will confuse the public."



Such a decision confers no new rights on you; it only protects rights you had already established. And to understand trademarks, you must realize that you do not suddenly get a right to one by the process of registration. This, in fact, is only a formality by which you make an official record of a right which you have already established by usage and activity.

Too many inventors and would-be promoters imagine they can somehow get advance trademark "protection" on some idea which may be put into practice in the future. For example, suppose you had just visualized the idea of a bottled water service, made a sketch of a label bearing the trademark "Ye Olde Welle Water," and mailed it to yourself by registered mail, retaining the envelope sealed.

Then along comes Joe Blokes, who actually goes into the business, using the trademark. Aha! you think, now I will sue him and collect damages for the use of my trademark.

Well, you can't. You weren't using the mark, it was of no value to you, and there-

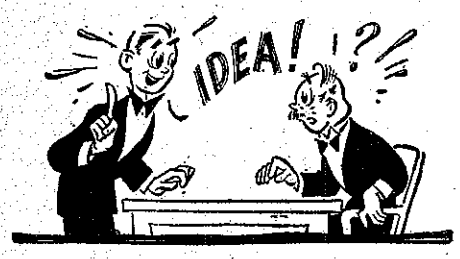
ou write back and say: OK, send it in. If ou then use the idea, you must pay me. This ould be true, under the decision of the court High vs. Trade Union Publishing Co., hether the idea was new or not, because we re not here dealing with a question of patnts or copyrights or even the law of ideas, ut with the contractual relationship set up y my first letter and your reply.

Even if you had said you would consider ie idea "without obligation," this, according the court in Moore vs. Ford Motor Co., ould only mean that you relieve yourself of ny obligation to use the idea, or to pay for ie privilege of looking at it. But you would till have to pay if you used it. (Note: The ecision was in favor of the Ford Motor Co. this case, due to other grounds not pernent to this point.)

Companies Make the Rules. So, if Rule o. 1 in the game of offering ideas to big orporations seems to favor the inventor, ule No. 2 does not. The latter, set up by the gal departments of most big organizations, in essence a flat refusal to operate under ule 1: They tell you at the outset that they on't look at your idea at all unless you agree advance to give up all your rights and to ut yourself entirely at their mercy. Here re pertinent points from the regulations set p by a leading rubber company:

"All ideas must be disclosed to the comany with the understanding, and on condiion, that the company assumes no obligation f any kind whatsoever. Ideas will be acepted from persons outside the company nly on the basis that the company will deide what compensation, if any, will be paid. he company will not consider any idea or nvention on the basis that it will be treated s confidential or secret.

"The company will be placed under no bligation to disclose its interest in, or apraisal of the subject matter submitted. A tatement that the company is not interested



n a submitted idea may not be construed as presumption on the part of the company hat the person submitting the idea has a roperty right therein. The company will not onsider an idea or invention on the condition return any of the papers you send them.

From this entire review of the subject, it seems abundantly clear that the free-lance inventor cannot really look to the big corporations as a particularly fruitful field for the sale of inventions, either patented or unpatented. No doubt some sales are made, but the general picture is far from encouraging.

What Should Your Approach Be? I think this depends on the invention. If it is some very basic and revolutionary new invention, an application for patent is wise, after which negotiations can be put on that basis and the going should be easier.

If it is more in the "idea" class, and still something which only a big corporation can use, you might as well take a chance and let them see it on their terms. If they pay you, fine. If they don't—well, the idea wasn't doing you any good, anyway.

If it is an improved part or component purchased from subcontractors by the big corporation, you will probably have better luck in trying to sell the idea—patented or unpatented—to one of the subcontractors. He is in a better position to do a sales and promotional job than you are, because he knows his way around the industry. This would be especially true if your design or production idea could save money for him.

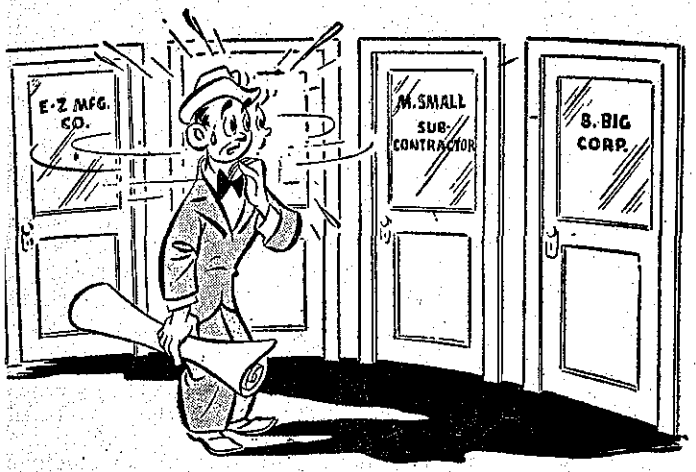
Several years ago, for example, the owner of a small machine shop told me that he had entered the low bid on a lot of parts for a big company. The bidding was sharply competitive and the buyer was satisfied that he had driven a sharp bargain, giving the machine shop only the most meager profit. What he didn't know was that the owner of the shop had perfected an ingenious method for cutting costs. The result was a $30,000 profit in addition to the ordinary profit on the contract.

Had an outsider developed this idea, it would have been folly to release it to the big company, but the machine shop would doubtless have paid well for the exclusive knowledge of the method.

Next, if your invention is in the accessory class, such as a "dress-up" gadget for automobiles, don't waste time on the big manufacturers at all. Try to get it in the hands of a promotionally-minded concern selling to the mail-order houses and auto supply stores. Some of these concerns whose success is based on the sale of flashy merchandise are little concerned with patentability, but will cheerfully pay a "finder's fee" or a royalty for some clever new design or trinket which can be quickly promoted.

In other and final words, if you are looking for profitable inventions, look in that class of goods which the smaller concerns can handle.

Know Who Your Best Customers Are



By ALAN MONTAGUE

Big industry a tough nut to crack, but many smaller concerns are receptive to ideas

ET'S say you have an idea or even a patent and are anxious to sell it to some company. What type of company will be ost interested in it, and what type of corration is most likely to buy your idea or tent?

You might suppose that it would be a big rporation in the field with which your pat- it deals. After all, you could reason, they ot only have the money to buy and promote, it they can't afford to let their competitors t hold of your million-dollar idea.

Sounds reasonable, but the fact is that day's industrial giants too frequently look the outside inventor as a nuisance, who ually comes into an intricate field of science id invention (where hundreds of experts ve worked many years) with an idea that old, impractical, useless, or commercially acceptable.

There are exceptions, of course. There are tside inventors who by luck, timing, know- g the right guy at the right time, or simply persistence and the obvious value of their ea or patent—have made a sale to a big rporation. You might be one of them, but e chances are, you won't. To realize how ugh a job you'll have selling to a large corration, listen to what representatives of me of these corporations have told me.

Odds Against the Outsider. "Actually we n't want outsiders to submit inventions," e general patent counsel for a leading umbing manufacturer recently said to me. We have about 300 inventors and potential ventors on our payroll now. These men are aduate engineers or plant-trained specialists ideas relating to various branches of the plumbing business than could be found in the Patent Office itself. Our sales department has extensive records concerning the commercial value, or rather lack of value, of scores of inventions that we thought were good enough to put on the market, but which the public wouldn't buy. No one on the outside can possibly conceive of the extent and degree to which our people have developed some of the arts.

"As a result, the outsider entering our field is up against almost hopeless odds. He is like a treasure-hunter digging at random, while our people have a map showing where to dig, how much treasure to expect, and whether it's worth the effort. So, knowing that outside inventors are usually licked before they start, we certainly do not encourage them."

Likes Things the Way They Are. A patent attorney employed by another big company said: "We consider not only inventors, but inventions and patents themselves as being nuisances. We are really pretty well satisfied with things as they are in our business. Such patents as we secure are taken out simply to make certain that somebody else doesn't beat us to it and make trouble for us.

"Occasionally these patents we put on the shelf come in handy. Not long ago one of our competitors started grumbling about how we were infringing on a patent they owned. I pulled one of our patents down off the shelf and grumbled back. As a result, nothing happened and the status quo is still quo-ing, which is the way we want it. If the entire patent law were abolished, everybody around

ave them an inventory of 3200 units. They pent about $500 in printing up price lists and ales folders telling prospective free-lance alesmen how this was the hottest-selling item ver introduced to the American public. The alance of the money went for small ads nder the "Agents Wanted" classification in agazines and newspapers.

When an agent answered the ad he received price list and folder, plus a letter urging im to buy a demonstrator's sample for $1.25 –or a dozen for $1 apiece—to be resold to the ublic for $2.50. The result was that the inentor and promoter got rid of their entire 200 units as demonstrator's samples, and also ot their $3200 back.

They waited for re-orders and are still waitng, because the agents found the item a very low seller. Of course a few were quite successful. One watched the newspapers for urglary stories, and then went immediately nto the affected neighborhoods, selling alarms ike crazy while people were still scared. Anther developed some knack for selling 50 or 00 units to small plants and businesses. But n general the idea was not popular.

The moral is: The invention was a failure, ut little money was lost.

Agent Selling Often Ideal. Testing a new roduct through independent agents has two ig advantages: It enables you to get most if ot all of your money back, it gives you a nuch truer picture of public acceptance than ny so-called "market survey" can ever proide. If the thing flops, you haven't lost much. f it goes over, you have a good argument or raising any reasonable amount of capital. Actually, you may not need any, because hese independent selling agents do not expect credit terms.



The so-called "contract manufacturer" mentioned above may be anything from a basement workshop to a big plant. Its distinguishing characteristic is that it doesn't make anything for its own account, has no trademark and knows little about merchandising. It is just a place where, if you pay in advance, you can have your product made.

They don't advertise as such and about the only way to find out is to look among "Model Makers" and "Tools & Dies" in the telephone directory, or watch for "Open Time" ads in the financial sections of newspapers.

These fellows usually work on subcontracts from big manufacturers, winding coils for radios, molding plastic nameplates for refrigerators, etc. They run few risks, but this is counterbalanced by the fact that they have to slash their profits to get big contracts. This makes them sad and wistful men who secretly yearn for a product of their own, where they can keep the entire manufacturing profit for themselves, like other manufacturers, instead of being craven wretches cringing under the lash of an assistant purchasing agent. But they rarely do anything about it, because they don't know how.

Can You Sell? If you are not only an inventor, but also a good salesman, you may be able to get under the skin of one of these fellows, touch upon his secret yearning for a product of his own, and get him to give you some breaks.

For example, one inventor has a signal device for railways which none of the big signal makers would bother to make. Knowing precisely where these devices were needed and how to sell them, this inventor lined up a contract manufacturer of fishhooks, and got him to go "halves" with him on a demonstration model of the railway signal. The inventor paid for materials, and the fishhook man put up labor and cost of the jigs.

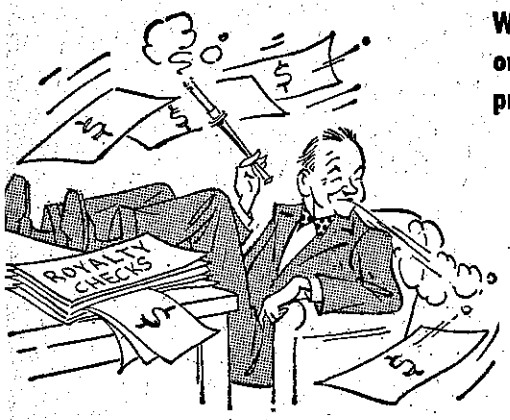
Now the inventor travels around selling until he gets six orders (the contract manufacturer's minimum). In lots of six, the materials and labor cost about $17 each. And the invention sells for $167. So the manufacturer makes $300 on an order, the inventor makes $600 (out of which he pays his own travel expenses). At last report, they were both quite happy.

This may be small potatoes compared with General Motors, but on two or three minimum orders a month, these fellows are making a very nice living, and don't have to punch any time clocks or kowtow to any bosses.

The man who could give you a line on a small plant that needs a big idea, would be the local banker. But, before contacting him, think through the different requirements you are going to have for money before you begin to hope for net profits. Don't make the mis-

Should You Make and Market Your Own Invention?

Why manufacturers balk at many new products on production facilities, contract manufacturers, promotion costs, independent agents, mail order



NVENTIONS largely sell themselves, once they are presented to the right manufacturer or distributor—but that hardly means he world will beat a path to the door of the ian who builds a better mousetrap.

Neither high pressure sales work, nor a mooth letter, nor a glib tongue will influence practical businessman. If industry bit at very new thing, it would be in a constant tate of tooling up, with close to 1000 patents eing granted every week. Still, the manuacturers must retain their interest in worthvhile improvements if they want to hold or ncrease their competitive position.

Some inventors manage to sell their patent ights to a big, well-established company, and hen relax while the comforting royalty checks ome in. Many more are not so fortunate, inluding those with good ideas. Nevertheless, his is the logical starting point.

If you can, call on the companies which seem o be the most likely prospective purchasers r licensees, or send a copy of your patent to hem, along with a letter stating your desire o sell your patent or offer it under a suitable icense arrangement. You can buy all the opies of your patent that you need for 25c ach, postpaid, from the Commissioner of Patnts, Washington 25, D. C.

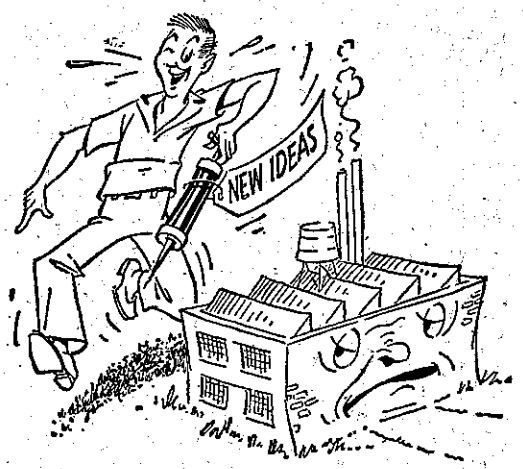
Locating Manufacturers. You can get lists f companies in the field of your invention at he nearest branch office of the Department f Commerce or through its Business and Deense Services Administration, Washington 25,). C.

The Small Business Administration pub-

A request that your invention be listed will be honored if SBA decides that publication is desirable. Write this agency at Washington 25, D. C. SBA also has a products assistance program offering information to small concerns interested in new products. It operates through over 50 branch offices.

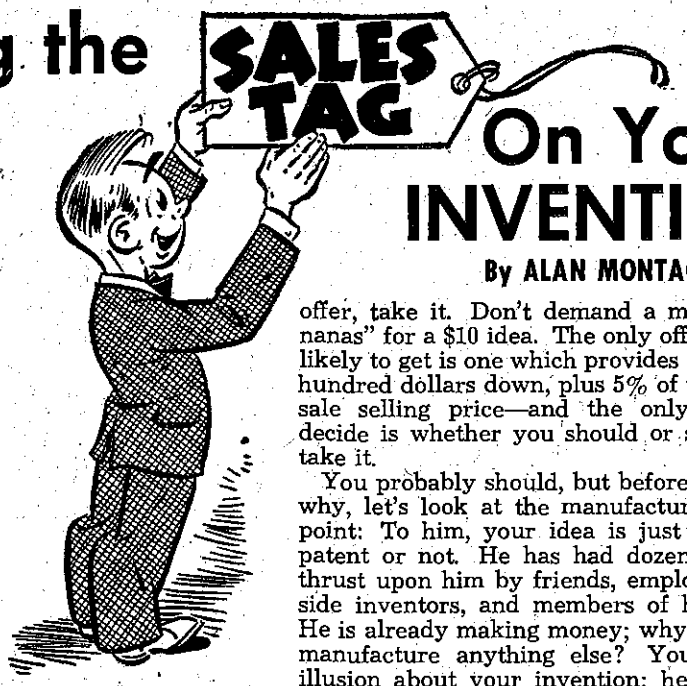
Many progressive businessmen and industry patent attorneys subscribe to the Official Gazette of the Patent Office. They may see a drawing and summary of your invention in the issue covering the week in which your patent was granted. For $3 you can have the Gazette print in any issue a notice of availability of your patent for sale or license.

You can often get reliable tips on manufacturers who may be interested in your invention from your local chamber of commerce, banker, or a national trade association in your field. National headquarters of the trade groups are published in the Thomas Register of American Industry, or you can inquire at a Department of Commerce office.



Why Are Manufacturers Hard to Sell? For one thing, they are just not interested in taking on the extra work and risk involved in producing and selling an extra product—as long as their regular lines are selling reason-

Putting the SALES TAG On Your INVENTION



By ALAN MONTAGUE

MANY men have an *illusion* about their inventions. They are sufficiently sold on the merits of a particular idea to have it patented that they tend to assume that the granting of a patent on the part of the United States government amounts to commercial endorsement of their invention. The government merely recognizes that you have something new and gives you the right to prevent others from making, using, or selling it. It does not, by implication or otherwise, say that your idea is worth anything. Nor does it give you any right to manufacture anything; possibly your improvement in the art to which your invention relates, is already dominated by other previously granted patents of broader scope.

You can pretty well tell—from the issue dates of the patents cited in the examination of your own application—whether or not your particular improvement can be made without infringement. If the other patents are more than 17 years old, you can forget about them.

To keep you from having any illusion about the value of your invention, and to help you view it in the proper perspective, look at the claims at the end of your patent. The *more* words there are, the *less* their value. Assuming that you have a short claim on a good invention, on what terms should you attempt to market or sell it?

Some 25 years ago a man down South tried to sell his invention for $5000. He wanted only $5000 because his patent had only one year to run. Investigation revealed that when he had been granted his patent in about 1920, he had been offered $1,000,000 for it; at that time he had held out for $1,500,000. In 1924, he had been offered $750,000 but insisted on 1,000,000. In 1926, he had been offered 500,000 but held out for $750,000. Before he was through he had probably got down

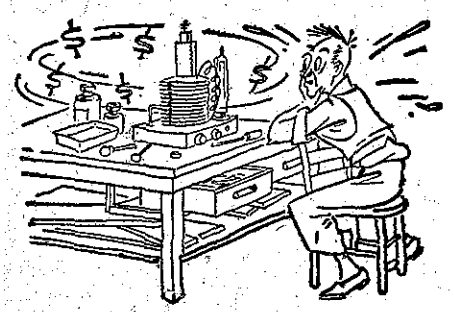
offer, take it. Don't demand a million "bananas" for a $10 idea. The only offer you are likely to get is one which provides for several hundred dollars down, plus 5% of the wholesale selling price—and the only thing to decide is whether you should or should not take it.

You probably should, but before we define why, let's look at the manufacturer's viewpoint: To him, your idea is just an idea—patent or not. He has had dozens of ideas thrust upon him by friends, employees, outside inventors, and members of his family. He is already making money; why should he manufacture anything else? You have an illusion about your invention; he has lived through several disillusions. Some cost him money. And to put your idea into production would cost him, let's say, $12,357.89 for tools, plus expenses for packaging, advertising, catalog sheets, salesmen's expense accounts, etc.

If he decides to buy your invention he is going to take the attitude that the $12,000 plus he must risk is worth just as much as the $300 or so you have spent, and assuming your patent is clean enough against possible infringement then, he may go to as much as $1000 or $2000 cash in your favor to buy the rights—and the risks.

You will miss your chances probably, if you ask for more than about $3000 or $5000 down for a gadget or other type of invention, in which manufacturing ingenuity and sales promotion are just as important as the idea itself. Just ask for "enough to recompense me for the developmental work and cost of patents." This will usually figure out to a thousand or so, anyhow.

How Much Royalty? While there was doubtless a time when manufacturers paid for novelty-in-end-results, they are now more inclined to pay for novelty-in-design-which-leads-to-manufacturing-economies. It has been expressed: "We will not even consider anything that in any way adds to the cost of our item; but we will pay thousands of dollars for any idea which will both improve it and reduce costs per unit." And, for something which will do this, the going market



uld be no restrictions as to territory, com-
nent parts, or a mere agreement as to in-
me. In other words, there must be an acutal
le or "transfer."

Payments for the transfer of a patent or an
ıdivided interest can be treated as capital
ins, even though they are payable periodi-
lly over a period generally coterminous
ith the transferee's use of the patent or are
ntingent on the productivity, use or dis-
ısition of the invention. The mode of pay-
ent, whether as an assignment or as an ex-
usive license will not prevent the inventor
om claiming the benefits of capital gains
eatment. However, where the inventor re-
ins title to the patent, and merely licenses
number of manufacturers, the money de-
ved would almost certainly be viewed as
raight income, and taxable as such.

Sale of Patent Pending. Many inventions
e sold either in the idea stage, or as soon
s the patent application has been filed. But
ıe tax code says that "it is not necesssary
ıat the patent or patent application for the
ıvention be in existence at the time of the
ansfer." So, if you sell a patent application,
r sell an idea and agree to sign a patent ap-
lication, it appears that the money you re-
eive may be treated as capital gains.

If you are already receiving royalties from
patent, and have been paying income tax,
ou may, if the amount is large enough, wish
consider it as capital gains hereafter. The
apital gains treatment applies to amounts re-
eived in any taxable year starting with 1954,
egardless of the year in which the transfer
ook place, if the assignment or license agree-
ıent under which the payments are received
vould have qualified for capital gains under
he new rule.

Income Spread-Back. If the sale price of
ın invention is not enough to get you up into
he bracket where capital gains will benefit
ou, there is still a section in the income tax
ode which sets a limitation on the tax. In
ffect, it says: "If the work on an invention
r patent covered a period of at least 24 cal-
ndar months, and the income received in the
axable year from that source is at least 80%
f the total amount received for the entire
which would have been payable had the in-
come been received ratably over the period of
work, or a period of 60 months, whichever
period is shorter."

In other words, if you work on an invention
for five years and then sell it for cash, the tax
rate on the total would be at the rate of one-
fifth of the amount. Thus, if you sold for
$10,000 cash, you would pay a tax on the total
as if you had been getting $2000 a year for
five years.

Depreciation of Patent Value. Another
section of the law may have definite bearing
on the ease with which you may sell your in-
vention. It provides: "The cost or other basis
of a patent or copyright shall be depreciated
over its remaining useful life. Its cost to the
patentee includes the various government
fees, cost of drawings, models, attorneys'
fees, and similar expenditures . . . *If a pat-
ent or copyright becomes valueless in any
year before its expiration, the unrecovered
cost or other basis may be deducted in that
year.*"

Suppose you sell your patent on a gizmo to
a manufacturer for a nice piece of money.
Then suppose that, before he has got his
money out of profits, somebody else comes
along with a better gizmo, or due to tech-
nological changes there is no longer any more
need for gizmos than there is for buggy whips.
Your manufacturer can deduct what he paid
you from his income tax.

QUESTIONS

Taxes on Patents

Q. How much are the annual taxes on U. S.
patents?

A. In some countries, there are heavy and
progressive annual taxes on patents. Their
purpose is to force the inventor either to get
into production or surrender his patent into
the public domain. But this is not true in the
United States. Here the only tax you pay is
income tax on the money you may earn
through sale or license of your rights.

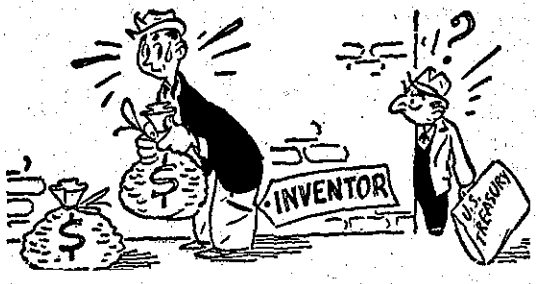
Tax Deductions?

Q. In the past three years I have spent sev-
eral thousand dollars on making inventions
and on patent applications, without receiving
any money therefrom. What part of my ex-
penses are tax deductible—and when?

A. An invention is a business project, and
all expenses connected with it are deductible
from your earned income. For the average
inventor, it's most favorable to deduct such
expenses from year to year, as they occur, so,
to take advantage of your expenses for those
past years you mentioned, you will have to
file an amended return for each year to in-
clude the expenses—with a request for a re-

Income Tax Primer For Inventors

By ALAN MONTAGUE



JNTIL recently, a man might slave over an invention for years, finally sell it for the proverbial million dollars—and then ave the income tax people snatch 90% of the oney. Now you may spread your "million" ick over as long as five years, thus paying a uch smaller tax. Or you may treat the oney as "capital gains" and thus pay no ore than 25% maximum tax.

Let's take a close look at the tax laws that ave made this change possible. What do they ean to the inventor? What can be deducted, ho can deduct it, and when can it be deucted?

The Amateur Inventor. To the amateur or ccasional inventor, there almost immediately rises the golden hope that anything he has pent on patent procedure or model making an be knocked off the income tax. But the an who develops only one or two, or five or x, inventions during his lifetime—and on a peculative basis—cannot deduct his losses, he fails to sell his inventions, from his inome tax. If you spend $300 or $400 on a patnt and another $300 or $400 on a model, and nen it won't sell, you are simply out of luck. he moneys are "personal expenditures" and ot deductible. On the other hand, when and you do sell the patent, then your costs can e charged against the sale price. So keep areful cost records.

What Determines "Pro" Status? If you ualify as a *professional* inventor, however, ou can charge off your expenses and losses. he question is, when and how do you become professional inventor? Well, if an individual orking on inventions in his home workshop an qualify as being engaged in a "trade or usiness" he is given a choice by the federal ncome tax law with respect to the treatment f his costs and expenses. He can:

1. Deduct the expenses in the year paid or incurred (depending on whether he uses the cash or accrual method of accounting), or
2. Amortize the expenses over the useful life of the property resulting from the research and experimentation.

It is doubtful of course, that the *average man,* holding down a full-time job, and puttering around a home workshop over the weekends can qualify as being in a "trade or

Unfortunately, the federal tax law doesn't provide a definite formula for determining whether or not a particular activity will qualify as a trade or business for tax purposes. The Commissioner of Internal Revenue has held that the term is limited to those whose income is derived from regular trade with others, such as merchants, manufacturers, and those who have paid taxes on incomes reflected by inventories, etc.

Yet this does not necessarily rule out the inventor. There is a necessity of a separate determination in each case, based on facts, such as the demonstrated *inventions* of the taxpayer, and his *reasonable expectations.*

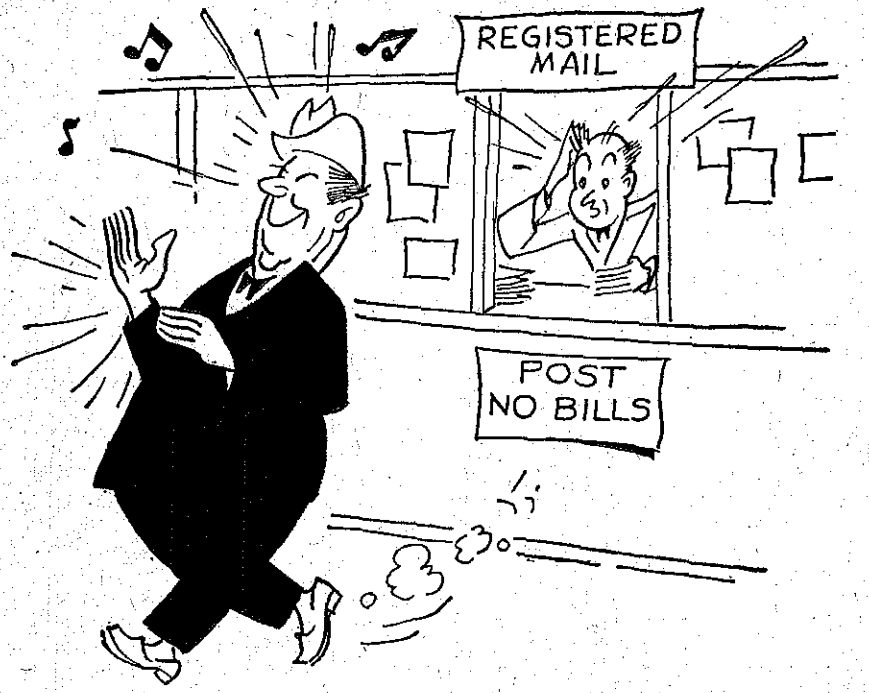
If you put, say, $5000 or $10,000 into a basement workshop, spend three or four hours working in it every night in a certain field of invention, and can show correspondence with manufacturers and attorneys and engineering societies or other experts, your *inventions* would probably be established. As to "reasonable expectations," if you have an *engineering degree or heavy experience* in the line on which you are working—indicating that there is a good chance of producing income from your activity—you may qualify as being engaged in a trade or business for tax purposes.

Understand that this is just an example. The tax boys might decide that $5000 to $10,000 in shop equipment is too high or too low. Three or four hours a night may be too much or too little. An engineering degree or heavy shop experience might not be necessary if you had an intensive commercial experience in the particular field to which you are devoting your attentions. In any particular case, the determination will be made in view of what you can establish as to your intentions and your reasonable expectations.

Of course, even though not qualifying as being engaged in a trade or business, an inventor is entitled to deduct his actual costs against the sale price of a patent. Or if he should retain title and merely license his patent, he would be permitted to recover his cost through annual depreciation deductions over the life of the patent. Such costs would include: Various government fees paid; cost of drawings; attorney fees; cost of models; other similar expenditures.

Keep Your Records Straight

By AUBREY D. McFADYEN



AN INTERFERENCE is a proceeding instituted by the Patent Office for the purpose of determining the question of priority of invention between two or more parties claiming the same patentable invention.—Patent Office Rule 201.

The determination is based on the evidence presented by the rival inventors. Winning of a valuable patent, therefore, may hinge directly on the quality of your record-keeping.

The late Miller Reese Hutchinson, former engineer assistant to Thomas A. Edison and inventor of the old Klaxon horn and the Acousticon hearing aid, plus over 200 other things, lost out in an interference action involving what he considered his most important invention because he had no witness to corroborate his personal record of it.

The invention, worked out by Hutchinson when he was 22 years of age, was a controller by which a motorman could operate a long string of electric cars. This type of device is still used on subway trains. The interference declared by the Patent Office was between

Fearing someone might steal his invention, Hutchinson never breathed it to a soul. Consequently, when he met his rival at the Patent Office he had some personal records, but lacked a witness to confirm his word. As a result, the date of his invention was restricted to the actual date his application was notarized. By being so secretive, Hutchinson lost his invention by the narrow margin of one week and patent No. 660,066 was awarded to Sprague.

The chances are only about one in a hundred that you will meet a challenge at the Patent Office and be called on to establish the date of your invention. Still, why should you run any undue risk when it's so easy to prepare yourself for this contingency?

Remember to preserve all evidence bearing on the date you conceived your invention and on the date you reduced the invention to practice, and have some reliable witnesses to those facts.

Witnesses Are Essential. The inventor who is able to prove by witnesses that he was

gent *prepare but not file* a patent application. his is a halfway step which will save you ome immediate cash. For example, if the cost f completely preparing, filing, and prosecut- ng a patent application and securing the pat- nt itself, runs to say $360 ($300 attorney fee nd two government fees of $30 each), you ay perhaps get the case prepared, only, for 150.

This gives you a fine set of professional rawings and a professionally-worded de- cription and specification which you can how to manufacturers. It will be in such hape as to command their interest and re- pect, even though, from a legal standpoint, ou have no protection and have applied for one.

Your procedure should be as follows: Write etters to all the band saw manufacturers isted in Thomas' Register, and mail them out ne at a time. Just state your ideas generally, nd ask if they would like to see details.

If the first one does not answer in about 10 lays, send off the same letter to the next com-



pany on the list. Then the third, and the fourth, and so on until you get a favorable reply. Go straight through the list, big ones and little ones alike (the big ones may be jammed up with business while a little one may be hungry for a new idea).

Then, when you get a reply stating that they will be willing to look over the details, send a photostat of the patent drawings, and a carbon of the specification. Don't say anything about filing the application; just say here it is, and I want to do business with you.

Then, if they write back and say they are interested in doing business, that is your cue to file the original drawings and application papers in the Patent Office promptly. You can then proceed to do business just as in any other case.

This system has several advantages: First, it minimizes your original cash outlay. Second if a manufacturer buys the invention he can pay the prosecution and final fees. Third, if nobody wants to buy, you have saved money, and can always put the idea on the shelf for a couple of years, and then try again. Somebody else may hit on the same idea and actually file his application while you are taking up time making contacts. It is definitely one way to lose your invention, but of course our whole assumption here is that you are only going to use this system on an invention of doubtful commercial value anyhow.

A Even Cheaper System. The foregoing is is the best halfway measure to take. But if your finances won't permit even that much, or you are still quite doubtful about the potential of the invention, you may go only a quarter of the way.

To do this, have a patent draftsman prepare nothing but the official drawings. If there is no local patent draftsman, write to a patent attorney, and get a quotation on drawings only. About $25 to $35 per sheet ought to be par for the course, and one or two sheets is usually enough to illustrate the average simple invention.

When these drawings are made, get photostatic copies, and have somebody type off a description of the invention and a statement of its advantages. Then follow substantially the same procedure as outlined for working with a complete application. Of course, there will be no reference numerals on the drawings, which, to anyone who notices the fact, will be a clear indication that the application has not been completed or filed. Also, in the event that you line up a potential buyer, there is going to be some delay while your attorney applies the reference numerals and draws up the papers. However, when you are taking chances, they must of necessity be in proportion to the amount of money you are willing to risk.

Although there is little likelihood that your invention may be stolen (most businessmen have no intention of cheating you), these procedures are recommended only in cases where the invention is not worth stealing: that is, where it is only an improvement on an existing device, which while it will add some value, is useless in and of itself.

In cases where the question is to patent quickly or to delay patenting, keep the difference between consumer products and industrial improvements in mind. If the invention is an independent item which will stand on its own feet, and can be sold as a unit to the public, plan on getting a patent. If such an item really looks "hot" there may be spirited bidding for it, and a lot of competition including infringement once it is on the consumer market.

But in the case of an improvement which cannot be marketed as an attachment or accessory, something which must be an integral part of a big machine, you can save a lot of money and grief if you will simply have the

How To Cut Costs On Improvement Patents

By ALAN MONTAGUE

IS IT really necessary for an inventor to take off like an ICBM and try to crash the Patent Office 45 seconds after an idea has exploded in his brain? Doesn't a man have any time at all to evaluate his invention before he commits himself to $300 to $400 worth of patent on an idea that he may never sell?

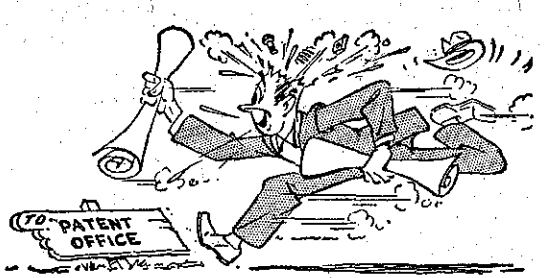
That's a good question, and it deserves a careful answer. In general, we have advised inventors to file patent applications as rapidly as possible, for the simple reason that if we recommended any delays we would be blamed, if someone else beat the delaying inventor to it, in filing for and securing a patent.

We still feel that filing a patent application without delay is sound advice on gadget or novelty inventions for popular distribution, for such inventions are obviously in a fast-moving and highly competitive field where patent protection is needed quickly. Fast action is also the best advice for inventors in such rapidly-developing fields as electronics, or rockets and missiles. So many inventors are trying to solve problems in these fields that a day's delay in filing an application here might be disastrous.

Delay May Save You Money, however, in a vast area of improvements on machines and tools—is particularly inviting to foremen, toolmakers, and skilled production workers. It involves improvements on band saws, hydraulic feed drill units, turret lathes, deburring belt machines, thread rolling machinery, press brakes, gear shapers and shavers, and similar types of industrial equipment.

Such equipment is usually expensive, complicated, difficult to build, and intended for long service. It is also usually "deficient" in the sense that there will be specialized purposes for which it cannot be adapted, close tolerances to which it will not work, and desirable operating speeds which it cannot reach or maintain.

Both the machinery manufacturer and his salesman are alert to complaints about these shortcomings which come in from users. In fact, the manufacturer will usually have his engineers brainstorming continually against the day when market conditions will justify the expense of producing a new model, which will incorporate features that circumvent the shortcomings of the old model.



to incorporate until and unless the entire machine is re-engineered and reproduced as a completely new model. And such complete model changeovers are costly procedures that manufacturers tend to postpone as long as possible.

So, if you were to approach a manufacturer with an invention which would improve his machinery, your chances of being greeted eagerly are not too good. He is in no hurry; he can usually wait for a whole line-up of such improvements to develop before he decides to make a model changeover.

In fact, if he does change his model, he may change to an entirely new type of machinery which obsoletes the old type completely (and your improvement along with it). This might put you in the same financial pickle as Mark Twain, who invented a Rube Goldbergish typesetting machine in which mechanical hands selected individual type from a case and set it in a composing stick. But about the same time, along came the Linotype which cast type characters quickly in a single slug—and thus put the kibosh on Mark Twain's whole enterprise.

Look Before You Leap. The inventor who hastens to plunk down a wad of money on a patent covering a minor improvement, or an improvement likely to be obsoleted, is in much the position of a man who discovers in the middle of a swan-dive that some joker drained the pool last night. His timing is poor.

The same thing is true of the inventor who is ahead of his time. He may develop an improvement or a tool in a new industry, and see his patent wither away for 17 years before enough demand has been created to make it a merchantable item. To a great extent this was true of zippers, which did not come into general use for at least 30 years

easy to do? Sure, it's easy, after you have shown him how, but if he insists that anybody could have done it, anyway and that the idea was already suggested in three or four other patents all the time, there just isn't much of an answer. (A common argument, and one that sometimes wins, is to take the line that if this was so easy, why didn't others do it long ago?)

Now go back to the spoke example, and put yourself in the position of the examiner. Your job is to grant patents on real inventions, and to refuse patents on stuff any mechanic could think up. OK. Right- and left-hand treading is old, and it would be obvious to any mechanic that there had to be some means for turning the shaft. How important is the particular means? Might not anybody reasonably think of channels cut into the shaft, or a collar, or holes through the shaft? That doesn't take any particular brains. If we are going to start granting patents on every mechanical expedient, the time will soon come when nobody in America can make or use anything without getting sued for infringement.

So, while some examiners may sometimes seem to get out of the wrong side of bed, the important thing for the inventor to understand is that there are two sides to the question of invention—and that mere newness is not enough. The fact that it was never done before does not necessarily make it an invention.

To understand the distinction better, let's say we toss some meat, potatoes, and vegetables into a pot and cook it up. It now becomes a stew, but you can still recognize the original ingredients. On the other hand, if we mix up flour, sugar, flavoring, shortening, milk, and baking powder, and put this in the oven, we get a cake—which appears to be considerably more than what we started with, and in which the original ingredients can no longer be recognized.

In the same way, with an invention, if the original "ingredients" are still clearly recognizable, and give you nothing more than what you started with, the examiner may feel you are not entitled to a patent, but if your ingredients "puff up" into something new and unexpected, you may get a patent easily.

Basically, then the prosecution of a patent application consists of an exchange of letters between the examiner and your attorney in which the examiner questions the newness, usefulness, and unexpectedness of your idea, while your attorney endeavors either to reassure him on these points or change the language of your claims to get around the objections. This is no job for an amateur. Patent Office practice is highly technical, and involves a special procedure. You must expect following rules and traditions not easily understood by laymen, and involving the use of specialized language which is largely incomprehensible. For these reasons, the inventor should cooperate closely with his attorney in giving him any facts called for, and comment judiciously on references when asked to do so, but otherwise let the lawyer handle it. Time and again an inventor may agree with the examiner that no patent should be granted, only to see a skillful patent lawyer pull the chestnuts right out of the fire.

Granting of the Patent. It usually takes an interchange of three to five official actions and responsive amendments to wind up a case. When the final action is favorable and one or more claims are cited as allowed or allowable, your attorney cleans up any details hanging fire and puts in a final response "passing the case to issue."

The Patent Office then sends back a notice of allowance, whereupon the final fee of $30 becomes due and must be paid within six months from the date appearing in the notice of allowance. The patent is issued on the fifth Tuesday after the date of payment, and mailed to you or your attorney. You are now the proud possessor of a U.S. patent, which gives you the right for 17 years to exclude others from making, using, or selling the invention throughout the United States, its territories and possessions.

QUESTIONS

Ignorance of Law Never Excuses

Q. I filed a patent application, and the Patent Office rejected my claims because of three foreign patents. How could I have known about them?

A. Under the law, an invention cannot be patented if it already has been patented or described in any printed publication anywhere in the world—either before the invention was made or more than 12 months before filing the application. Whether you knew of the foreign patents makes no difference. It's somewhat expensive, but you could have checked the foreign patents by having a search made in foreign countries or by having your attorney or agent search the foreign patents available in the U.S. Patent Office.

Prosecuting Your Own Application?

Q. After applying for a patent on my invention, I have made some improvements. Would it be possible for me to amend the application while in process? I am trying to act as my own attorney with the Rules of Practice of the Patent Office as my guide.

Prosecution and Allowance Of Your Application

Why quick allowance may be bad; how attorneys extract art; final steps in granting of the patent

LIKE the lucky Canadian who plunged into Africa a few years ago and promptly hit one of the world's biggest diamond mines by looking in exactly the "wrong" place, so it sometimes occurs that a patent application will be allowed by the examiner just as soon as he looks at it and has a chance to check his files. It can happen. It does happen. And when it does, the patent attorneys don't like it. Here's why.

The trouble with getting an immediate allowance is that it may only mean you failed to ask for all you were entitled to—and that you are getting a fast allowance of a little, instead of a slow allowance of a lot.

For this reason, attorneys usually ask for far more than they expect to get. The classic joke, which must date back to the days of Benjamin Harrison, has to do with the patent attorney who "filed an application on a buggy and wound up with a claim on a whipsocket." Well, you can't say he didn't ask for enough at the start.

To take an admittedly crude, but more illustrative example, if you had invented certain improvements in spokes, it might not be out of order for your attorney to file these claims: (1) On the wheel, pure and simple; (2) On the wheel with spokes; (3) On the spoke, alone; (4) On your specific type of spoke.

Now he knows, and you know that you are not entitled to the first three claims at all, but the effect of putting them into the application is to force the examiner to knock them out by making a search and giving you his references. This will put you in possesion of information drawn from all kinds of foreign patents, U.S. patents, publications, etc., which would have cost you a fortune to get any other way. Or it may show you that there is much less information in print than you had really expected.

Extracting the Art. This is known as "extracting the art from the examiner," and whether you get more or less information than was anticipated, the net effect is to show you the actual "state of the art"—which now, for the first time, enables you to see clearly how much of what you have invented is actually new.

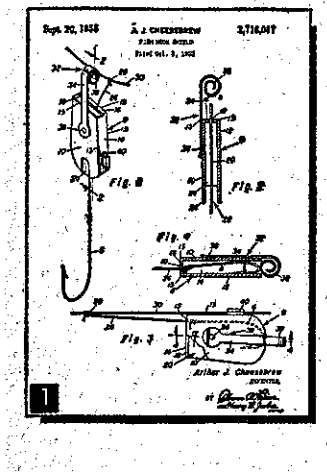
Patent Office—from start to finish. First, it is briefly scanned to make certain that no material parts of it are missing. Then it is assigned to the division having charge of that particular class of invention. It comes up for consideration in the order filed (first come, first served). After the examiner has looked it over to see that it is formally corrected and does not involve perpetual motion or anything contrary to public morals, he proceeds with his search. After he has "applied the art" and reached a decision, he writes to your attorney or agent.

This letter is known as "the first official action." In it, the examiner will ordinarily reject your claims one by one—and in each instance for one of two reasons: Either that it is "fully met" or "anticipated" by the prior patents or other references.

Where the examiner says that the claim is "fully met," he usually has a very pat reference, as he would obviously have in the case of the wheel or the spoke. Where he says that a claim "lacks invention" over something previous, it means that he is expressing an opinion, and that your attorney has a chance to argue about it, and to request re-examination or reconsideration, with or without amendment.

On this point the Patent Office advises the inventor: "In order to be entitled to re-examination or reconstruction, the applicant must make request therefor in writing, and he must distinctly and specifically point out the supposed errors in the examiner's action; the applicant must respond to every ground of objection and rejection . . . and the applicant's action must appear throughout to be a bona fide attempt to advance the case to final action. A mere allegation that the examiner has erred will not be received as a proper reason for such re-examination or reconsideration."

The First Amendment. As a general matter, your attorney will not ask for reconsideration of the claims as originally filed. In the wheel case for example, the correct procedure would be to submit the first amendment of the application, in which claims 1, 2, and 3 would be canceled. These as everybody (including the examiner) already knew, were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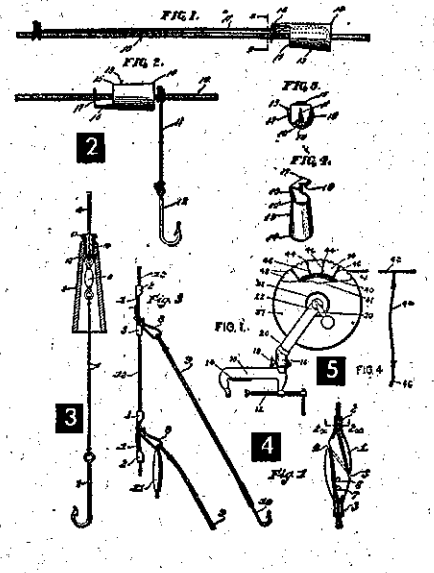
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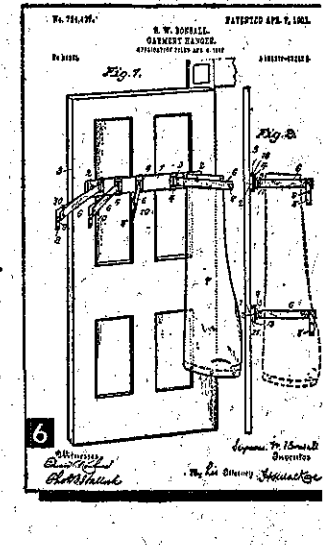
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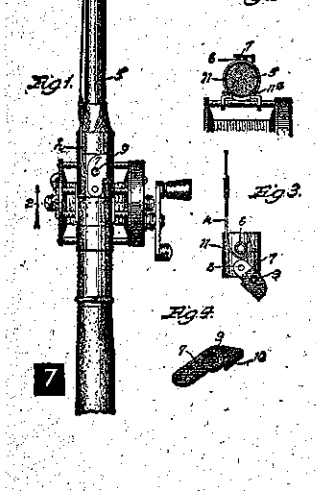
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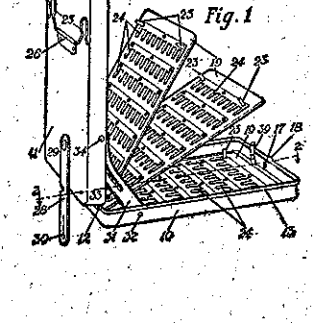
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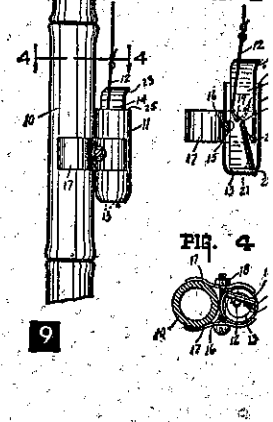
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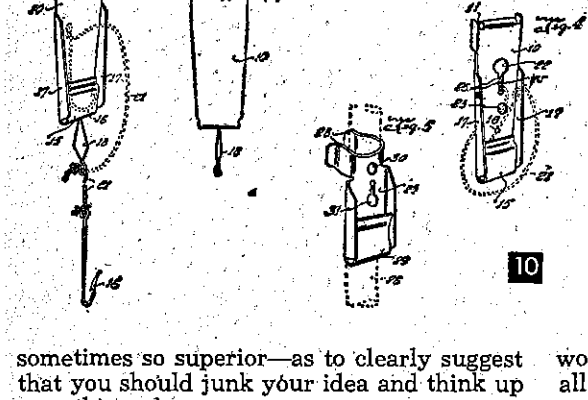
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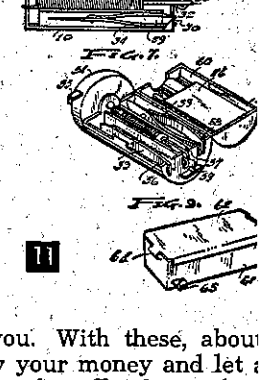
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sometimes so superior—as to clearly suggest that you should junk your idea and think up something else.

Finally—and these are the instances where

would clearly stop you. With these, about all you can do is pay your money and let a patent *examiner* start the official search.

The Searcher's Problems. Why doesn't the

exercising device. That's why the attorney frequently enters a number of claims in a patent application. These claims are of "diminishing breadth." For example claim No. 3 in this case reads:

"An animal exercising and amusement device, comprising a single piece of expansible elastic material, one end of which is shaped to simulate the appearance of a bone and adapted to be grasped by the mouth of an animal, the opposite end being adapted to be detachably secured to a support."

Note that the "member" in the basic claim has now been narrowed down to a shape—"to simulate the appearance of a bone."

There's a good reason why claims are written in this diminishing form. The fact is that it is almost routine practice for the patent attorney to put in, as claim No. 1, a claim so exceedingly broad that he has no hope whatsoever of securing its allowance by the examiner.

This May Seem Silly, but here's the idea: The more you ask for, the wider the search the examiner must make in determining the scope of the claims to be allowed. Since patentability is largely a matter of searching, and since the examiners in the Patent Office have the best searching material in the world available to them, a request for exceedingly broad protection causes them to make an exceedingly broad search, and thus present the attorney with a wealth of information which he would otherwise not be able to secure.

Thus, in having your exceedingly broad first claim knocked down, you get the benefit of the thinking of many other people, and your attorney is then in a position to start amending your claims so as to get the greatest possible protection for you, in view of what has taken place before.

With all of the art which the assertion of exceedingly broad claims puts before him, the patent attorney can either (1) narrow down claim No. 1 or (2) take out unnecessary limitations. This latter rarely occurs, but it sometimes happens that after the attorne has seen the art he realizes that he has sai more than he needs to say in the present tion of claim No. 1.

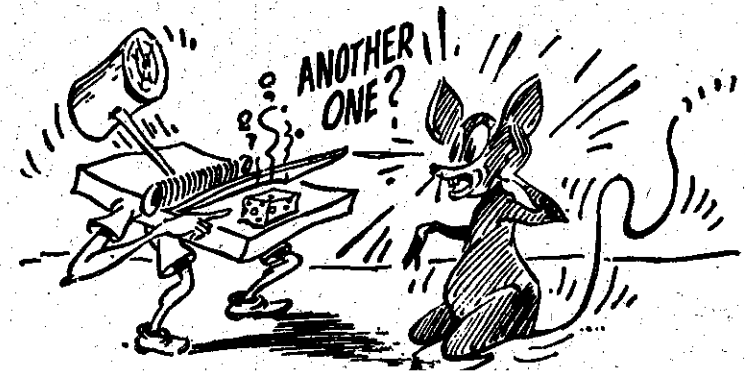
Of course, claim No. 1 is usually cancelle out entirely, and subsequent claims are mod fied in the light of the prior art.

Prosecution of the Case. The interchang of letters between the primary examiner an your attorney constitutes what is called th "prosecution" of the case, and it is in th course of this prosecution that your attorne has the opportunity of amending your clai to avoid the art cited by the examiner and t eliminate unnecessary limitations. Ordinaril there are three or four exchanges be tween the examiner and the attorney befor the examiner calls for finalization of th application.

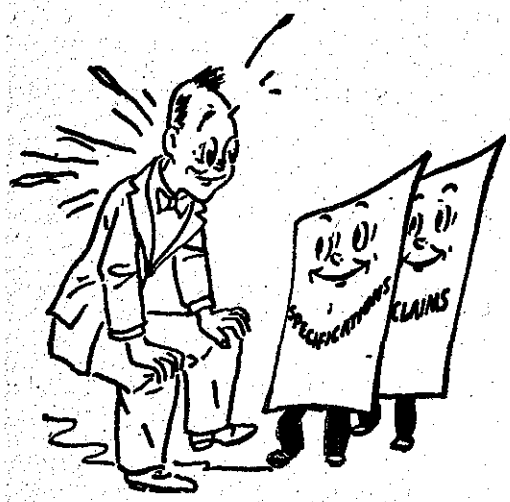
There is no way of predicting in advanc what the examiner's viewpoint is going to b what reference he will unearth, what he wi have to say about them, or when he is goin to do this. Until the examiner's first lette (known as the "official action") comes to th attorney, there is nothing that can be said c done about the case.

It may take anywhere from 30 days to year before the examiner gets around to you application, after which your attorney has si months in which to file his response. As result, there is frequently a long waitin period before a final decision is reached, an during this time the inventor must eithe simply "sit it out" or, if he so desires, put hi invention on the market under "patent pend ing" or "patent applied for." While thes phrases have no actual force in law, the are frequently effective in warning off th would-be infringer.

Thus, while the delays in the Patent Offic frequently seem nettlesome, they may, in cer tain cases, be turned to the advantage of th inventor, in that they give him several year of additional protection even before his pat ent has been granted.



How Your Attorney Prepares the Specification and Claims



WHEN the time comes for the preparation of the specification and claims covering your invention, if you have hired a patent attorney you'll be glad he's around. This is the critical stage in the completing of the application, when he must really get in and pitch.

To begin with, very little space is afforded by the Patent Office for the specification, and whoever writes it must not only be miserly with his words, but must have an exceedingly wealthy vocabulary. Where you might take a half hour and several thousand words to explain the purpose and utility of your invention to a friend, your patent attorney, in the specification, must do it within the first 50 or 100 words.

The Specification. The attorney briefly describes the nature and function of the invention, and then, referring to the numerals on the Official Drawing, explains the structure, operation, and nature of the various parts involved in the mechanism.

In simple mechanical cases, this may amount to little more than a catalog of parts, with some explanation as to their interaction or coaction. But somewhat lengthy explanations may sometimes be needed, such as references to the inventor's own preceding patents over which the new one is an improvement. There may also be specific references to patents of record held by other inventors.

You will have a chance to see the specifica-

ing, to make sure all reference numerals coincide and that no material errors of fact have been committed.

Since the specification is neither easy to write nor easy to read, proofread it with great care. If your invention is complex, involving several sheets of Official Drawings and many reference numerals, have one of your friends help proofread the specification against the drawings.

Of course, the examiner in the Patent Office can always call for corrections, but why make his life more difficult than it already is by submitting something that contains errors? The more ship-shape everything is, the better sailing your case is going to have.

The Claims. Let's turn our attention to the next step, the preparation of the claims. This is the most critical part of the whole procedure.

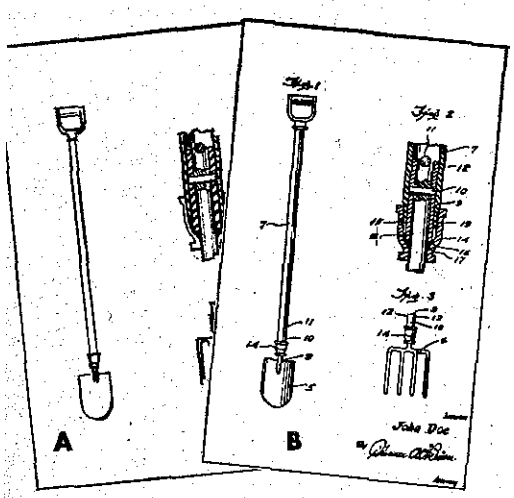
A common misconception is the idea that a patent claim is something like an advertising claim. An inventor will often write to an attorney and say, "When you write my claim, be sure to say it is the greatest invention of its kind ever thought of. . . . I claim it will work miracles for anyone who uses it."

A patent claim is not intended to be either an advertising statement or a catalog of parts. Rather, coming at the end of the catalog of parts (the specification), it is a technical statement of what the inventor believes he has invented, and it is intended to define the limit to which he may exclude others from making, using, or selling the device.

As an example, note Fig. 1, and then study the claim which was drawn on this drainage tube. The claim reads:

"A dental and surgical ejector comprising a fluid-conveying tube open at its opposite ends and having an intake opening adjacent one end, a removable closing plug for said one end, and adjustable means for regulating the capacity of intake of said opening, said means comprising a coiled spring mounted on the exterior of the inlet end of the tube and having the convolutions at the opposite end thereof contracted to snugly engage said tube for holding said spring in various adjusted positions."

This language may be difficult to follow—in fact, it is—but every word is there for a good, legal reason, and any word *not* there was likewise left out for good and sufficien



Most registered patent attorneys make a photoprint or photostat copy (A) of the draftsman's first version of the official drawings, done on official-size Bristol board in pencil. Such a "pencil print" copy is sent to the inventor for his OK or correction. The inventor then returns the approved or corrected print to the attorney, who writes the specification which will accompany the first drawings, numbering each part in the drawing as he comes to it. The final version of the Official Drawings (B) is then made up by the draftsman in indelible India ink.

what he wants to emphasize and what he wants to play down or even leave out entirely, in order to get the right kind of claims for you. When he has reached this decision, he may scratch down the raw wording of some of the claims on a yellow pad and go into a huddle with the draftsman, explaining what end result he is shooting for.

The whole affair is something like taking a bolt of cloth to a tailor and asking him to make a suit. The tailor sizes up your height, weight, build, and appearance, and then decides not only what style is best for you, but also to what pattern the weight and design of the fabric is best suited. Then he explains this to the cutter, who takes over from there.

And the Patent Draftsman. While there are some attorneys who make their own drawings, and many more who *can* do it in a pinch, most of them have their own favorite draftsmen with whom they have worked for years. From experience, these draftsmen know just what the boss wants. They can therefore give it to him the first time, which saves their time and your money.

It also means that the drawings will be made to emphasize the claims the attorney is going to insert in the case, which, in turn, means that your entire case will be well-integrated.

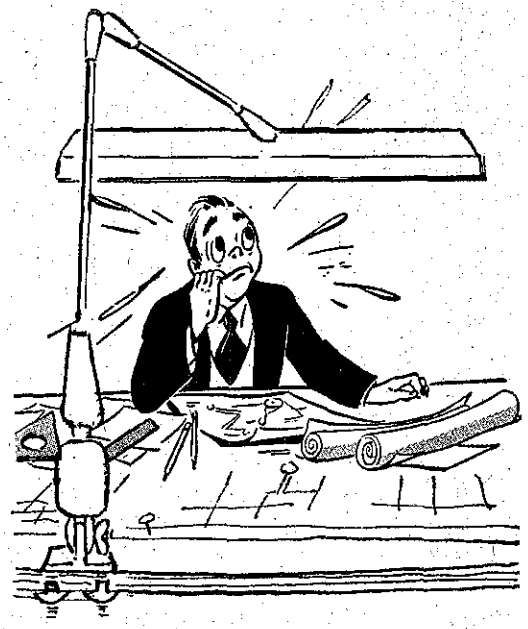
If you go out and have drawings made by

size (or even to show) what is claimable, as most draftsmen don't tend to think in terms of claims. At the other extreme, they may contain so much irrelevant detail as to confuse the attorney, the examiner, and the whole issue.

Preferred Embodiment. What makes a set of Official Drawings good or bad is the degree of judgment or artistic sense the draftsman uses in selecting his views and illustrating a "preferred embodiment" of the invention. The patent draftsman, working with the advice of the attorney, will make an illustration (not a working drawing) following a detailed set of rules.

Note that term "preferred embodiment." This refers to the fact that where there may be a number of different ways of working out an invention in practice, only one form (or embodiment) of it need be shown in the Official Drawings.

Inventors often scream in anguish when they have sent in half a dozen different designs, and find only one in the Official Draw-



ings. But remember that the claims are the important thing. If what you claim is the common denominator in all the designs, you only need one design to show it. If it isn't a common denominator, chances are you have two or more inventions, and will have to apply for separate patents.

Divisional Applications. Only one invention can be covered by any one patent. In some instances, both the inventor and his

hat it is easy enough to imagine that if a lot of old ideas were combined, they would produce what you have produced, and that therefore your "invention" is not actually new. So you must get across to your attorney exactly what is "new and unexpected" in what you have produced.

Finishing Up. After you have gone through the presentation of the industrial background and the practices common to the industry, told what is wrong with current practices and what is right about your invention, and given the details of your invention and explained wherein it is different from prior inventions, you are ready for the wind-up. Here you should explain the results achieved by your invention, its commercial advantages, and how previous widgets now on the market or now performing a certain task either cost more or do less than the particular gadget which you are now presenting.

Information of this kind may not be acceptable in the patent application itself, but your attorney can make good use of it in prosecuting the case. While you can't put a lot of advertising claims into a patent application, your attorney may need this type of material to be able to talk fluently about the practical and commercial value of your invention in his various arguments with the examiner before the patent is finally allowed.

How long should such a disclosure be? As in any form of explanatory writing, the only possible answer is "long enough." You must give enough of the facts to enable an intelligent man to do an intelligent job for you.

Things to Avoid. Many of the things to avoid in making a disclosure may seem obvious, but a quick review will make sure you have all the important "don'ts" in mind. First, avoid the use of a lot of adjectives such as "marvelous," "splendid," "outstanding," "world-beating," and the like. Your job is to *describe* your invention, and not to write advertising copy about it which may even tend to obscure your description.

Another thing to avoid is the description of a lot of different mechanical equivalents. For example, if you need tension at some point in your device, and either a spring, a rubber band, or a string with a weight on it will accomplish the desired purpose, don't waste time describing all of these. Your attorney understands the doctrine of mechanical equivalents, and will generalize on this point so as not to restrict your claims to any one particular structure.



Also, don't waste a lot of time talking about the many applications of the invention. For example, if you have a new type of buffing wheel, you don't need to specify that it is going to be good for buffing automobiles, kitchen floors, shoes, and table tops: anyone should know that a buffing wheel is designed to buff up anything that requires a high polish. On the other hand, if your buffer has an oscillating movement which makes it particularly effective on automobile finishes, you should emphasize this point. Just don't clutter up your description with the obvious.

Try It Out. Before sending your description off to your patent attorney, try it out on one of your friends, a local mechanic, or anyone else who can be expected to understand and, at the same time, ask intelligent questions. Write out the description, then lay the manuscript before your critic and give him a red pencil. Let him read through it and make marginal notes on all points which are not clear to him.



There should be "no coaching from the audience." If your critic can't fully understand what you have written, your job is to clarify it and make it so simple that anybody of reasonable intelligence can understand it. When questions come up, don't assume they are stupid questions, and don't get into arguments trying to defend your literary endeavors. Remember that when you are making a description of an invention, you must get the idea across to the reader.

Have It Typed. Let's be realistic: unless you are a graduate of some fancy school of penmanship, your handwriting may be so poor that nobody can figure out what you are trying to put on paper. Consequently, once you have the disclosure written, criticized, and edited, have the thing copied off by a good typist.

All of this may seem a lot of trouble, and it may seem to you that anybody ought to be able to see the construction and merits of your invention. But if you will follow these instructions you should be in a far better position than the two Topliff boys who got

Tell It to Your Attorney

Give your patent attorney the right facts —and all of them—if you expect him to do a good job for you



T IS important that you know just how you should describe your invention to your attorney, so that he will understand it clearly nough to write up a sound set of claims to ıbmit to the Patent Office. We all remember etective Sgt. Friday, who wanted "just the ıcts, ma'am, just the facts." But when tellıg your patent attorney about your invenon, neither the bare facts nor brevity is ecessarily the right approach.

Improper Description. Too many inventors ave lost valuable rights through brevity and ıadequate and incorrect explanations of ıeir inventions. Years ago, in the famous ase of Topliff vs. Topliff, the U.S. Supreme ourt made the point that uninstructed eople are likely to make one of two misakes: They either claim what they have not ctually invented, or they fail to adequately laim what they have invented.

There was the Canadian who invented a aw set, and then had his entire case written round a saw set *gage*. Not until the thing ıad gone through several actions in the U.S. atent Office was the mistake detected.

Then there was a mechanical device in vhich the angle of incidence was the only mportant feature in an invention relating to he use of multiple blades. The inventor comletely failed to mention the importance of he angle of incidence, with the result that ıis patent by no means covered what he had ıctually invented; the invention was very aluable, and he suffered a substantial finanial loss.

This will indicate the extreme importance of what we say here to every inventor who ıopes to cash in on his invention.

Not Mind Readers. It is no criticism of the patent bar to say that patent attorneys canıot be expected to be mind readers for inventors, or to know everything about everything. As a matter of fact, it is amazing what a good patent attorney can do with a lot of almost incomprehensible drawings and some ungrammatical and misspelled scribbling on a piece of old wallpaper.

Patent attorneys are human, however, and in spite of the vast knowledge which they acquire as a result of dealing with thousands

mation, the attorney is in the position of the doctor who treated the fellow for yellow jaundice for 20 years, until the fellow finally confessed he had a Chinese grandmother.

A letter once arrived in a large patent law office asking whether or not a patent could be secured on a "hawk." Everybody was laughing over the idea of getting the United States to patent a bird; it was only after mature reflection and a lot of looking things up in the dictionary that it dawned upon the assemblage that what the man was talking about was a plasterer's hawk—namely, a small, quadrangular surface with a hand grip underneath, for the purpose of holding plaster.

You fellows who know all about the plastering business will get a bang out of this, and will perhaps think that patent attorneys are a pretty stupid lot. You are entitled to your opinion, but you are also entitled to your rights, and it would be wiser—if and when you invent a new type of hawk—to describe it as a plasterer's hawk. Then you can be *sure* your attorney will know what you are talking about.



a point where you are claiming practically your entire specification.

For example, a claim on a "protective covering" would be very broad: the less it says, the broader it is. On the other hand, a claim which covered every brick, shingle, electric outlet, and water-spigot would be very deep, narrow, and specific. In such a narrow claim, you can claim minor elements by the simple expedient of mentioning them.

The successful drawing of a claim involves, to a certain extent, the use of "nice" language. Take the choice of whether to use "rigid" or "non-flexible" in describing a part. "Rigid" is a positive word, whereas "non-flexible" is a negative term: and as a general rule, direct, positive, and constructive words put the reader in a more cooperative frame of mind.

More important than a nice choice of words, however, is the extent to which you utilize the vocabulary contained in the patents turned up in the preliminary search on the invention. These patents relate to inventions that deal with the same type of subject matter as your invention. Thus, by using the same mechanical terms to describe similar portions of the invention, you fit yourself into the examiner's channel of thought. In effect, it enables him to see quickly and clearly where your invention differs from those on which previous patents have been granted.

No Functional Claims. Always remember that a claim cannot be accepted if it deals entirely with the broad function of the apparatus, or the result of using it.

Suppose, for example, your claim were to read: "Means for killing animals." Here is something so broad it means nothing from a mechanical standpoint. Such a claim would cover every conceivable means of killing animals, from spears through the bow-and-arrow, the throwing-stick, the cross-bow, and the gun, down to throwing rocks and kicking them to death. What you are saying, in effect, is: "I claim every way by which an animal may be done to death."

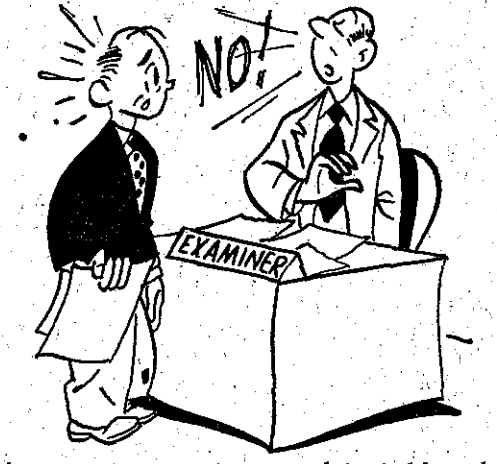
If what you have actually invented is a gun, you would be required to define the mechanics of the invention, which would lead you to say something like this: "A tube with internal lands and grooves, a breech-bolt slidably engaged with the tube, means for locking the bolt, means for striking the detonator of a cartridge inserted in the tube, a trigger for loosing the striking means; and means integral with the bolt for withdrawing the case of the spent cartridge."

Remember that the one thing which you are trying to get by filing your application is an official examination and official action by the Patent Office examiner. If you give him a functional claim such as "Means for killing you without action. But if you give him a claim (however lousy) along the lines of "A tube with internal lands and grooves . . ." he has something into which he can sink his official teeth, and render an official action.

Action of the Examiner. Because patents are not granted on function or purpose, but upon structure, what the examiner must look for are structural differences. He searches through previous patents to see whether or not the structure of your invention is actually different from the mechanisms that have been patented before.

Assuming, in our example about the gun, that the prior patents showed nothing but various forms of smoothbore flintlock muskets, the search would fail to turn up your lands and grooves and your breech mechanism, and the examiner would grant you an allowance on these features.

Some inventors seem to feel that the patent examiner ought to do the noble thing by looking at a specification and writing the claims. This he is not permitted to do. Asking



the examiner to write your claim is like asking a judge to step down off the bench and argue your side of a lawsuit. No one in the Patent Office can act as your attorney. All the examiner can do is compare the structure you claim with the structure shown in other patents, and then either allow a claim or reject it, and give you the reason why.

If necessary you then have the privilege of coming back with an amended claim, but here is where you need a good patent attorney or agent.

The drafting of claims may sound difficult, but it is not at all impossible for someone who follows these suggestions.

Finishing and Filing. When you have reached the point where you have your drawings in pencil form with the reference numerals marked in, and your specification and



loesn't know any more about it that *that*, he nust not have much of an invention. The ess consideration I give him, the better." As ndicated above, examiners are human, and in a tight spot: if you throw road-blocks in their way, they're not going to fall in love with you.

The Specification. When you have a good set of pencil drawings in front of you on the dining room table, it is time to commence writing the specification.

Begin by putting down a very brief summary of what the invention is all about, stating the field to which it belongs, such as typewriters, window shade rollers, shoe heels, wire baskets, or whatever. If you have the "prior art," make reference by name and number to those patents over which yours is an improvement. Spend little space in reciting the prior art itself, but write out extensively an explanation of the critical features.

Avoid comments respecting size, shape, and materials of construction. Where materials of construction must be mentioned for reasons of clarification, do not stick yourself with any one material without qualification, but say "preferably" of silver, gold, firebrick, wood, or what-not.

Next, indicate the purpose of the invention.

Mention in a few words the deficiencies of other inventions in the same line, in order to make clear what difficulties your invention overcomes. You might say, for example, that while Thompson's invention works fine up to the point where it reaches 45°, it then becomes inoperative, while in your case the counterbalance overcomes this deficiency. Don't take any nasty cracks at Thompson's "objects" of your invention, telling the various things it will do.

Then start a new paragraph, and say: "With these and other objects and advantages in view, the invention consists of the new and novel combination, construction, and arrangement of parts as hereinafter more fully described, set forth in the claim(s) appended hereto, and disclosed in the accompanying drawings forming part hereof, wherein: Figure 1 is a plan view illustrating . . ."

At this point you stop, move your pencil over to the drawings, and write "Figure 1" under the appropriate figure.

Then you go back to your specification and commence a new paragraph: "Figure 2 is a view showing a side elevation . . ." of whatever it is, and you write "Figure 2" in the proper place in the drawing. Continue this for Figures 3, 4, 5, however many there may be.

Vocabulary. An important point to remember in writing out your patent specification is the use of the right vocabulary. It's a very special vocabulary we are talking about here, and the best example of it would be found in the prior art. By studying over this group of existing patents in the field to which your invention applies, you can familiarize yourself with the terminology used by prior inventors. Use the same terms, wherever they apply: this will enable the examiner to get your invention into perspective with that of the previous patentees, and will speed up his work.

Novelties of expression will tend to confuse the examiner. To illustrate: If all the previous patentees have referred to a ring as an "annulus," you would do well to follow their lead. Otherwise, in comparing claims, the examiner will be forced to jump his thinking from English to Latin—with results that will not baffle him, but may slow him down.

By reading the prior patents, it should not be difficult for you to pick up the standard names of the parts. Make a list of all the words that are unfamiliar to you, and look them up in the biggest dictionary in your local library.

QUESTION

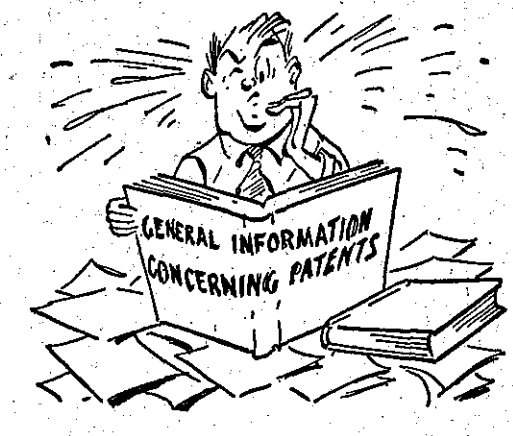
Attorney Needed?

Q. To get a patent, do I have to hire a patent attorney?

A. No. You don't *have* to, for the same reason that you don't *have* to see a doctor, no matter how sick you might be. There is an old saying, though, to the effect that when a man is his own lawyer, he has a fool for a client. Regarding patents, even stronger language might be used. For good, solid rea-

Preparing a Patent Application

The advantages and dangers in filing on your own, and how to go about it



DESPITE warnings against it coming from as high a source as the U. S. Supreme Court, many people do file their own patent applications, according to Patent Office officials. The court pointed out (in the case of Topliff vs. Topliff) that handling a patent application is one thing that most assuredly calls for the services of a legal eagle with sharp eyes and tool-steel mental claws, if the inventor expects to get any worthwhile protection.

The court further noted that the layman is likely to make one of two mistakes: he either (1) claims too much or, worse yet, (2) fails to claim what he has invented. In one sad case, the latter was revealed at the crucial moment just before the contract of sale was signed, when some wise guy threw a monkey wrench into the works by pointing out that the inventor had failed to include in his patent application the only feature that made it useful!

Advantages. There are some *initial* advantages to filing your own case. It only costs you the $30 filing fee. You can say "patent pending," or "patent applied for." You gain six months or more in which to test the commercial value of your invention. And, after you get your first official action from the primary examiner, you can turn the case over to a registered patent attorney who will handle the prosecution of the application, correcting the various points on which you may have goofed.

In brief, what you get by filing your application yourself is an *official* search for 30 bucks, and the right to offer the invention for sale under "patent pending." If the thing looks hopeless from the standpoint of either patentability or commercial value, you can drop it and spend no more time or money on it. If the thing looks good, you can call in your lawyer and let him go to work.



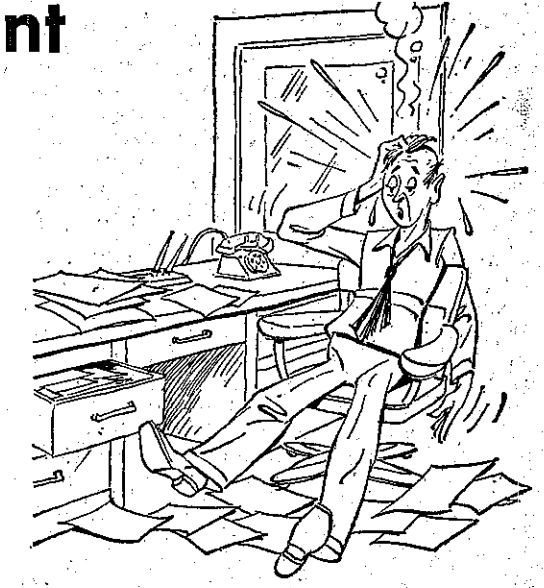
Before filing your own application, however, you should educate yourself on the procedures and problems involved. A patent application is unlike any other kind of application you ever saw, in that there are no blanks to fill in or X-mark. Instead, every application is strictly a custom-built job, in which you must distinctly point out and claim, in language acceptable to the Patent Office, what you believe you have invented.

Start Getting Educated by writing the Commissioner of Patents, Washington 25, D. C., and asking for a free copy of the booklet, General Information Concerning Patents. When the mailman delivers this, lock yourself up in the toolshed where you won't be bothered by kids, wives, or bill-collectors, and *read* it. Then read it again.

Next, write to the Superintendent of Documents, Government Printing Office, Washingto 25, D. C., enclosing $1.15 and requesting a copy of each of these three booklets: (1) Patent Laws, (2) Rules of the U. S. Patent Office in Patent Cases, and (3) Guide for Patent Draftsmen. You'll get plenty of knowledge out of these books.

That Guide for Patent Draftsmen is an absolute necessity. Patent drawings are unlike any other drawings on earth: at first glance they may look like mechanical drawings, but they are actually mechanical illustrations. They do not follow the rules of the mechanical draftsman, but are made according to certain somewhat unusual rules of their own, rules established by the Patent Office

arts of a Patent Application



HEN you are ready to try to obtain a patent on your invention, it's time to file an application with the Commissioner of Patents, Washington 25, D. C. order to be accepted and placed on file, the ent Office requires that it include:

. A written document which comprises a petition for patent, a specification fully describing and claiming your invention, and an oath;
. A drawing in such applications where a drawing is possible;
. The government filing fee of $30 (plus an additional dollar for each claim exceeding 20).

he papers must be written in English, and drawings must be done in a size and style, l on a special type of paper as prescribed the rules of practice of the Patent Office.

etition and Oath are formal parts of the lication. The oath generally should paraase those prerequisites to patent stated in statute. It includes a statement that you ieve you are the first and true inventor of at you claim in your invention. It must signed and sworn to by the inventor, as ist the specification. In case of his death insanity, or of an inability to locate him, patent law has a provision under which ers may file on his behalf.

he Specification should be arranged in following order:

.. Title of the invention;
2. Brief summary of the invention;
3. Brief description of views in drawing;
4. Detailed description;
5. Claim or claims.

The specification must completely describe the process, machine, manufacture (viz. article), composition of matter, or improvement invented. Wherever applicable, it must also explain the operation and any principle involved.

In the case of an improvement, the specification must particularly point out the parts related to the improvement. The specification should be confined to the specific improvement.

Claims are the most vital part of the entire application, from the inventor's standpoint, since they carefully define in critical wording the scope of his invention. For detailed information on claims, see "Drawing Up Your Own Claims" (p. 55) and "How Your Attorney Prepares Specifications and Claims" (p. 64).

QUESTIONS

How Many Applications?

I have six ideas. Can I include them all one patent application or should I first file the best idea?

Patent Office Rule 14 says: "Two or more dependent and distinct inventions (such as razor and a toothbrush) cannot be embraced in a single application, but must form basis of separate applications."

If your ideas are merely different forms of single basic invention, the office will let you clude them in the same application. Not ore than five different forms of an invention ay be claimed in one application, though, d those five only when the office finds an owable claim of such breadth as to cover of them.

If you want to file on only one of your inventions, naturally you should file on the form of the invention you consider best. This phase of the patent law is quite complex, and you would do well to consult an attorney or agent.

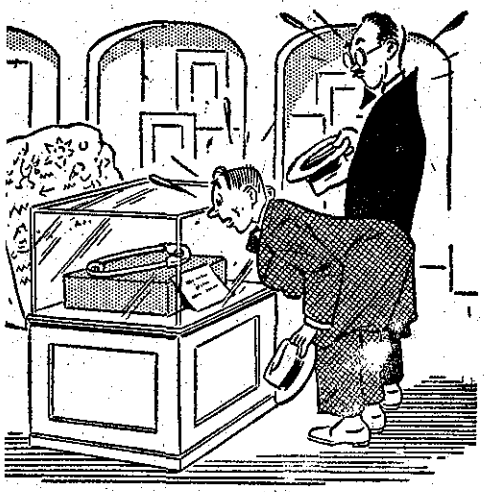
Change the Application?

Q. My application is all ready to file, but the manufacturer has made some changes in setting up the blueprints. Should I file the case the way it is, or what?

A. Since it is sometimes difficult, if not impossible, to make changes in an application once it has been filed, submit the blueprints

Is It Patentable?

Decision to file your application hinges on searcher's findings and attorney's recommendations



o the ancient Romans, ye safety pin was already ld stuff—yet an American hundreds of years later ot a patent on it. Which proves that improvements on old ideas can still qualify for patents.

YOUR preliminary search report is in. You have the recommendations of your patent attorney or agent. Now the decision to try for a patent on your invention is uarely up to you.

The answer should be yes if you believe ou have met the requirements of the patent ws that an invention must be (1) new, (2) eful, and (3) unobvious to persons who are illed in the art.

New means that your invention was not nown physically by others in this country efore you made it, nor was it in public use on sale in the U. S. more than 12 months efore the date you apply for patent. It also eans that the invention has not been patted or described in *any* publication anyhere in the world before you made the vention or more than 12 months before you pply for a U. S. patent.

Useful means that your invention is operave for a useful and moral end. Even though may not be as efficient as some prior inentions, the requirements of the law are atisfied if it is useful in itself.

Unobvious to those skilled in the art is a equirement added by the Patent Act of 1953 hich modified a troublesome and long-standng decision of the U. S. Supreme Court that a flash of genius" was necessary to warrant ne issuance of a patent.

With more than 3 million U. S. patents and 6 million foreign patents on record in the Patent Office, it is clear that the differences between inventions are often very thin. All of these patents fall under 340 main classes.

The new inventor should not feel discouraged if his invention isn't exactly a world-beater. Big money has been made and is yet to be made from small changes and new combinations of old elements. There have been some 15,000 patents issued in the wake of the electric light alone.

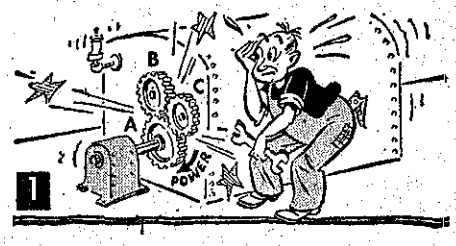
When the Bell telephone patent was in litigation, the U. S. Supreme Court was shown that a mere quarter-turn down of the make-and-break contact of a German patent to Philip Reiss resulted in a perfect anticipation of the Bell telephone. The Bell industry was founded on that small a change.

Similarly, Emile Berliner changed the hill-and-dale phonograph groove of Thomas Edison to a lateral groove. The Victor Talking Machine Co. was founded and flourished on his microscopic change.

The Test for Invention, or unobviousness, as it is called, is not how great a physical change or modification of structure is involved, but whether your change produces a new or improved operation or result. A new combination, even of old elements, is patentable if a new result is obtained. So is an old result if it is accomplished in a better way.

Ultimate perfection in any line of invention will be reached step by step, in the same way that a building is constructed. Each contributor in the course of the improvement is entitled to his reward. A recent court decision sustaining a minor patent declared: "Improvement is as important in simple devices, even when in a crowded state, as it is in complex devices in a pioneer stage."

The question of newness or "novelty" is decisive in about 90% of patent cases. If the idea is not new, there's not much point in going on with it. But the Patent Office takes a liberal view of usefulness or "utility."



xaminer search through them after the pat-
nt application has been filed.

If you don't want to spend time and money
n a trip to Washington, you may write a
:tter to the Commissioner of Patents, Wash-
igton 25, D. C., telling him what you have
ivented or what you have in mind, and re-
uesting him to define for you "the proper
eld of search."

He will, in reply—it says in the bulletin on
ie subject—"list those classes and sub-
lasses which are thought to contain copies
f patents pertinent to the subject matter
lentified in the request. In order to render
iis service, the Patent Office should be in-
ormed as fully as possible of the exact na-
ire of the invention (features of struc-
ire, mode of operation, and intended uses,
nd in the case of designs, the type of manu-
icture and ornamentation), since general
equests can be answered only by stating a
road 'field of search' involving large num-
ers of patents."

Now before you start dashing off a short
ote to the Commissioner, consider well that
ist statement: "general requests . . . (in-
olve) . . . large numbers of patents."

Figuratively Speaking. There are 340 gen-
ral classes of patents, divided into 80,000
ibclasses, involving more than 3 million pat-
nts. On the average, each class contains al-
iost 9000 patents, and each subclass close
) 40: of course, some contain far fewer,
)me far more.

Consequently, since you don't want to
'ade through 9000 patents (or pay the $2250
iey would cost you), your request to the
'ommissioner should be as specific as you
an make it. Indeed, if you are far enough
long in your thinking, you could enclose a
:etch (for Pete's sake, *don't* ship a model) to
elp narrow things down.

In reply, the Commissioner will tell you
'hat subclass or subclasses seem to consti-
ite the "field of search." You next order
'om the Commissioner a list of the patent
umbers in each subclass he has mentioned,
equesting an estimate of the number of
sting sheets which will be required. There
: room on each sheet for 100 numbers, and
ie cost per sheet is 20¢.

When you are told how many sheets will
e required, you get a Post Office money
rder for the correct amount, payable to the
'ommissioner of Patents, and send it in. In
eturn, you will get the numbers, and nothing
iore than the numbers, of the patents in the
idicated subclasses.

You may then order copies of all these pat-
nts at 25¢ each (design, 10¢), enclosing a
ioney order for the total amount. Printed
opies of the patents will then be sent to you,
nd you can then make your own search,
ight on the dining room table.

vantage to all this is that you will get far more patented art to study than would be covered by a searcher making a novelty search. The disadvantage is that you will unquestionably get a lot of patents that are of no interest, and you may spend quite a little chunk of money. At 25¢ a throw, 100 patents cost $25; if there are 300 or 400 patents in your field of search, you may not feel like spending the $75 or $100 involved. Yet you have no way of cutting down on the list, because all you have are the patent numbers, which are of no aid in making a selection.

It all depends on how indefinite your idea is, and how definite is your intention of doing something in the field. If you are working on some major problem, where you know from a special understanding of the field that there is a genuine fortune awaiting the successful inventor (like Edison with the electric light), it may well be worth hundreds of dollars and hundreds of hours of study. If you are gambling on some gadget, you will be better off having an attorney file a patent application and then waiting to see what happens.

Searching in Libraries. In 21 cities throughout the United States (see Table A), files of printed copies of U. S. patents are maintained. So, if you are within driving distance of any of them, simply put your list of patent numbers in your pocket, go to the library, and



make your search. You can X-mark the patent numbers which are of particular interest, and order copies of these only from the Patent Office for further study and consideration at home.

The desirability of making your own search, really, depends on what you are looking for. If you want guidance in developing some rather vague idea, or you want a panorama of success and failure in order to see whether the field is worth entering, this procedure has the advantage of providing you with a wealth of reference material.

If you merely want to know whether or not your particular structure is likely to be patentable, you will probably find it cheaper and better to let an attorney or agent make a novelty search and give you a report.

Applying the Art. There is another drawback to making your own search: unless you

n exact copy of your invention is found.

Other Unofficial Searches sometimes are equested by inventors after their patent has een issued. They include the validity search, vhich may be ordered by the owner, prospec- ive purchaser, or someone who fears in- ringement of the patent. It serves to double- heck the validity of the patent by having an to be sure the examiner missed nothing during his consideration of the application. This takes at least two days and may exceed two weeks. An enlargement of this is a full-fledged infringement search, conducted for the inventor who has his patent but is afraid to start production lest he infringe on prior patents. This probe will last a week or more.

QUESTIONS

How Much Time?

!. What is the normal time needed to make preliminary search? To prepare a patent pplication?

.. Searchers usually are quite prompt in ompleting a preliminary check and or- inarily you should have a report within a veek. As to the actual number of work- ours required, that's like asking how long it akes to build a boat. (A dinghy? Rowboat? acht?) No two searches are likely to re- uire the same amount of time. But as a ank "guesstimate," you might say that bout three hours is the average time for a reliminary search. The same uncertainty pplies to the time needed to prepare a patent pplication.

No Patent Search Needed?

!. I have been trying, unsuccessfully, to aise funds for making a model and filing a atent application. I don't want to divulge ny details of my invention, and I know a atent search is unnecessary, because my lea is radically new. . . . What do I do next?

.. Either go out and earn some dough, or et off your "top secret" kick and level with omebody who has the bread, man. As to our not needing a patent search, how do you now until you try it? In six cases out of 10, search proves that a "radically new" idea pathetically old. On the other hand, if the earch indicates that you really do have omething radically new, the favorable re- ort will be a powerful tool to use in pry- ng money from the pocket of a backer.

Give Searcher a Drawing?

!. I have told a searcher what my invention oes and sent him my money, so now he vants me to send him a drawing. What's the natter with him?

.. There is nothing wrong. Patents are not ranted upon purpose or function, but upon ne specific structure by which the purpose r function is achieved. Consequently, the earcher cannot possibly do right by you un- ess you give him a structure on which to ase a search. Of course, he could pick out half dozen sample patents from different ubclasses, but such a search would be vir- ually meaningless, and could lead you into ome very costly blunders which you would bitterly regret. So, by all means, send the man a drawing, however crude.

One Search Sufficient

Q. I have a system made up of component parts. Will I need a search on the system as such, and then additional searches on each component?

A. Start out with the assumption that one search will be enough. Searchers will usually go into several subclasses if it appears to be necessary. Of course they will sometimes recommend extending the search, and call for more money, but this doesn't happen often.

Does Search Protect?

Q. I am having searches made on some of my inventions. After these searches have been made, can somebody else get patents on these inventions?

A. They sure can, so if the reports are favorable and you are serious, be prompt in filing patent applications. Years ago you could file what was known as a *caveat* in the Patent Office, this being a declaration of intention to file application at a later date. So if somebody else filed an application ahead of you, the Patent Office would send you a notice, and you could then come swarming in with your own application and involve this second party in an interference. The procedure was always of doubtful legality, and was abolished many years ago. Today, if you want protection, you must file application.

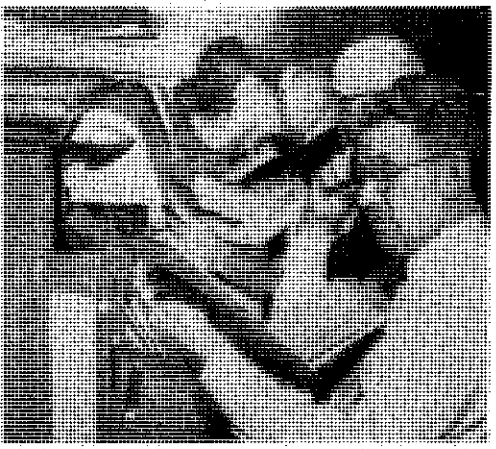
When to Search

Q. How fully should I develop my invention before having a preliminary search made at the Patent Office? What form should the information to the searcher take?

A. Some inventors have a preliminary search made even before they start working on an invention. This often saves useless work and expense in reinventing something already patented. Even if your idea involves a new structure, it is well to know in the beginning what has been tried in the past. So we advise an early preliminary search. The information to the searcher can be in any form that will clearly apprise him of the structure or result you have in mind. In many cases a brief written description is enough, while in others a sketch may be necessary.

The Preliminary Search

How this early check determines if you should apply for a patent



At work in the public search room.

THE check made to see if an invention appears to have sufficient novelty to warrant the expense of filing a patent application is known as a preliminary search. It also called the "novelty search" or the ore-ex."

The work takes place in the public search om of the U.S. Patent Office in Washing-n, D. C. You may go there to conduct your vn search if you desire, but most searching done by professionals who devote their isiness life to the job and know where to ok.

While the Patent Office will not make such search for you, its attendants in the public arch room will tell you or your searcher here to find the pertinent areas of investi-tion and how to locate the groups of patents ou may require.

Quality and Value of a preliminary search ries considerably. Much depends on the aining and experience of the person making em and the time he has to do the job. A archer lacking mechanical skill and patent w know-how might hunt for another patent hich "looks" like the subject being investi-ted but overlook more pertinent patents of quivalent and nearly the same mechanical sign because of a different appearance.

Unless you are an experienced inventor, erefore, you will be wise to have your arch made, and reported by a patent at-rney or patent agent. They do most of the arching, anyway, and will know how to in-rpret your case in view of the previous U.S. tents.

The "fraternity" of professional searchers rves a good purpose because they devote ll time to the business, learn its ins and rts, and assist each other with difficult or specialized problems. Consequently, when you put your drawings in the care of Mr. Smith, you may not only get his advice but also the benefit of the knowledge of Mr. O'Reilly and Mr. Olson as well.

It sounds easy to compare your idea with those shown in previously granted U.S. patents. Just shuffle through the pictures in the right classification and if you don't find a picture of the alleged new invention, then indeed it must be new. But, back in the stacks, to the left as you enter the search room, are more than 3 million U.S. patents arranged in some 80,000 bundles. Each bundle represents a class or subclass, such as "Pumps, hydraulic," "Controls, paper thickness," etc. Many classes are in a process of revision and some 800 to 1000 new patents are being added every week.

Patent Office officials themselves often find it difficult to decide just what bundle to put a new patent in, and the work of reclassification is going on all the time—with the result that there are as many as 200,000 patents "floating around" at any given moment.

How the Searcher Operates. When the searcher opens up your drawings and spreads them out on a desk in one of the search rooms, he analyzes your invention carefully to see what classifications he should look in for similar "art." He may decide to look in three or four, or more subclasses. If he is in any doubt, he will either discuss it with one of the other searchers over a cigaret out in the corridor, or he will get the suggestions of the chief clerk in charge of the room.

Then, having made up his mind where to start, the searcher goes back into the stacks, picks up a bundle of patent copies pasted on cardboard, takes them back to the desk, and starts going through them—comparing them carefully with what you have shown. Whenever he is through with one bundle, he goes back and gets another, repeating the procedure until he is satisfied that he either has knocked you out, or that he cannot knock you out, or that you are groggy but still on your feet.

As the result of what he has found, the searcher will purchase copies of any pertinent patents and send them to you with his report classifying your invention as unfavorable, doubtful, or favorable. "Unfavorable" means that he has found the identical thing in a patent to a Joe Blokes, perhaps dated 1888. "Doubtful" means that he has found one or

nd amendments, and this fact should be real-ed by the inventor at the outset.

Let's look at some actual fee quotations btained from different attorneys for handling arious cases or from the inventors who re-eived them:

ttorney A in a one-sheet case (involving one page of drawings): $25 for drawings, $30 for U. S. government filing fee (fixed by law), and $325 for preparation. No prosecution costs were given nor was the likelihood of prosecution mentioned.

ttorney B, one-sheet case: flat fee of $350 covering everything except prosecution.

ttorney C, average one-sheet case: $20 for search, $30 for drawing, $275 for attorney, $30 for filing fee.

ttorney D, one-sheet case: $20 for search, $400 for everything else in a package deal.

ttorney E, six-sheet case: $35 for search, $300 for drawings, $600 for preparation of papers, $30 for filing fee.

Based on recent observation and inquiries, ıe prevailing charges of reputable patent at-ɔrneys and agents for preparing a patent application for a reasonably simple mechanical evice (such as a floor mop or other house-old aid) are given in Table A.

TABLE A

STIMATED CHARGES BY PATENT ATTORNEYS FOR PREPARING SIMPLE MECHANICAL APPLICATION

ees	Low to High
earch	$ 20 $ 35
rawings	25 50
ttorney	300 350
overnment filing	30 30
Total	$375 $465

If it costs you less, you are getting off fairly asy. If it runs around $100 more, that is not nreasonable. Even $200 more may be all ight. But if they quote you $1000 for prep-ration, beat feet if you want to have money. Bear in mind that the increased cost for pre-aring complex applications is not directly elated to the number of drawing sheets in-olved. A two-sheet drawing may require ıree times the work of one with a single sheet. t may also take three times as much time on ıe part of the attorney to prepare the appli-ation. So Table A is not an accurate guide ɔr inventors with complex inventions. For lectrical, chemical, process, and plant pat-nts, you must expect to pay considerably ıore.

Design Patent Work should cost you less. 'he search fee should be about $15 since there s no structure for the searcher to pore over.)rawing costs should also be much less than hose for mechanical patents. Since the prep-ration of the application is mainly a formal rocedure, it should approximate $100.

Extra Charges. The attorneys' figures bove do not include preparation of amendments, possible petitions, and appeals. Each amendment in the average application will probably average around $100, and usually there's more than one.

Whenever it is found impossible to make a reasonably precise estimate of the labor required in preparation of a paper, the work is done on a time basis. The daily rate for the average attorney is around $100.

What to Expect for Your Money. In your search report, you should receive some discussion and advice as to the wisdom of further procedure. While your attorney obviously cannot guarantee you anything, he is not treating you too fairly if he only says something like the following: "We have had a search made and herewith are copies of the U. S. patents which the searcher feels are pertinent to your invention as disclosed. Should you now wish to proceed with a patent application, please remit $100 on account."

This is not particularly helpful. You are really entitled to have your attorney say that he thinks (or does not think) that you are likely to be able to get a patent over the references. It is also nice, though a bit unusual, for him to give you a sample claim, showing about what he thinks might be obtainable.

You are then entitled, upon request, to a clear breakdown of all fees for carrying the case to an issue before the primary examiner in the Patent Office. Fees for interferences and appeals are rarely quoted at this time.

You are also entitled to a reasonable amount of courteous correspondence. But you are not entitled to write once a week, to write to the commissioner with trivial complaints and questions, to ask about commercial value and lists of manufacturers, to hang around the attorney's office, or to get him on the long distance telephone every time you get a new idea. Since it will take two or three years to get your case through, just relax and don't pester the man.

Upon request, you are entitled to see responsive amendments before they are filed and to make suggestions. If you don't know what it is all about, however, don't try to get



What Your Patent Attorney Should Charge



CONSIDERING how many opportunities there are for misunderstandings and disputes to arise in the intricate business f handling patents and inventions, it is much the credit of inventors and attorneys alike iat there is so little discord. Thousands of ises entrusted to patent attorneys are sheperded skillfully through the Patent Office ith mutual satisfaction to all concerned.

But disputes do arise and mistakes are ade. Since sympathy is almost automatically be found on the side of the inventor, it ould be noted how inventors sometimes can ul things up for their attorneys.

Tell the Full Story. Take one case where inventor devised a special type of cutting ead using a number of curved-head blades t at an angle. He was about to sell this intention when one of the prospective buyer's gineers pointed out that the patent claims d not explain the purpose of the curved ades (which was to provide a shaving action the cutting head dug in). This purpose was e most important and only really new feare of the invention.

When taken up with the patent attorney, e record showed that the inventor had stipated that the angle and not the shape of the ades was the vital feature. The deal was lled off and the angry inventor blamed it all on his patent attorney. But the attorney had only the inventor's original sketch and description. He could hardly be expected to claim that which the inventor seemed explicitly to disclaim in all of his communications.

Unless you completely disclose your invention to your attorney, tell him what it is for, why it is better than others along the same line, and explain how it works, you can hardly blame him if he misses some point which only an expert in that particular line of work could spot. He is more your *legal,* than *technical* expert.

Squawk Against High Fees. Patent attorneys and agents have to absorb the same extent of training and experience as a doctor before they are able to practice their profession, and, therefore, earn a high rate of pay. Most complaints lodged by inventors against high fees tend to be resolved when the attor-



ney's side of the story is revealed. In addition to his office setup and overhead expense, his cost figure will vary greatly according to the demands of each individual patent application.

Obviously there will be much more drawing and preparation work on a jet engine than a paper clip. Yet the latter may result in more prosecution work. Such factors have to be balanced out in any attempt to estimate costs.

The inventor can avoid getting involved over his head in costs by discussing the probable charges in advance with his attorney or agent. He will receive an estimate, if he requests, in the same way he can get a figure from his doctor for an operation. But since the estimate is based on the sketches and description—or model—supplied, such a figure will usually be on the "high side" to take care of unforeseen complications.

What the Work Involves. To understand what all the shouting is about, let's look at the customary steps in securing of a patent. *Usually,* they are: (1) preliminary search; (2) preparation of drawings; (3) preparation

Selecting Your Attorney or Agent

By AUBREY D. McFADYEN



WHILE the first move toward a patent is to have a preliminary search or check made at the Patent Office, few nventors are in a position or have the skill to o this work themselves. That means the first tep, in most cases, is to select a searcher.

Since the odds are about 50-50 that the earch will result in your filing for patent, it s simpler and more efficient to select a per- on who is qualified and eligible to carry the vork all the way through from search to pat- nt—a patent attorney or agent.

These persons have passed a qualifying ex- mination to be registered at the Patent Office nd they alone may represent an applicant on fficial business at the office. Anyone who is ıot so registered but who represents himself ıs qualified to prepare or prosecute a patent ıpplication, or who accepts a payment for as- isting an applicant before the Patent Office s guilty of a federal offense.

Each Registered Attorney and Agent has hown to the satisfaction of the Commissioner of Patents that he is of "good moral character ınd repute and possessed of the legal and cientific and technical qualifications, and is otherwise competent to advise and assist" the nventor. Neither is permitted to advertise.

Chief difference between the two is that the ıttorneys only are members of the bar. Both ıre qualified to prepare and prosecute appli- ations, but agents cannot conduct patent liti- gation nor write licenses, assignments, or other contracts in the practice of law. It is understood that more than 90% of the patent attorneys hold at least one degree in science or engineering. An inventor may appoint an attorney or agent to represent him. This appointment may be revoked at any time by simply advising the commissioner.

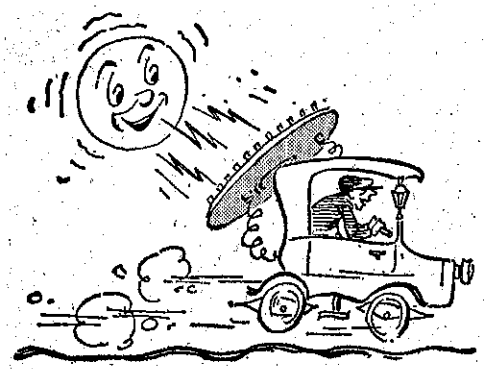
The Patent Office will not recommend any particular attorney, but on request will furnish you a free list of attorneys and agents in your area. Your choice of a representative should be guided by the field of science you believe would be most helpful in preparing your application. Many patent firms are composed of members of various backgrounds, so that they will have at least one member particularly proficient in each of the three major fields: mechanical, electrical, and chemical.

Many patent attorneys belong to the American Patent Law Assn., with headquarters in the National Press Building at Washington, D. C., and branches in major cities. It prescribes a rigid code of ethics for its members and may suspend or revoke membership of anyone who strays from it. You can obtain a membership roster at any of its offices.

In choosing someone to prepare and prosecute your application for patent, you would do well to heed the advice of any experienced and successful inventor you may know. But a person who merely offers you the name of an attorney or agent is not doing you any favor for you have access to all the names in the roster.

Logically, you should be able to obtain a good recommendation from your local chamber of commerce, the head of some prominent local industry with patent experience, or a





ration, or in the case of a process, explains ıe novel procedure followed. Each specifiation closes with one or more claims clearly ointing out exactly what the patent covers. he claims thus correspond with the boundries located in land deeds.

In a patent, the scope of the invention is sually set out in a number of claims, with ach one varying in breadth and/or emphaizing various features of novelty.

Puzzle Over Claims. Even experienced ıventors are often surprisingly ignorant bout claims. Many erroneously seek what re called "picture claims"—which specify very bolt and screw in their invention. Since very word in a claim means exactly what says and every element recited must be resent to establish an infringment, a would-e infringer simply omits one of the minor adgets of the picture claim and thereby voids infringement.

The point is, the more all-inclusive you ant the claim to be, the *less* detail should e recited. Suppose you were the first perın to build a wooden box. You applied for atent on it, claiming side, top, and bottom alls, and *nails* passing through the edge ortions to secure the parts together. Under ıese claims, if someone else began to make box, but used screws of dovetail joints to old the parts together, he would not be inringing on your patent.

If you want your patent to cover screw or ove an fastening methods, you must draw your claim in broader language, such as: "A box consisting of side, bottom and top walls, and *means* securing the edge portions of the adjoining walls together."

In keeping with the spirit of the patent laws, both the courts and the Patent Office agree about refusing a patent not only where the applicant seeks to monopolize an idea, but also where the effect of the patent would be to cover a principle or law of nature.

Going back to the days when Morse obtained his telegraph patent, one of the claims read: "I claim the force of electromagnetism, however applied, in the transmission of intelligence." This claim purported to cover only a principle or bald idea—the force of electromagnetism as applied to transmit intelligence. It did not say *how* this force was to be applied. No details of structure or law of operation were given. The U. S. Supreme Court ruled that this claim was invalid.

Unobvious Applications. Though discoveries of principles and facts of nature cannot be patented as such, an unobvious application of such a principle or fact may be patentable. For instance, the patent on the use of ether as an anaesthetic to produce insensibility during surgical operations was invalidated by the court on the ground that it was nothing more than the discovery of a fact of nature. Ether had long been known by the time its anaesthetic value had been discovered, and the inventor contemplated no unobvious application of his discovery.

Subsequently, many patents have been granted and granted to cover unobvious applications such as control and sequence of administering the ether.

There are several more modern examples that prove this point. The fact that food could be frozen was a scientific fact long accepted before Birdseye came upon the scene. But Birdseye made an unobvious application of this old principle with startling results. The basic thought of this patent (now expired), was to freeze food quickly—so quickly in fact that the water in the food had no time to collect into needles of ice which would rupture the food cells.

QUESTIONS

Luxury 'Copter Boat?

I. Enclosed sketches are of my big idea—a ombination yacht-helicopter. What do you ink?

A. If there was any demand for such a conraption, Sikorsky would probably be makng it. The point is, however, that would-be ıventors can't get patents or make sales on road ideas which require that other people o the actual inventing. Ideas are a dime a ozen, with Jules Verne and Rube Goldberg leading the parade. The payoff comes on specific elements of claimable, patentable novelty and engineering detail.

More Than an Idea Needed

Q. Has my idea of an easier-to-use electric plug any merit?

A. While your letter is quite impressive, it would appear that you have done no more than think of something that would be desirable to have, if and when somebody invented

em, we will be able to advise you whether r not we are interested. Please do not send model unless you are requested to do so."

It would seem from this that the party subitting the idea virtually could be shot at mrise if his idea proved not to be new. Acording to the language used, the inventor ould determine whether his invention is new r not only at considerable expense to himlf. The organization does not commit itself any way as to what it will do about the lea if anything. It would appear that any erson or corporation would consider invenons under such conditions, where there is verything to gain and nothing to lose except e time spent in looking over the suggestion.

ally turned in his idea to the organization quoted above, neatly sums up what little benefit may be expected:

"Two months after submitting my idea, I received an answer. I was told that my idea was good, but it had been presented before and they could not work from an idea. They must have it in a 'breadboard' shape in order to determine manufacturing costs.

"If I must develop and build a model of my idea, and figure all manufacturing costs, then what is there for the development people to do?"

Until something better comes along, the inventor is still largely on his own to work up and patent his invention.

QUESTIONS

Problems of a Clinic

Q. Can you tell me what now exists in the ay of an inventors' clinic, or equivalent for vestigating possible ideas for new prodcts? I have some gadgets in mind, but want be sure the idea can be protected if patitable. What gives?

A. From time to time people in various calities will start up an inventors' club, and e Commissioner of Patents has expressed mself as being favorable to the idea. Howver, few of these clubs have amounted to uch, and I don't think anybody has as yet tched onto the missing success ingredient—ere just aren't enough inventors in any one wn to give the club a sufficiently broad base operation. And these committees usually n't have a wide-enough spectrum of busiss experience to do a good job of deciding hat to back and what not to back with the ub's money.

If a national club were incorporated along e lines of an investment trust, with several ousand inventors kicking $200 apiece into e kitty and agreeing to give the club first ack at their inventions, something effective ight be done. Also, the membership might opened up to investors who would like to ve some of their gambling money riding on ventive long-shots.

Ideas By the Dozen

Q. I have dozens of good ideas. Please ovide a list of companies that buy ideas and en develop them.

A. There are no companies that buy raw eas and then develop them. The fact is that ere are far too many ideas, and far too few ally good inventions worked out in detail d ready to manufacture. Furthermore, if l you did was to supply a broad idea, while mebody else worked it up, the chances are at it would be considered his invention, and not yours. Manufacturers only pay for specific inventions which are or can be patented.

What About Financial Aid?

Q. Is there an organization that will guarantee protection of ideas submitted to them for examination, and if they see fit, will patent and manufacture the item, and then either pay me a royalty or buy it outright?

A. I'm afraid the answer has to be negative. Some organizations which started out in this manner were so quickly flooded with ideas that they soon had all of their working capital tied up, and were forced to discontinue solicitation of new inventions.

Of course, there is no telling when another such organization will be formed, but I know of none at the present moment which is looking for additional ideas. Instead of waiting around for an angel, the best procedure is to work up your idea into a good sketch and description, have a patent search made, and then either place it with an experienced patent broker or sales agent, or get patent attorney fees from a local businessman in return for an interest in the invention.

Several years ago we ran a survey on this subject, and found that local financing is not hard to get *if* you have what appears to be a worthwhile and patentable device. Many inventors reported getting money from doctors and dentists. One got free groceries, living quarters, and $15 a week spending money from the corner grocer while developing his invention. Another man got financial backing from the gas company's meter-reader when the latter came down to the basement and started talking about the model which he saw under construction.

One rule which was repeated over and over again was this: Don't get the money from friends or relatives. Line up a business or professional man, and put it to him as a straight business risk. You put up the idea, he the money, and you both split any profits.

othing to a manufacturer with a diversified
ne, but it can be fatal to the inventor—all
whose eggs are in the one basket.

"Hopeless" Invention Trap. One of the
ugh problems any inventor faces when he
evelops an idea for a better way of doing
ything is: "Will enough people actually
uy it or will too many of them ignore it be-
use they are satisfied with things the way
ey are?"

Many inventors fall into the trap that be-
use *they* want something, "everybody"
ill want it. Because they have had one bad
xperience with an item, they assume the rest
the world must be equally disturbed about
ie same thing. In short, they take a molehill
personal frustration, multiply by the num-
er of people in the United States, and come
p with a mountain of paper profits.

But the fact remains that four out of five
ew products prove failures because the pub-
c won't buy them. Fooled into thinking
ey would were not only the inventor, but
whole panel of experts consisting of his
tent broker, the manufacturer himself, his
wyers, designers, engineers, tool and die
akers, advertising agency staff, package
signer, sales manager, jobber, wholesalers,
lesmen, and the retailers. If all these can
fooled four times out of five. It's easy to
e how the individual inventor without mar-
ting experience can easily misjudge pub-
c need for something he believes is new.

Consequently, the first rule for successful
vention in a "hopeless" field must be to
ake a realistic appraisal of the *actual* need
demand on the part of the public. In these
opeless" fields, necessity is no longer the
other of invention. Instead, it is *dissatisfac-
on.* With this as your first consideration,
ere is a list of things to check:

Seven Rules for Success

1. Decide how serious your dissatisfaction
tually is to yourself. Ask and answer the
uestion very honestly. One or two frustrat-
g experiences are not enough. It must be
continuing problem—and one that is not
rgely your own personal and individual
ult or predilection. The fact that you hap-
en to like oysters with chocolate sauce
oesn't mean there's a market for them.

2. See how many other people have the
me trouble, and determine how trouble-
me it actually is. This means talking to
eople, to retailers, to businessmen. And in
is connection remember that everybody
xcept your big brother-in-law will tell you
at your idea is wonderful. Market survey
xperts long ago learned that people will im-
ediately tell you what they think you want
hear, and that, if you press them they will
o to great lengths to agree in order to get
d of you. The same experts also long since
arned to their sorrow that out of a thou-
article, only five or ten may actually buy it
when they go to the store. Also, remember
that there is a vast difference between admir-
ing a new gadget and paying good money for
it.

3. Make certain that your solution to the
problem is a real solution, and that it does
not create additional problems somewhere
along the line. A man once got frustrated
about lack of elbow room in a tiny Washing-
ton, D. C., apartment, and invented what he
called a "Two-Tray" which held a complete
dinner with trimmings for the service of two
people. It was exactly small enough for use
in a small apartment. But it was also just
exactly too big for any known kitchen sink.
The only way to wash it was to take it down
on the service elevator to the basement, tote
it out into the back yard, and then hire the
janitor to turn the hose on it. It never became
a commercial success although the model
maker was last seen driving a Cadillac.

4. Do it in such a way as to make it obvi-
ous, bearing in mind that quick commercial
success is based on giving people something
they can appreciate at a glance, rather than
things which call for demonstration or the de-
velopment of new techniques. The red rip-
cord on cigaret packages is an excellent ex-
ample of meeting an almost universal need
in a simple and readily apparent fashion on a
big scale.

5. Spare no effort in perfecting your inven-
tion. In a "hopeless" field where there have
already been hundreds of flops, nobody is
going to listen sympathetically to your story
about how your invention would work if
perfected.

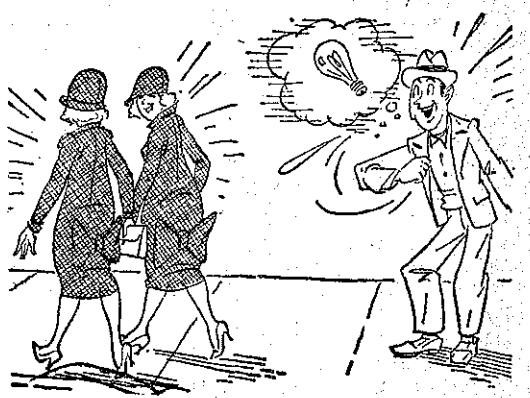
6. Do it at a competitive price. In the
realm of "hopeless" inventions, people are
well enough satisfied with things as they are
so that no improvement will justify an in-
crease in price. Too many improvement-in-
ventors think people will pay anything for an
improved article. But marketing experts
know that the cheap imitation and the rea-
sonably good substitute will usually run the
more expensive item right out of the market.

The only real hope for success in the "hope-
less" field is to come forward with something
which will not only improve the product, but
also lower the cost.

7. If a need must be created—as was the
case with television—or if previous failures
in the field were due to insufficient promo-
tion, as often happens then make up your
mind that you must travel the rocky road to
Dublin before you find success. Your only
hope—and you must start with the heavy
expense of good patents and good models,
before doing anything else—lies in finding
a backer with big enough money and suffi-
ciently important contacts to bulldoze a path
into the big corporations.

Tackling Tough Problems Which Plague Inventors

Forthright advice on "fad" inventions, getting cash from unpatentable ideas, copyright protection, and "shelved" inventions



"HE perils of the patentee are well illus-
trated by the story of the man who saw
women's fashions trending back to the
les of the 1920s. So he decided to get on the
ndwagon by manufacturing celluloid col-
s for men. After three months of produc-
n, he was talking to his auditor:
'In August," he moaned, "I lost $10,000. In
ptember, I dropped $20,000. And they took
to the cleaners for $30,000 in October. Can
u imagine anything worse?"
'Sure," said the auditor, "November."
Moral: By the time a trend, style, or pro-
tion becomes a national sensation, it is
ually too late for you to get in on it. So
ware of novelties unless you can make and
l them fast.
And don't waste time dreaming up a for-
ie from the big idea which just hit you.
st, find out if it is really new. Just be-
se you haven't seen it on the dime store
nters or in the Sears catalog is no guaran-
that it wasn't patented years ago. Send
ur sketch and description (or model and
scription) to a patent attorney or agent
h a request that they make the prelimi-
y U. S. Patent Office search and give you
traight answer as to the probable patenta-
ity of your invention.
Along with this they will send printed
ies of previous patents similar to your in-
tion so you can see for yourself where
u stand. Then, and only then, do you have
logical reason for making a formal pat-
application, raising money, conducting
veys, or contracting manufacturers.

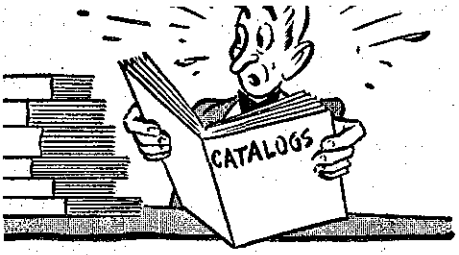
s the Disclosure Adequate? No one knows
w many searchers have ended it all in
Potomac River—driven to despair by
orly drawn, illegibly scrawled, and incom-
te sketches and descriptions of inventions,
t in by inventors. One inventor actually
ained a patent on something he had no
ention of inventing, and, at the same time,
npletely lost the truly important thing he
l invented, just because his original dis-
sure was incomplete.
Moral: No searcher can search and report
what you don't show him and tell him. If
u can't draw and can't write, get a local
ftsman, artist, blueprint reader, mechanic,
gineer, or college student—and a high
ool girl with a typewriter—to help you
condition your disclosure for search. And don't worry about these people stealing your invention; have them all sign as witnesses.

Nothing New Under the Sun? Alexander Graham Bell, of phone fame, had his mansion air-conditioned long before there was any such word in common parlance. He built an asbestos-insulated duct or air-shaft from attic to ground floor. In the attic he had a big open box filled with ice and salt, while on the ground floor he kept the tops of the windows open just a couple of inches. Cold air came down the shaft to the first floor rooms. This, in turn, forced hot air out the tops of the ground floor windows, and kept Mr. Bell cool as a long-gone clarinet player.

Moral: Don't be surprised if your preliminary search turns up a number of old patents all directed toward the problem which your invention is intended to solve. Thus, while Bell had an answer to the air conditioning problem, it was the wrong answer for anybody but a rich gadgeteer with a houseful of servants. The right answer didn't come along until the portable or window box compressor-and-fan unit of two generations later.

So, merely because you see that others have failed, don't leap to the conclusion that you must fail, too. Your bright idea may be the right idea. Saftey pins were old stuff in ancient Rome, but they didn't become a big deal until American inventors perfected them nearly 2000 years later.

Cash from Unpatentable Inventions. When you discover that your idea cannot be patented, you still don't have to junk it. Put it



e of the 2400 business, trade, and techni-
nagazines published in this country, such
Aero Digest, American Machinist, Auto-
ive News, Chemical Engineering, Electri-
Construction and Maintenance, Factory
iagement and Maintenance, Food Indus-
s, Machinery, Marine Engineering, Mill
plies, Modern Hospital, Packaging Parade,
er, Product Engineering, Progressive
hitecture, Rubber Age, and Toys and
elties.

ou may find that an idea from one indus-
has application in another field. Henry
d is said to have got the idea for his as-
bly lines from watching the *dis*-assembly
s in a meat packing plant, where overhead
leys moved the carcass from the killing
r to the cooler, permitting cutting and
ssing operations to be performed in transit.

itentability. How do you evaluate your
s from the standpoint of patentability?
re is no market for ideas as such, nor may
e ideas be patented. Often an "idea" man
s little more than point out a problem that
ds solving, or an end result that might be
rable if attained. Few people are willing
ay for that kind of advice. What industry
ts is a *solution* to a problem, a definite
for attaining the desirable end result.

his is what we call an invention—and,
be patentable, it must be more than a
e mechanical expedient or aggregation of
s that anyone familiar with the business
d easily think up. So you have to learn
to examine ideas critically to determine
ther or not they probably contain pat-
ble subject matter.

et a copy of the Rules of Practice of the
Patent Office, and send for instruction
ks such as offered by various patent at-
eys. Also, check with your local library
files of the Official Gazette of the Patent
ce, and plow through several issues, read-
the claims of the various patents carefully.
e claims are those short paragraphs at the
end of a patent that don't seem to make
h sense and are actually the most im-
ant part of the patent.) After you have
lied several hundred of these, you will
in to get the idea.

k-Luk and His Board. Let's examine the
of Uk-Luk the caveman, who, we'll say,
his patent claim might have read, "A flat plane piece of any suitable material, for the purpose of supporting and protecting the rump of the user from the cold, cold ground." This gives Uk-Luk a patent on a board.

A second inventor adds some legs—maybe three, maybe four. His claim reads: "In a device of the class described, a plane surface, and a plurality of leg members supporting said plane surface above the surface of the earth." (Notice that he says a *plurality* of leg members: this covers two, three, four, five, or any number of legs. That's what is called a "broad claim." If he said three legs, four legs would not infringe on his patent.)

The next inventor adds a back to the chair, and his claim covers only the back. The next one adds arms, and his claim covers only the arms.

Now you come along, let's say, and dream up the idea of the rocking chair. Can you get a patent? Well, if you can draw a mental claim to the device, you must have patentable subject matter, so let's see: "In a seating device of the character described, a pair of arcuate rocking members, one each attached to two of the leg members at their bottoms, and parallel to each other, enabling the occupant to rock back and forth."

Sounds a little silly, doesn't it? But that is the way to scrutinize your ideas. If you can draw a claim to an idea, then it may be worth further development and possibly a patent.

Improvements. This story of the rocking chair is a pretty good example of a basic patent followed by a series of improvement patents. It is also a good example of *domination*: Uk-Luk's basic patent on the chair seat would dominate all the others, and as long as his patent was in force none of the others could manufacture their inventions without Uk-Luk's permission. You, with your rockers, would have to get permission from Uk-Luk *and all the others* before you could start making rocking chairs. Consequently, you might decide, and with good reason, that it would not be worthwhile to take out a patent.

Remember that mechanical expedients and aggregations of parts are not inventions. In the case of the fellow who added a rubber eraser tip to the common lead pencil, the Supreme Court held that the two parts did not have anything in common—that they did not combine or cooperate to produce a new result. You can break such a pencil in two, and still successfully write with one end and erase with the other. So the court decided the patent was invalid.

Simply because you might know a lot of structures or mechanical movements and can combine them, it does not follow that you have a patentable invention every time you make a combination. The rule used to be that

lly desirable, but carefully consider his tation for honesty, and qualifications for ıg an acquaintance with wealthy men.

e Final Contract. Very seldom will a osed purchaser pay an adequate amount he patent rights to the invention in the of a cash payment. A small cash payment the balance in yearly royalties will prob- pay better in the long run. However, y large corporations refuse to pay royal- preferring to make a cash settlement.

sure you have a good, honest, trust- hy lawyer in your corner before enter- nto the final contract for the sale of your ıtion. He should be a man of thoroughly en honesty—not like the lawyer I once with who, having obtained a very miser- ttlement, demanded half thereof, under of taking it all if he was not satisfied. woods are full of wolves of that type.

e lawyer who prepares or okays the contract should really know his contract and not just recall a few essentials from ollege days. With all the best intentions ıe world, it is perfectly possible for a le of lawyers who do not understand ıts to draw up a document so full of loop- ; that, when it comes under the glare of egal lights in court, it looks like a cross on of a piece of Swiss cheese.

have looked at things entirely from the personal standpoint of the inventor. However, the inventor has a moral obligation to his industry and to the public, and that obligation involves helping to disseminate knowledge.

Specifically, in Electronic Design—which is one of the excellent trade journals I regularly read—there recently appeared an editorial which brings this point out so ably that I would like to quote a few lines of it:

"If engineers thought the problem through even casually, and then acted upon the conclusions reached, they would literally "flood magazines with good manuscripts. They have everything to gain by such action . . . professional recognition . . . promotions . . . financial return . . . disseminating information that helps to advance their industry and create more and better opportunities for growth."

I heartily concur in these sentiments, and urge all of you, when you have something of a technical nature worth saying, to say it in print. In conclusion, I sincerely hope that what I have said here will serve as inspiration and guidance to many a young inventor who has started on his life's path in much the same manner as I did—that one of you, 50 years from today, will be proffering an even better schedule of advice to an even greater generation of American inventors.

QUESTION

Inventing as a Career

am an artist, 30 years old, and feel that not getting enough sense of accomplish- ; out of my work to make it worthwhile. ve many good ideas for consumer items, ary inventions, etc., all of them very le and practical. I am thinking of ing my job and becoming a professional ıtor. All the women I have talked to say ideas for household gadgets are good; all I is somebody to finance me. What is advice?

he last part of your question really es first. Unless you can get somebody to he freight, you are likely to have a tough ver the long haul. It may take from two ree to five or ten years to get from pat- o product to profits, so, unless you can rich patron, you had better stick to your and devote only your spare time to ıtions.

nes have changed considerably since the when an unschooled genius like Thomas on could think up over a thousand pat- ole inventions, form his own companies, become a rich man. Today you (and an t into the bargain) are up against over ,000 patents of record, the reports in 2400 e and technical magazines coming out y month, and the constant work of thousands of scientists, engineers, industrial designers, and advertising marketing experts—all of them experts in their fields.

Your chance in any field, therefore, that you will think up a killer-diller that the experts have missed is remote and becomes a longer shot every day. In view of this, your best bet would be to select one particular field and, through self-education, become an expert in it. Then, if you are prolific with ideas, you increase the likelihood that what you dream up will prove to be new, acceptable, and profitable.

Finally, your age will soon begin to tell on you. Statistical studies and intelligence and aptitude tests show that creativity is at its high point at about age 24, and that from then on it steadily declines. Actual study of the most important modern inventions shows that most of them were produced by men below the age of 40. Older inventors, it may be noted, are more prolific, but their inventions are less startling.

Now, let's consider this question: Aren't you just tired of the grind in the studio, and gazing out wistfully at the far green pastures? Wouldn't you, if you were destined to become a professional inventor, have become one years ago? Better think it over very carefully before you quit your job and embark on uncharted seas.

DR. DeFOREST ADVISED

tead the science magazines and good scientific ooks.

Associate with intelligent people, particularly engineers and organizations who are experienced in our field of invention.

Don't rely entirely on Patent Office searches.

Get a patent attorney who is especially skilled in our own field.

Keep a careful diary of your work.

n selecting a good middleman to sell your inven-ions, make it clear that he should not stampede you nto an unprofitable sale.

ie sure your contract is airtight before you sign it.

s not too good an idea to start specializing soon. Also, a wide acquaintance with ndard literature definitely broadens the id. Furthermore, the inventor should not a hermit. He should associate with en-eers, and join an engineering society and end their meetings . . . two societies are ter than one if they do not encroach too ch on study time.

Every inventor should take care of himself, sically, and enjoy life. In my diary for the mmer of 1891, I find that I was in a private itary camp, where I learned to row and m well, to dive deep, and to run cross-ntry "hare and hounds" chases. I also find t I was often on the punishment roster, ually for being mixed up in some infraction rules.

see, too, that I attended the symphony certs, and began to develop a healthy in-est in pretty girls. In my spare time, I ame a book agent, and made a profit of . While door-to-door selling is hard work, s valuable in that you meet the public and rn some very basic lessons in business and es psychology—a rich and useful knowl-ge for inventors.

ree Education. With some of my earn-s, I went to Chicago in the summer of 1893 see the World's Fair, where I got a job as hair-pusher. This enabled me to spend a month studying models of machines and gines. As I noted in my diary at the time, is really money, and a paying education me, as well as the highest enjoyment." this connection, I would like to comment t the aspiring inventor makes a serious stake if he fails to take advantage of the e education which he can gain by visiting seums, fairs, exhibitions, and trade shows. Professor Diesel, for example, got the idea his famous Diesel engine while examining Polynesian fire cylinder in a German mu-m. So, the next time you go to Washing-, I would suggest that you will find more fication in the Smithsonian Institute than will under the dome of the Capitol. The cities, where there are excellent museums of science and industry.

My next suggestion ties in somewhat, with the last: Discuss your ideas with intelligent, informed men who are working in or are acquainted with similar work, or who are familiar with the problems that are puzzling you. Such conversations will usually enable one to discern between a brain wave and probably useful invention.

Also, seek opportunities to visit factories and shops of a great variety—such visits will frequently result in inventive ideas and information which one could not obtain otherwise.

Don't Give Up. It is a grave error for the up-and-coming inventor to let disappointments frustrate him. While I was a freshman, and desperate for money, I invented an improved type-bar movement for my typewriter; an improved compass joint which I mailed to Keuffel & Esser; a game which I mailed to Milton Bradley, and a number of other things, including an improved type of subway construction.

None of these things sold, but I managed to make out all right by getting a job waiting on tables. The point I want to emphasize is that one or two, or a half-dozen inventive failures are no cause for heartbreak early in your career.

One of my most cruel disappointments was the invention of a boiler-condenser device for steam engines, which was contemptuously and sarcastically ridiculed as being useless. Today, methods akin to my old idea have been customary steam engine practice for decades.

When you think you have something worth while, have a search made in the Patent Office. This may result in a great saving of time and expense, but you must understand that the results of such a search are not always definite. Something very pertinent to your invention may already be in the pending files (which are not open to searchers) and it is also possible that some anticipation of your idea may have been published in one of the various trade journals.

For this reason, when working in a particular field, it is highly desirable to familiarize yourself with all the published papers to which you can possibly gain access. For example, being interested in electricity, I would read everything in the magazines I could get my hands on concerning Nikola Tesla, the outstandingly brilliant young electrical genius whose spectacular demonstrations of high-tension, high-frequency currents were arousing such extreme interest at the time that I was attending college.

Pick the Right Attorney. My fourth piece of advice has to do with patent attorneys. Consult your associates or acquaintances in

he Three Kinds of U.S. Patents

'HE word "patent" means open, or public, which is the reason each of these highly coveted documents begins with the words: it known:

'he United States government grants but ee kinds of patents: mechanical, design, l reissue. They are effective only in this intry and cannot be renewed. They may extended solely through a special act of ngress, an exceedingly rare occurrence.

)ne of the principal exceptions to this rule urred after World War II when Congress ended the patents of servicemen who were able to profit from their inventions due to vice overseas. Such extensions were ited to a period equal to the time the servnan served outside the continental U. S.

Mechanical Patents comprise more than % of all patents granted and because of this -heavy majority they are commonly re-ed to as "patents." They are intended for protection of the physical structure and nciples of an invention, without regard to earance. Their life is 17 years.

'he name of "mechanical patent" is loosely lied, since it refers to things electrical and chemical as well, plus all types of processes and plant patents.

Design Patents are predicated on novel and ingenious appearance. Examples of typical subject matter for design patents include lampshades, furniture, fabric patterns, shoe styles, and decorations on dishes. Such patents may be obtained for terms of 3½, 7, or 14 years.

Some inventions lend themselves to protection through both of the above patent types. A picture frame, for example, might be awarded a mechanical patent for its structure, whereas the ornamentation on the frame would be eligible for a design patent.

A Reissue Patent is merely a replacement of a patent which has proven to be inoperative due to errors ("Error in Your Patent?" p. 77). It runs for the unexpired portion of the original patent.

There is no such thing as an international patent or a "paper" patent. The latter term is used informally on occasion, however, in a disparaging sense to call attention to a patent for an invention which has never been used and has apparent commercial value.

QUESTIONS

Name for Worthless Patent?

What is meant by "negative patent"?

This is just a piece of trade jargon, occaally used to indicate a worthless patent ch has merely been taken out to get the out of circulation. The engineering detments of corporations will sometimes are patents on things they don't intend to , just to prevent others from getting simipatents which might possibly have some sance value at a future, unforeseeable, but ceivable date.

How About State Patents?

The company I work for has a state trade-k on its products. How about a state nt on some of our products?

Seems reasonable, but it can't be done. e registrations you can get, but patents issued only by the federal government. last state patent I can locate was issued x in 1790.

owever, the states still do have some ative control over the use of patents, in under the police power each state may reasonable laws to protect the morals, lth, and general welfare of its citizens. s, though you may have a federal patent gambling device, a phosphorus match, or int containing green arsenate, some states e laws which would prevent you from g your invention within their boundaries. One would naturally think that a U.S. patent would override all local laws, but it does not. What a patent gives you is simply the right to sue infringers in a federal court.

One Year to Go

Q. I got my patent 16 years ago, but due to wars and upset conditions, I never got it on the market. Now things look good. Can I get the patent renewed or extended?

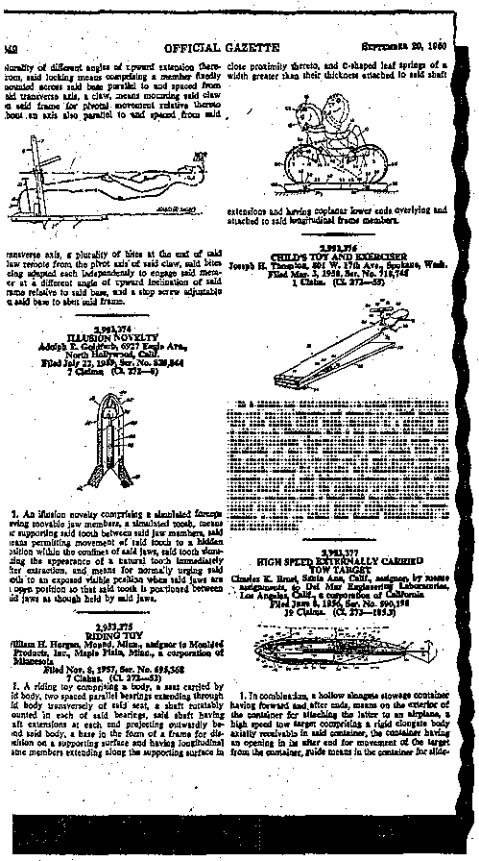
A. This is pretty tough, but it can be done. It takes an act of Congress, so retain a lawyer who knows your congressman and see where you go from there. The Patent Office has no procedure for handling matters of this kind, and it is not easy to get a special bill through Congress.

International Patents

Q. If I get an international patent, won't it cover the U.S.?

A. There is no such thing as an international patent. The only way to get world-wide protection is to secure a patent on each and every country on the face of the globe, because the nations have never been able to get together. Theoretically, there probably ought to be an international patent law, and many patent authorities from all parts of the world have been plugging for such a set-up ever since the early 1880s but, in spite of apparent progress from time to time, nothing has actually been signed, sealed, and delivered.

Helpful Publications Offered by the Patent Office


OFFICIAL GAZETTE

SEPTEMBER 20, 1960

plurality of different angles of upward extension therefrom, said locking means comprising a member fixedly mounted across said base parallel to and spaced from said transverse axis, a claw, means mounting said claw on said frame for pivotal movement relative thereto about an axis also parallel to and spaced from said

transverse axis, a plurality of bites at the end of said claw remote from the pivot axis of said claw, said bites being adapted each independently to engage said member at a different angle of upward inclination of said frame relative to said base, and a stop screw adjustable on said base to abut said frame.

2,953,374
ILLUSION NOVELTY
Adolph E. Goldfarb, 6927 Eagle Ave., North Hollywood, Calif.
Filed July 22, 1959, Ser. No. 828,864
7 Claims. (Cl. 272—8)

1. An illusion novelty comprising a simulated forceps having movable jaw members, a simulated tooth, means for supporting said tooth between said jaw members, said means permitting movement of said tooth to a hidden position within the confines of said jaws, said tooth simulating the appearance of a natural tooth immediately after extraction, and means for normally urging said tooth to an exposed visible position when said jaws are in open position so that said tooth is positioned between said jaws as though held by said jaws.

2,953,375
RIDING TOY
William H. Horgan, Mound, Minn., assignor to Monided Products, Inc., Maple Plain, Minn., a corporation of Minnesota
Filed Nov. 8, 1957, Ser. No. 695,368
7 Claims. (Cl. 272—53)

1. A riding toy comprising a body, a seat carried by said body, two spaced parallel bearings extending through said body transversely of said seat, a shaft rotatably mounted in each of said bearings, said shaft having shaft extensions at each end projecting outwardly beyond said body, a base in the form of a frame for disposition on a supporting surface and having longitudinal frame members extending along the supporting surface in close proximity thereto, and C-shaped leaf springs of a width greater than their thickness attached to said shaft

extensions and having coplanar lower ends overlying and attached to said longitudinal frame members.

2,953,376
CHILD'S TOY AND EXERCISER
Joseph H. Thornton, 801 W. 17th Ave., Spokane, Wash.
Filed Mar. 3, 1958, Ser. No. 718,745
1 Claim. (Cl. 272—55)

2,953,377
HIGH SPEED EXTERNALLY CARRIED TOW TARGET
Charles K. Brust, Santa Ana, Calif., assignor, by mesne assignments, to Del Mar Engineering Laboratories, Los Angeles, Calif., a corporation of California
Filed June 8, 1956, Ser. No. 590,198
19 Claims. (Cl. 273—1853)

1. In combination, a hollow elongate stowage container having forward and after ends, means on the exterior of the container for attaching the latter to an airplane, a high speed tow target comprising a rigid elongate body axially receivable in said container, the container having an opening in its after end for movement of the target from the container, guide means in the container for slide-

ical page of a recent issue of the Official Gazette, ealing how detailed information on new patents is made available to the public.

EARLY 1000 new patents are issued every week at the United States Patent Office and copies of every one are avail- to anyone at 25¢ each, postpaid. Where es of older patents are out of print, photo es will be furnished for the same price. requests for these copies should be di- ed to the Commissioner of Patents, Wash- on 25, D. C.

ne following pamphlets and books may purchased from the Superintendent of uments, Washington 25, D. C., or at field es of the Department of Commerce, at paid prices indicated:

eral Information Concerning Patents,

38-page pamphlet describing the general re of patents, the elementary prerequisites to the grant of a patent, and the parts of an application. It includes reproduction of both mechanical and design patents, and has an appendix of forms, including oath, assignment, and license.

Patents and Inventions—An Information Aid for Inventors, 15¢

A 27-page pamphlet presenting matters to help the inventor decide whether to apply for a patent. It describes all steps necessary to obtain good patent protection, including importance of witnesses and maintaining good records, proper preliminary search, selection of a registered attorney or agent, the application, critical importance of claims, and how to assist your practitioner in the prosecution of your application. Valuable information is also given on marketing and developing an invention.

The above two pamphlets supply the basic information and advice needed by all inexperienced inventors.

Patent Attorneys and Agents Available to Represent Inventors Before the Patent Office, 45¢ (The Patent Office will supply free of charge a list of registered attorneys and agents in your area.)

Complete 78-page roster of all attorneys and agents registered to practice. Names and addresses are listed in alphabetical order according to states, cities, and metropolitan areas. This roster is offered as protection against unscrupulous persons claiming competence to represent you as an inventor. Anyone who does this and is not registered is guilty of a federal offense and should be reported to the Commissioner of Patents.

Patent Laws, 30¢

A 100-page printing of the bald patent laws, with index. It is of value principally to patent attorneys and agents.

The Rules of Practice of the United States Patent Office, 45¢

A 160-page book containing the 352 rules governing the practice of applicants before the Patent Office and by the Patent Office itself. Sections of the patent statute involved are keyed to the rules as footnotes. Also included is an appendix of 54 forms which may be needed during practice before the Patent Office. Too complex for the average inventor,

er to reject or grant applications. This with amendments from time to time, ained the basic law of patents until ıary 1953. However it was modified by es of other acts of Congress and hun- s of court decisions.

ecisions in these lawsuits created an im- se amount of new "common law" (as nct from "statute")—some of it good, e of it bad, and a lot of it contradictory uzzling.

ıe most fundamental question raised in e lawsuits was the precise definition of ention." Just what is it? Where do you r the line between mechanical skill and us?

t's take an example. Suppose you are ɔwner of a small machine shop, and at suggestion of your brother-in-law, you developed a special machine to produce ;ets. He has tramped the streets of the ndustrial towns, slept in flea-bag hotels, ı-hiked to save train fare, and finally suc- ed in getting the machine into the fac- s of the big widget makers. You have without most of the things that make worth living in order to finance the ma- ls and labor for turning out the machines. ıen the blow falls. Some character you never heard of suddenly shows up with tent and a lugubrious-looking lawyer to you that you are infringing on and de- ds his "rights," which in his opinion unt to this: Give him 90% of your profits, ɔntrol of your company, or go out of busi- . You are confronted with what seem to ɔnly two alternatives: Either go out of ness entirely, or surrender and become a e in the plant where you were once the ;er. Or, you ask, is there some way to ;le out?

ɔu ask your own lawyer, and you find there may be an out. Did you and your her-in-law apply for a patent on your hine? Of course not. We didn't think it an invention. It was just a good idea. body could have thought it up if he was liar with the widget business. It didn't any particular brains. What the heck the government mean by giving this guy ıtent on a machine which any skilled hanic could create?

ha!" says your lawyer. "Tell the patentee ıe. Our defense will be that his patent is lid for lack of invention. We will summon ıttery of expert witnesses from all the ing widget factories and convince the t that the Patent Office goofed off."

the two of you slug it out in court. You ıtain that the machine is merely the re- of mechanical skill, and cannot be digni- with the word *invention*. Your opponent that it must obviously be more than hanical skill; that he was the first to con- lized this fact and thought it was definitely "invention" and worthy of patent protection. Thus we get down to the one big question:

What Is Invention? The statutes, between 1870 and 1953, gave the court no guidance on this point, and, of course, no definition of "invention," nor any criteria by which it might be evaluated.

Judges, in consequence, fell back on various philosophical or practical viewpoints. Some took the position that nothing could be patented in a highly-developed field; others took the view that the more highly the field was developed, the greater was the amount of inventive ability implicit in an improvement.

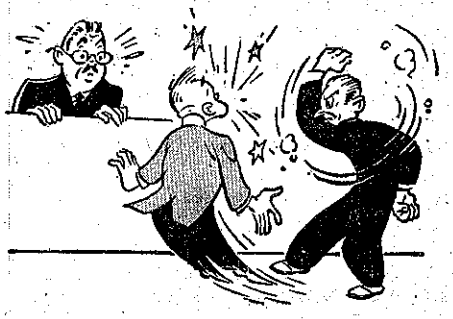
In other words, one school of thought said "so much is known that this would be obvious," while the others said, "the very fact that this man thought of it, when the rest of them didn't think of it, proves that it could not have been obvious." As a result, more than once a patent would be valid within the jurisdiction of one federal court, and invalid in another.

A Matter of Opinion. Unless and until (which is unlikely) some psychologist comes up with an absolute standard by which these matters can be judged, it will always be a matter of opinion and viewpoint. That the Patent Office, itself, is not necessarily immune to making mistakes—and that judicial review is a very highly desirable thing—is indicated in the case of Starlock Manufacturing Co. vs. Kublanow, 106 Fed. 2d, 495. Here the court said:

"The cohesive and energetic body of patent solicitors wears down the civil servant who is often waiting for his first opportunity to leave his side of the fence for the rich pastures beyond . . ."

And then, turning from this to a discussion of the specific case, the court continued:

"There are four separate interferences. There are two exactly opposite opinions by examiners of interference. There is one opinion by the board of appeals of the Patent Office. There is one refusal to act by the commissioner under his supervisory powers. Finally, and most wonderful of all, the Patent Office granted five patents for the same thing."



Procedure for Canadians

ɔw does a Canadian get a U.S. patent?
just the same way as an American
ɔ does. The only difference is that the
:ation papers must be "legalized" and
ned by a U.S. diplomatic or consular
:. Incidentally, it is more or less cus-
y to apply for the U.S. patent first, and
filing of the Canadian case until the
:ase stands allowed but not issued. Both
ts will then be the same, and you will
uniform protection from the Rio Grande
DEW line.

Where's That 110 *mpg* Carb?

it true that large companies buy up
ts on inventions that could be useful to
eneral public—then just shelve them?
ıat's a good question, and I don't think
ıny one man can give you a solid "yes"
o." Undoubtedly some companies have
ıt up inventions and then never used
Such cases could be due to many
s: changes in the national economy, a
in the company's long range plans, or
ps the failure of the invention to pan
s expected.
npanies know that patents represent
h to invest and exploit, not capital to
away. To suppress an invention would
ıch like starving the goose that lays the
n eggs. So, our guess is that companies
deliberately hold back inventions very

Patent Not Needed

ıave a special power-driven garden tiller
various good mechanical features, and
ı special lubricant I use, which has in-
ed power by at least 40%. Can I put
ıller and the lubricant on the market
ut a patent?
ıere is certainly no law that says you
to have a patent in order to put a prod-
ı the market. At the same time, if you
have something good here, I should
you would want to apply for patents.
wise, at the end of your first year in
ess, your ideas become public property,
here is nothing to prevent the big boys
moving in.

rotection Without Protection?

have devised a new chemical formula
ray bombs and am puzzled how to pro-
. If I patent it, anyone can look up my
ıla, make just a slight change and manu-
e it under a different name. On the other hand, if I manufacture it without a patent, skilled chemists could analyze it and arrive at my formula. What can I do?

A. Your main trouble is that you apparently want to eat your cake and have it, too. Under our patent system, the price the inventor pays for his patent is a full and clear disclosure of the invention—so that the public may know how to practice the invention after the patent expires. Any patent attorney would so frame your claims that your patent could not be gotten around by the "slight change" that you mention, so there is no ground for fear on that score. It is next to impossible to market a chemical product and still keep the formula secret; indeed, by this tactic you may be held to have forfeited any right to a patent. Your safest procedure is to apply for patent.

Sow Here, Reap Abroad?

Q. Since other countries can buy a copy of any U.S. patent for 25¢ and thus learn of advancements here, why should I assist other countries by taking out a patent?

A. The underlying purpose of our patent system is to promote progress in this country by encouraging research and investment in new industries. Estimates of research costs here run as high as $8 billion a year, and this expense is defrayed through earnings on new patented products. It is true that some of the benefits of our system are reaped abroad. On the other hand, we likewise gain from foreign inventions. For example, we obtained photography, rayon, and pasteurization from France; the steam engine, turbine, telegraph, and textile inventions from England; the X-ray, diesel engine, and chemicals from Germany; the atomic breakthrough and work of Marconi in space communications from Italy.

As to inventions bearing on our national defense and atomic energy, no copy of a patent on these vital matters reaches any foreign country. In the first place, no patents are granted pertaining to atomic energy. All applications for patents in this field are promptly turned over to the Atomic Energy Commission. The AEC can retain the applications indefinitely and tell the inventor, under penalty of law, to keep his invention secret. A compensation board then weighs the problem of remunerating the inventor. Likewise, applications bearing on the national defense are referred to a board designated by the Department of Defense, which has the same powers.

iiner and applicant take final form. The cant may then either request issuance e patent on such claims as the examiner allowed or, if still dissatisfied with the iiner's decision, asks for a review by a d of Appeals. After an adverse decision iis board, the law permits further appeal ertain U.S. courts.

ist Storehouse of Information. While purpose of the patent system is to "pro- the progress of science and the useful " for the benefit of all mankind, its iod rests upon encouraging inventors to sit their patent applications with full anations of their inventions, thus creat- vast storehouse of technical information. Patent Office has thus become the world's anding scientific and mechanical library. re are available to the public copies of atents granted by the United States, as as those of all leading foreign countries. Patent Office also includes hundreds of sands of technical books and periodicals. pies of all United States patents are ped under one or another of 340 main ings, such as aeronautics, games, furni- ordnance, etc. Subject matter of 39 of e classes was unknown at the time the em was inaugurated. The first classes olished included nailing and stapling, ap- l, artificial body members, baths and ts, beds, bee culture, and tools, in that r. Electrical classes appearing midway ie list include class 178, telegraphy; 179, hony; and 250 radiant energy (viz. radio). tents in these main headings or classes broken down into 80,000 sub-groups! The iine elements class, for example, is en down into over 900 sub-groups! The of games is divided into 199 sub-groups golfers will be surprised to learn that nts on golf balls alone are divided into ategories. Here the public may read and notes on patents in any field they choose. ie Patent Office goes the ordinary library better in that it maintains in print copies iost of its patents and will sell these es at 25¢ each, postpaid. Photocopies of foreign patent, periodical, or text, or any ion thereof, are furnished at 30¢ per page.

vo Sets of Patents, classified as above are itained. One is kept in the examiners' is, which is split up into divisions cor- onding to their specialized fields. The r remains in the public search room of Patent Office. This room is open on work from 8:30 a.m. to 10 p.m. and half days Saturdays. Attendants present will help public find the pertinent fields of search. ere a person may review in sequence all patents issued in any field of interest to This sequence is fascinating to those wish to trace modern inventions back ieir earliest and simplest forms.

see, was little more than a toy. In the earliest vacuum cleaner, the suction was created by bellows operated by links connected to the wheels carrying the apparatus, the dirt and lint being caught in a pan of water. The earliest electric razor was much like a midget lawn mower. Sometimes it is difficult to discern the kinship between the early, crude forebears and the slick looking developments of today.

Nearly every day some inventor, after working months on an invention, comes to the Patent Office search room and finds that his idea was patented years ago. Much time

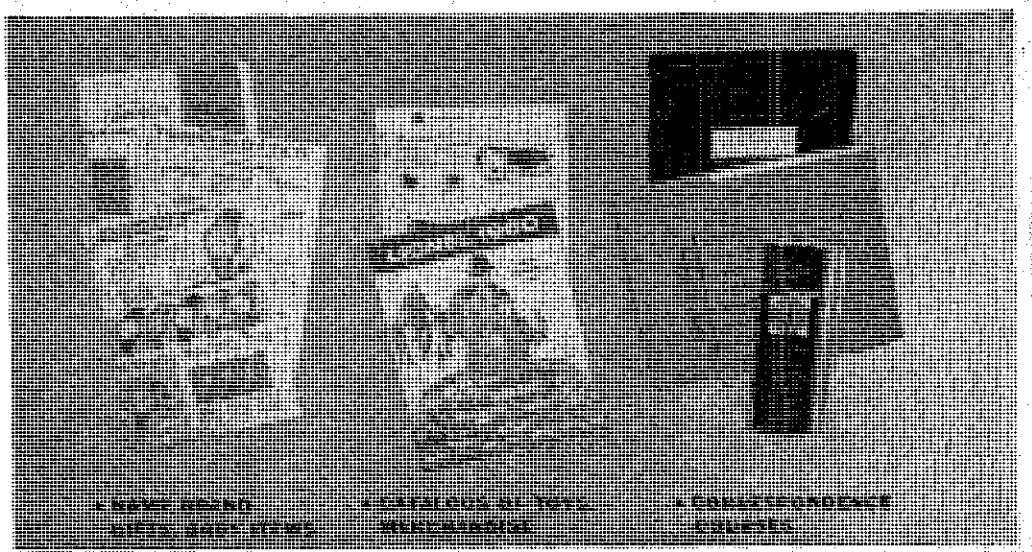


and money would be saved by making a preliminary search at the Patent Office at the outset of developing an invention. Large corporations, aware of this, purchase copies of interesting patents each week when issued and use them as background in their research. They also note those patents that expire from week to week and the teachings which become open to free use by the public. In the main, however, our smaller companies do not avail of the facilities of the Patent Office and the advances taught in patents.

Growth Since 1790. It is interesting to observe how the United States has progressed under this distinctly American patent system. When George Washington signed the first patent act in 1790 this country had only pots, pans, candles, muskets, and such tools and devices as could be produced by the coppersmith or blacksmith. Only three patents were granted during the first year.

In 1794, Eli Whitney, a teacher two years out of Yale, invented the cotton gin. In 1834, Cyrus McCormick, from the valley of Virginia, patented his reaper. In 1840, came the telegraph; four years later Charles Goodyear, a physician, patented his process for vulcanizing rubber, and two years thereafter Elias Howe of Massachusetts brought forth the sewing machine. America was on its way.

Your Own Catalogs of Top Mail Order Items!



A. J. Statile Co. will prepare your catalogs, write your sales letters, supply mailing lists and even ship merchandise for you, using your own shipping labels!

),000 a year! But frankly, this is the excep-
n rather than the rule. Most mail order
erators are content to earn a comfortable
ing doing little physical work, but enjoying
eir work thoroughly! We don't say you'll be
mail order millionaire or another Sears &
ebuck, but if you're looking for a business
your own with financial security, the an-
er is mail order. If you've already tried mail
der with little or no success, don't give up!
y to analyze what went wrong. Success
mes only to those who keep trying and learn
m their own mistakes. Again we empha-
e, deal only with a reputable firm.
The A. J. Statile Co. has been in business
over twelve years.

They gladly furnish bank or trade references upon request. They are probably one of the largest mail order wholesalers in the country. Whether it be toys, gifts, vitamins or appliances—they've got it ready to ship under your label WITHIN 24 HOURS!

Firmly convinced that no other business offers the tremendous opportunities of mail order, A. J. Statile, president of the firm, is an outspoken advocate of the man or woman who wants to start in business for himself. As Statile puts it, "by all means, start your own business and start NOW! If you want a chance at security and financial independence make your choice mail order. There's nothing like it. Absolutely nothing!"

FOR FREE DETAILS

Mail coupon below — no obligation

A. J. Statile Co., Dept. 39, Statile Building, Hillsdale 39, New Jersey

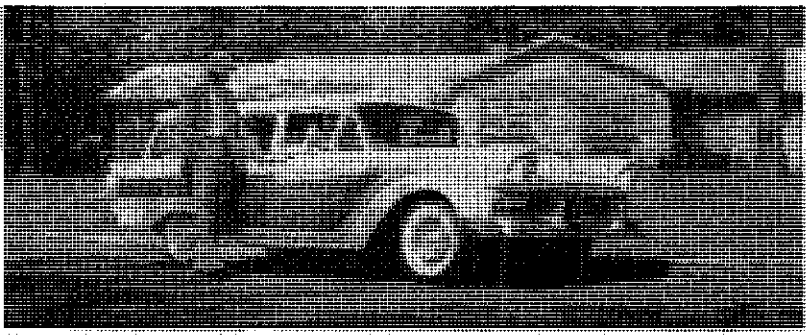
Dear Mr. Statile:
Please send me complete FREE details telling me how I may obtain a franchised mail order dealership with your firm. I understand I am under no obligation and no salesman will call on me.

NAME..... AGE..... SEX.....

ADDRESS .....

CITY..... ZONE..... STATE.....

PREVIOUS EXPERIENCE, IF ANY.....



After a short time in mail order, Sambati soon had a beautiful home with all the luxuries of a successfulbusinessman.

He figured that a small mail order business ight provide a temporary income to support s family until he got back on his feet. His 'st step was to obtain a franchise from a rge wholesale mail order firm which sup- ied him with all the necessary catalogs and ailing literature. It wasn't long until his are-time venture blossomed into a booming nterprise. Drawing a small salary and pour- g the rest of the profits back into the busi- ess, he soon had others working for him! oday he owns a large retail store, his own arehouse and a beautiful home with all the xuries of a successful businessman.

Sambati's story is typical of a number of en and women who began a small mail order usiness with absolutely no previous experi- ice, and made a huge success of it. These ttle' people are quietly pocketing big profits very day—many content to keep the business nall . . . spending an hour or two each day the privacy of their own home. No bosses, ne clocks or small pay envelopes. No door to or selling, in fact, you never even meet your stomers face to face.

Yes, a small one-man mail order business is eal for anyone wanting a chance to gain nancial security and independence. Yet ousands try mail order each year and fail, mply because they don't learn the few simple crets of success early in the game.

Take the case of Bud Sheer who had been orking for a theatre in a small New Jersey wn. With only a few hours spare-time to end each morning, he tried mail order to pplement his regular income. Like many ginners in this field, Sheer was faced with e problem of finding good mail order items hich would have a high mark-up and repeat les potential. But the biggest obstacle was e expense of printing a catalog.

Then he heard about the A. J. Statile Co. of llsdale, New Jersey—an organization set up aid the small mail order beginner.

He wrote to A. J. Statile Co. for full infor- ation, sent in his application for a franchise d within a short time the cash began rolling . Today Bud Sheer *owns* the theatre he once orked for. Sheer attributes his success in ail order to the A. J. Statile Co. Actually, the eatre he owns has become a side investment. He still uses the beautiful 300 page mail order catalogs supplied by A. J. Statile Co.

How does the Statile Co. help the beginner get a sound start in mail order? Very simply. Just as Henry Ford made automobiles within the reach of the general public—by mass production and large volume.

Let's take a few specific examples:

(1) All franchised dealers of A. J. Statile are offered ready to mail catalogs and sales literature. Each mailing piece has the dealer's name and address printed right on it. By printing millions of catalogs, Statile is able to offer these at a fraction of their regular cost. The artwork and layout costs for these catalogs would run into thousands of dollars for the beginner if he were starting from 'scratch'.

(2) Since all mailing material and catalogs contain your name and address, all orders come directly to you. Yet you don't have to invest one penny in inventory. All merchandise is stocked for you. In fact Statile has over $3 million dollars worth of mail order merchandise at your disposal.

(3) All packaging and shipping is done for you. You simply send a shipping label to Statile together with the wholesale cost of the items, and the merchandise is shipped directly to your customers under your own shipping label.

(4) A consultation service is provided to answer any questions you may have. You receive a secret list of over 100 national magazines which run free ads. You'll be shown how to obtain free publicity on your own mail order items. In addition, you obtain trade names and addresses of over 150 other mail order wholesalers who drop-ship top mail order items for you. You'll also be given all the government laws and regulations pertaining to a home operated mail order business. These laws are a 'must' for all beginners.

All this valuable information is covered in the Statile Mail Order Survey which every new franchised dealer receives from Statile before they begin. Formerly sold for $25.00, this survey has become the 'bible' of the trade. Mr. J. M. of Baltimore, Md., writes: "To tell the truth, all the information in regard to obtaining free ads is alone worth the $25.00 I paid you . . ." J. D. of Kalamazoo, Mich.,

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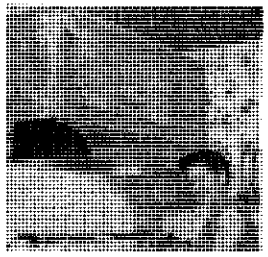

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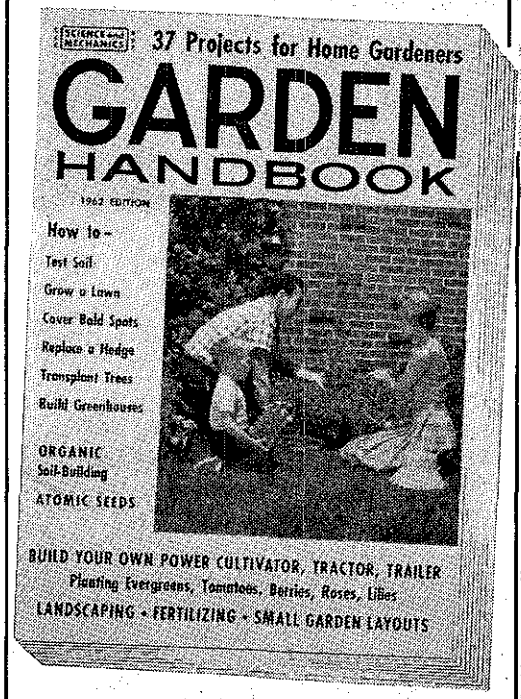

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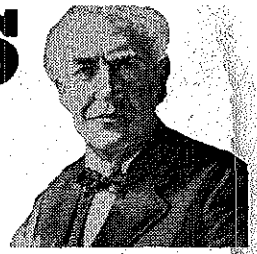

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