nary workman, machinist, chemist, electrician, metallurgist, foundryman, technician and superintendent—i.e., all persons not specifically hired to engage in research and development work, the law appears to be clear that, in the absence of an agreement to that effect, a duty to assign inventions made in the course of employment will not be implied. At most, where the employee, during his hours of employment and working with his employer's materials and machines, conceives and perfects an invention for which he obtains a patent, he would be required to accord his employer a non-exclusive shop-right to practice the invention. The existence of a shop-right, however, may be negatived by the facts; but in the case of employees connected directly with production, i.e., ordinary workmen, machinists, chemists, electricians, metallurgists, foundrymen, engineers, technicians, and superintendents, the evidence pointing toward a shop-right might be clearer and stronger from the character of the employment and the duties involved. However, with respect to title, no duty to assign would be inferred in the absence of a clear agreement to that effect.

With respect to employees specifically hired to engage in research and development, the facts and circumstances in each case, in the absence of a clear agreement, will govern, but it may be said, in general, that where one is employed to develop a particular process or machine for manufacturing a specified product, title to the resulting invention will be held to be the property of the employer. In this connection, it is to be noted that an express agreement by an inventor to assign future inventions and patents to his employer will be enforced, provided the agreement is expressed in clear and unequivocal terms and is not of such a nature as to be contrary to public policy because it is either, in effect, in restraint of trade or "a mortgage on the whole future output of a man's brain." And even in a case where an agreement seemingly covers future inventions and patents in gross, but the object of the agreement is to safeguard a particular business, or where the inventor is connected in business with the party to whom the assignment is to run, or is interested in the profits arising from the business

in which the invention issued, such an agreement will be upheld.

Various questions arise from time to time between employer and employee affecting the rights in and title to inventions conceived in the course of employment. Such questions usually arise where the employment is general and makes no reference to the subject of inventions at all, or where there is a hiring to do research and development work and dispute arises as to whether title to a particular invention developed is in the employee or employer. At the outset, it should be noted that courts are reluctant to divest an inventor of title to his invention and will not imply a duty to assign to his employer, in the absence of express agreement to that effect, where the contract of employment is either silent on the subject or there is lacking that clarity and definiteness of intention which the courts insist upon before implying a duty to assign. As was stated by the United States Supreme Court in the case of *United States v Dubilier Condenser Corp.:* [10]

> The reluctance of courts to imply or infer an agreement by the employee to assign his patent is due to a recognition of the peculiar nature of the act of invention, which consists neither in finding out the laws of nature, nor in fruitful research as to the operation of natural laws, but in discovering how those laws may be utilized or applied for some beneficial purpose, by a process, a device or a machine. It is the result of an inventive act, the birth of an idea and its reduction to practice; the product of original thought; a concept demonstrated to be true by practical application or embodiment in tangible form. . . . Though the mental concept is embodied or realized in a mechanism or a physical or chemical aggregate, the embodiment is not the invention and is not the subject of a patent. This distinction between the idea and its application in practice is the basis of the rule that employment merely to design or to construct or to devise methods of manufacture is not the same as employment to invent. Recognition of the nature of the act of invention also defines the limits of the so-

10. United States v Dubilier Condenser Corp., 289 US 178, 77 L Ed 1114, 53 S Ct 554, 17 USPQ 154, 85 ALR 1488 (1933). Note also, Bandag, Inc. v Morenings, 259 Iowa 998, 146 NW2d 916, 152 USPQ 353 (1966).

called shop-right, which shortly stated, is that where a servant, during his hours of employment, working with his master's materials and appliances, conceives and perfects an invention for which he obtains a patent, he must accord his master a non-exclusive right to practice the invention. McClurg v Kingsland, 1 How 202; Solomons v United States, 137 US 342; Lane & Bodley Co. v Locke, 150 US 193. This is an application of equitable principles. Since the servant uses his master's time, facilities and materials to attain a concrete result, the latter is in equity entitled to use that which embodies his own property and to duplicate it as often as he may find occasion to employ similar appliances in his business. But the employer in such a case has no equity to demand a conveyance of the invention, which is the original conception of the employee alone, in which the employer had no part. This remains the property of him who conceived it, together with the right conferred by the patent, to exclude all others than the employer from the accruing benefits.[11]

On the other hand, where there is an oral or written agreement governing the situation, it is well settled that an express agreement by an inventor to assign to his employer his inventions and patents is valid and will be specifically enforced by the courts. The qualification to which this general statement is subject is that the agreement to assign must be expressed in clear and unequivocal terms and further that it must not be of such nature as to be contrary to public policy because it is either, in effect, in restraint of trade, or "a mortgage on the whole future output of a man's brain."[12]

The problems discussed in this section concern the rights of an employer in inventions made by its employees in the course of their employment, the employees being classified in the following broad classes:

[I]. Officers, directors, superintendents, general and miscellaneous employees.

[II]. Employees connected directly with production, as ordinary workmen, machinists, chemists, electricians, metallurgists, foundrymen, engineers, technicians, and superintendents, etc.

[III]. Employees specifically hired to engage in research and

11. 289 US at 188-189, 17 USPQ at 158.

12. Aspinwall Mfg. Co. v Gill, 32 F 697 (1887, CC NJ).

development work or to discover and develop a specific invention.

In considering the problems, there must be borne in mind the distinction between actual title to the invention in question and the acquisition by the employer of a mere shop-right or nonexclusive license to practice the invention without paying therefor.

As to the first class of employees under consideration, the mere existence of the employer-employee relationship would confer no title on the employer to inventions made in the course of employment. At the most the employer might acquire a shop-right or nonexclusive license to practice the invention, if the evidence showed that the invention was made during the employer's time with the use of his materials and facilities and that the employee acquiesced in or is estopped to deny such shop-right. However, the existence of even a shop-right may be negatived by the particular facts.

As to the second class of employees, much the same considerations apply as already indicated in connection with the first class. In the second class, the evidence pointing towards a shop-right might be clearer and stronger, from the character of the employment and the duties involved; but again, with respect to title, no duty to assign title would be inferred in the absence of a clear agreement to this effect.

With respect to the third class of employees, the difficulty would arise not so much in connection with the shop-right, but in connection with title to the invention and the duty of the employee to assign to the employer. As stated in a leading case,[13] the "obligation of an employee to assign to an employer

13. Pressed Steel Car Co. v Hansen, 128 F 444, (1904, CC Pa). See also, Mosser Industries, Inc. v Hager, 200 USPQ 608 (1978, Pa CP) ("In an equitable action to compel the assignment of an invention of an employee to the employer, the employer must show by clear and convincing proof that; (1) the invention was conceived by the employee while in the employ of the employer; . . . (2) the assignment was governed by a valid, binding, and enforceable contract, unambiguous in its terms so as to warrant specific performance; . . . and (3) all conditions and covenants

an invention made in the course of his employment does not arise from the existence of the relation of employee and employer alone, but there must be in addition a contract to assign." Whether a research and development employee, in the absence of an express agreement to assign, would be required by the courts to assign, would depend in every instance upon the particular task to which he was assigned and the specific facts and circumstances involved.

In view of these general observations, certain decisions will now be discussed to indicate when, if at all, an agreement to assign will be implied; the type of employment agreement which will be enforced and the extent of the right conferred by such agreements; and, in the absence of an express agreement governing inventions, when a shop-right will be implied.

It may be noted that the principles governing title to inventions as between employer and employee are generally not affected by the nature of the employment, i.e., whether the inventor be an ordinary workman, machinist, electrician, metallurgist, foundryman, engineer, technician, or superintendent, or stockholder, director, officer or other operating head. The exception seems to arise only where, as in the case of an official of a corporation, a fiduciary or trust relationship may be implied so that, under such circumstance, title which ordinarily would remain in the employee, is held to be in the employer because of such fiduciary or trust relationship. Such a situation was involved in the case of *Dowse v Federal Rubber Co.*,[14] which suit involved the validity of and title to a patent issued upon a method of reinforcing rubber tires, made while plaintiff was employed by defendant company. The facts showed that Dowse, president and general manager of the Federal Rubber Co., did not expressly contract as a part of his duties with the corporation to design new tires; but on the other hand the court said:— "The all-important question is Dowse's relation to the tire-manufacturing business. If he was only a hired man,

concerning the assignment were fulfilled.").

14. Dowse v Federal Rubber Co., 254 F 308 (1918, DC Ill).

taking orders as to his work from another officer or employee, the invention belonged to him, leaving only an implied license or shop right to the corporation, and this right was only personal to it, incapable of being assigned. . . ." But, the court continued, even if Dowse did not expressly contract as a part of his duties to design new tires, "if he did so agree in substance, and was more than a mere employee, having the main responsibility to make the business successful, then he should be compelled to assign the patent. . . . *So the real test is whether Dowse occupied such a relation to the corporation that he was its alter ego, in such capacity that it is only consistent with good faith that he should recognize its ownership of the patent issued to him.*" (Author's Italics.) The court further found that Dowse was not a mere employee, under the direction of a superior officer; that during the whole period in question he was president and general manager and one of its directors; that he was practically the corporation, taking orders from no one. His position was that of a "quasi trustee, such as to make it clear that the patent was taken out by him for the corporation. . . . Here the patent involved the very life of the corporation. It was developed by the whole corporate force as something absolutely necessary, under the supervision of the president, who was straining every nerve to make good. . . . Under the circumstances it would be grossly inequitable for plaintiff to retain title. . . ."

In *Diversey Corp. v Mertz,*[15] which was a suit for infringement against defendant, a former vice president and general sales manager of plaintiff, the court found that Mertz was a fiduciary agent of plaintiff and under the facts in the case was held to be a constructive trustee for plaintiff of any patent if he made the invention thereof. In its opinion, the court said:— "In the present case Mertz was Vice President and general manager. He knew plaintiff's needs and wants. He had discussed with his superiors and associates the marketability of a cheap noncorrosive detergent for tin. . . . These facts indicate clearly

15. Diversey Corp. v Mertz, 13 F Supp 410, 415 (1936, DC Ill).

recognition upon his part that the property rights in the invention were those for whom he was fiduciary agent." The same general equitable principle is stated in *Baker Oil Tools, Inc. v Burch,* [16] and *National Wire Bound Box Co. v Healy,* [17] although those cases are not concerned with situations involving employer and employee, but with license agreements. In the case of *Melin v United States,* [18] the court said: "In a situation where it appears that an employer made a substantial investment in an invention conceived by an employee, and that the inventor consented to the employer's use of the invention, the employer has a shop right in the invention. This is so even though the invention was conceived on the employee's own time."

While the facts and circumstances in each particular case will govern the decision, it may be said, in general, that where one is employed to develop a particular process or machinery for manufacturing a specified product, title to the resulting invention will be held to be the property of the employer. Such a situation was involved in *Standard Parts Co. v Peck,* [19] which involved a contract with an employee whereby the employee agreed "to devote his time to the development of a process and machinery for the production of the front spring now used on the product of the Ford Motor Company. First party is to pay second party for such services the sum of $300 per month." While it is to be noted that there was nothing in the contract which stated whose property the "process and machinery" were to be when developed, the court said: "The answer would seem inevitable and resistless—of him who engaged the services and paid for them, they being his inducement and compensation, they being not for temporary use but perpetual use, a provision for a business, a facility in it and an asset of it, therefore,

16. Baker Oil Tools, Inc. v Burch, 71 F2d 31, 21 USPQ 289 (1934, CA10 Okla).

17. National Wire Bound Box Co. v Healy, 189 F 49 (1911, CA7 Ind).

18. Melin v United States, 177 USPQ 580 (1973, Ct Cl).

19. Standard Parts Co. v Peck, 264 US 52, 59-60, 68 L Ed 560, 44 S Ct 239, 32 ALR 1033 (1924).

contributing to it whether retained or sold." *Dinwiddie v St. Louis & O'Fallon Coal Co.,*[20] involved a suit by the company against Dinwiddie, Cuno, Bashioum et al., to determine its rights to certain patents. Decree vested the plaintiff with full and equitable title to the patents involved. The plaintiff had entered into an agreement with certain Kerns relating to their processes for the production of various materials and by-products by low-temperature distillation of coal. Defendant Dinwiddie had been employed by the Busch interests, affiliated with plaintiff, in various capacities, and was asked to report upon the feasibility of making the Kerns connection, and it was upon his favorable report that the agreements with the Kerns were entered into. Since the Kerns did not possess the mechanical manipulative knowledge essential in demonstrating practical theories, and upon Dinwiddie's recommendation, he was authorized to associate with him in the work of developing the Kerns' processes the defendant Dr. Charles W. Cuno, an engineer of the Industrial Bureau of St. Louis and Dr. Harrison Bashioum, a chemical engineer and head of the Chemical Engineering Department of the University of Pittsburgh. Various experiments were carried on and certain discoveries were made, and patents applied for in the name of Dinwiddie, Cuno, and Bashioum; the expenses thereof were paid by plaintiff and the application prepared by plaintiff's attorney. Thereafter, the defendants organized a corporation of their own and assigned their rights under the patents to this corporation. The court decided that, from the evidence, the conduct of the defendants was such that they only conceived the idea of making their claim to the patents after they became convinced that the discoveries would be of great commercial value. In concluding the court said: "The relationship existing between the three defendants and the plaintiff was one that demanded of the defendants the utmost good faith with respect to the work for which they were employed and they could acquire no rights to the patents in question."

20. Dinwiddie v St. Louis & O'Fallon Coal Co., 64 F2d 303 (1933, CA4 Md).

Tennessee Copper & Chemical Corp. v Martin,[1] involved a suit to compel assignment of title to certain inventions. The defendant, a consulting engineer, was employed by plaintiff to make researches and experiments and to devise a new method of separation of phosphate rock; his compensation was at a fixed per diem rate; and if the research resulted in a patentable process, the agreement made arrangement for a total compensation of not less than $5,000 and not more than $10,000:

> The defendant, having entered into an agreement with the plaintiff under which the defendant conducted research work and created inventions, and the agreement providing that the result of the work was to belong to the employer, the plaintiff is entitled to have the two original applications for patents, filed as aforesaid, assigned to it. . . . The defendant engaged for the specific purpose of making research and investigation to develop a phosphate rock separating process, as an employee of the plaintiff, if without a specific agreement as to the plaintiff being entitled to the result of the employment, his inventions would nevertheless vest in the plaintiff, who, under these circumstances, is entitled to have an assignment of the inventions evolved during such employment.[2]

The right of an employer to the invention of his employee springs from the contract of employment.[3] The employer and the employee may contract as they wish.[4]

A parol agreement to assign the right to obtain a patent for an invention is valid, and, when established by sufficient proof, may be specifically enforced by a court of equity.[5]

1. Tennessee Copper & Chemical Corp. v Martin, 4 F Supp 38, 14 USPQ 152 (1932, DC NJ).

2. 4 F Supp at 43.

3. Amoco Production Co. v Lindley, 609 P 2d 733, 208 USPQ 513 (1980, Okla).

4. Keller v Clark Equipment Co., 210 USPQ 742 (1981, DC ND) ("As a general rule the law does not regard the ordinary contract of employment as including a right on the part of the employer to the products of the inventive genius of the employee. Rather, it depends upon the terms of the particular contract of employment.").

5. Pressed Steel Car Co. v Hansen, 128 F 444 (1904, CC Pa); Dalzell v Dueber Watch Case Mfg. Co., 149 US 315, 37 L Ed 749, 13 S Ct 886 (1893).

In general, an agreement to assign future inventions upon a particular machine or device, will be specifically enforced, provided the agreement is not in restraint of trade and not "a mortgage on the whole future output of a man's brain". And even in a case where the agreement seemingly covers future inventions, applications and patents in gross, but the object of the agreement is to safeguard a particular business, or where the inventor is connected in business with the party to whom the assignment is to run, or is interested in the profits arising from the business in which the invention issued, such an agreement will be upheld.

In order to illustrate the foregoing general statement, several specific sets of facts will be discussed to indicate the attitude of the courts. Examples of agreements which have been sustained will now be considered.

A. O. Smith Corp. v Petroleum Iron Works Co.,[6] was an action for damages for the appropriation of secret processes obtained from plaintiff's former employee. Contention was made that the contract of employment, under which the employee agreed not to divulge any information received by him during his confidential relationship to the plaintiff, was invalid because, being one of many similar contracts made by the plaintiff with its engineers, it was unlawful as in restraint of trade. The court said "It is only necessary to say that contracts of this character have frequently been enforced."

Suit to compel specific performance of an agreement to assign "any future formulas, inventions, or improvements upon, any formula or invention, whether patentable or otherwise, in, upon, or pertaining to dispersing agents, or in means for obtaining colloidal substances" was involved in *U. S. Colloid Mill Corp. v Myers.*[7] The plaintiff was held entitled to the assignment of applications dealing with chemical inventions, despite the fact that in one application, defendant had incorpo-

6. A. O. Smith Corp. v Petroleum Iron Works Co., 73 F2d 531, 24 USPQ 183 (1934, CA6 Ohio).

7. U. S. Colloid Mill Corp. v Myers, 6 F Supp 283, 290, 21 USPQ 441 (1934, DC NY).

rated certain mechanical elements, the court holding that it did not have the duty of separating the chemical from the mechanical features. The court said: "There is no effective way of assuring to the plaintiff the enjoyment of what indisputably is its property, in his own right, unless what has been inextricably commingled with it also goes to the plaintiff." As to certain purely mechanical patents, the court held that the word "means" used in the phrase in the contract reading "in, upon, or pertaining to dispersing agents, or in means for obtaining colloidal substances" did not cover such purely mechanical inventions. In deciding this case the court said: "When a plaintiff elects to pursue the remedy of specific performance, not alone does he take over the burden of establishing his cause of action by clear and satisfactory evidence, but also lays down the rule that in the interpretation of the contract itself it must be clear to a man of common understanding that it was the purpose of the contract to include the particular thing which the plaintiff seeks to have the court award to him."

Assignment of certain patents together with the phrase "with all the improvements I may hereafter make, without further cost" was construed by the court in *Aspinwall Mfg. Co. v Gill.* [8]

> A naked assignment or agreement to assign, in gross, a man's future labors as an author or inventor,—in other words, a mortgage on a man's brain, to bind all its future products,—does not address itself favorably to our consideration. . . . But where a man purchases a particular machine, secured by a patent, and open to an indefinite line of improvements, it is often of great consequence to him that he should have the benefit of any future improvements that may be made to it. Without that, the whole value of the thing may be taken away from him the next day. . . . And hence it has become the practice in many cases, to stipulate for all future improvements that may be made by the same inventor upon any particular machine which he induces a party to purchase from him, sometimes by way of license to use such improvements, and sometimes by way of purchase and ownership thereof. Where the inventor is connected in business

8. Aspinwall Mfg. Co. v Gill, 32 F 697 (1887, CC NJ).

> with the party making such stipulation, or is interested in the profits arising from the business in which the invention is used, the arrangement seems to be altogether unobjectionable. But such a connection or interest does not seem to be necessary to the validity of such bargains. If based upon a valuable consideration, they are sustained as collateral or incidental stipulations connected with the conveyances of a principal subject.[9]

The courts hold that the public policy is to encourage invention rather than to hinder it, and where a contract of employment obligated an individual to assign all inventions which he may at any time hereafter make or conceive, either solely or jointly with others, and not confined to the subject matter to which the employee was to direct his attention while employed, but extended to any business in which a company might be concerned, such a provision is held against public policy and will not be enforced. Such a provision was involved in the case of *Guth v Minnesota Mining & Mfg. Co.*,[10] which was an action to compel the execution of an application for a patent. Guth was a chemical engineer, more or less successful in research work, and, as stated by the court, prepared to devote his life to discoveries of value to industry. He was employed as a chemical engineer in the plaintiff's research laboratory. His assignment was to solve the problem presented by the laminating or tearing of paper tape when being unwound from a roll. The contract of employment obligated him to assign: "All inventions which I may at any time hereafter make or conceive, either solely or jointly with others, relating to abrasive, adhesive or related materials, or to any business in which said company during the period of my employment by said company or by its predecessor or successor in business, is or may be concerned." The court found that under the contract Guth was bound to assign all discoveries by him made wherever employed, and that the effect of the contract would be virtually to close the doors of other employment to him. Since the agreement was not limited in point of time and was not

9. 32 F at 700-701.

10. Guth v Minnesota Mining & Mfg. Co., 72 F2d 385 (1934, CA7 Wis).

confined to the subject matter to which he was to direct his attention while employed, the court refused to uphold the agreement as against public policy.

As noted hereinbefore, so reluctant are the courts to divest an inventor of title to the invention that in order to sustain a decree of specific performance, the contract governing the agreement to assign must be not only clear and unambiguous, but the evidence in relation to acts alleged to have been done under it and necessary to give it effect, should be clear and convincing.

In *Monsanto Chemical Works v Jaeger,*[11] suit was brought for specific performance of two written contracts, one relating to sulphuric acid and the other to phthalic anhydride. The plaintiff owned and operated two manufacturing plants, at one of which sulphuric acid was manufactured and phthalic anhydride at the other. Defendants were experienced chemists and inventors and discoverers of certain processes and contact masses for the manufacture of sulphuric acid and phthalic anhydride. Agreements were entered into covering the purchase by the company of the exclusive rights to use the processes and contact masses and all the United States and foreign patents, when and as issued. Each agreement consisted of two parts, designated respectively as an "option agreement" and a "purchase agreement". In the option agreements, the company was given the right to investigate the processes and contact masses to determine whether they were satisfactory. For this purpose the chemists agreed, in the sulphuric acid contract, to start immediately the preparation of their contact masses in the laboratories of the company and diligently proceed with the work until a sufficient amount of the contact mass or masses had been prepared for the company's semi-commercial test. During the time for preparation of such contact mass or masses, the company agreed to pay the chemists a fixed salary per month and designated expenses. This salary, if the company exercised its option of purchase, was to be deducted from any

11. Monsanto Chemical Works v Jaeger, 31 F2d 188 (1929, DC Pa).

royalty payments due under the purchase agreement. The company agreed to furnish the chemists a laboratory for preparation of the contact masses and testing the same and to supply, at its own expense, such small equipment and supply of chemicals as were reasonably required. A period of four months was given for the delivery of the contact mass to the company for its semi-commercial test. At the time of such delivery, the chemists were to furnish the company full data for calculating the cost of manufacture on a commercial scale, etc. Very generally stated, the chemists proceeded under the sulphuric acid contract, and the company exercised its option; but the phthalic anhydride contact was not carried into effect, and the company gave no notice of its intention to accept the option of the purchase. Each party attributed to the other the failure to consummate the agreement. In the suit, the principal dispute arose over what the chemists undertook to sell and the company to buy under the contract. Plaintiff claimed that the contract covered all masses and processes then invented and discovered, including those resulting from the research work which the chemists had carried out and reported at the plaintiff's laboratory in anticipation of the acceptance of the option. The defendants claimed that the contract granted rights only to those inventions which existed when the contract was made, contained no covenants as to future inventions, covered only inventions and not ideas unreduced to practice, and further covered only inventions "concerning contact masses for sulphuric acid" and "processes for manufacturing such contact masses". In solving the controversy, the court enunciated certain well-established principles:

> Where specific performance is sought, vague or indefinite terms cannot be supplanted by clear and definite ones through forced or strained construction. Equity will lend its aid only in enforcing those terms which the parties themselves have made clear and definite. . . . Where specific performance is sought of a contract, the burden of establishing the precise terms and certainty of the contract rests on him who seeks performance. . . . The word 'inventions' does not include mere conceptions of the inventor, ideas unreduced to practice. This is conspicuously true

> when used in connection with patents and patent applications therefor. "A conception of the mind is not an invention until represented in some physical form, and unsuccessful experiments or projects, abandoned by the inventor, are equally destitute of that character. These propositions have been so often reiterated as to be elementary." . . . *Presumptively a contract for the sale of inventions grants rights only to those inventions which existed when the contract was made. If the parties intend to contract for future inventions, language plainly expressive of such purpose must appear.* There is no principle of law which holds that one who has sold an article impliedly agrees thereby that he will not compete with the purchaser in the sale of the same or similar articles, or will not produce or sell anything that may serve as a substitute therefor. . . . A naked assignment or agreement to assign, in gross, a man's future labors as an author or inventor—in other words, a mortgage on a man's brain, to bind all his future products—does not address itself favorably to our consideration. (Justice Bradley in Aspinwall v. Gill (C.C.) 32 F. 697.) "The law does not look with special favor on such covenants." (Author's Italics.)[12]

Examining the contracts under consideration in the light of the foregoing principles, the court found that the recitals indicated that the parties were speaking of present inventions. When attention was directed to the clause in the contract reading:

> The chemists will, at the request of the company, carry out any additional research work which the parties agree is necessary to allow the filing of their patent applications to properly protect their mutual interests, and it is agreed that the cost of such research work shall be paid by the company.", the court stated that nowhere in the agreement was there a covenant to file patent applications on future inventions; that such intention, had it existed, could have been expressed; and that "the authorities establish that, where such is the purpose of the parties, the intention must appear in clear and explicit language.

The use of language, such as "inventions they have made or may hereafter make", would have removed the question entirely from the realm of argument. No evidence appeared of any agreement between the parties that any further research

12. 31 F2d at 191.

work was necessary or of any request of the company to carry out any such additional work. The express purpose of the additional research work, the court found, was "to allow the filing of their patent applications" and "to properly protect their mutual interests." The court stated that the mutual interests could not be broader or more comprehensive than the mutual obligations under the contracts in question, and concluded:

> In view of the repeated expressions of the courts that covenants tending toward a restraint on the future work or inventive genius of man are not looked upon with favor, that when such purpose exists it is easy to express such intention, and that when specific performance of a contract is sought, it must rest on precise terms and certainty of contract, I am wholly unable to construe the covenant in question as imposing an obligation on the chemists to assign their future inventions, or as a guaranty to the company against future competition by the use of some catalyst unthought of when the contract was signed. It surely would be impossible to base specific performance on a contract so vague and indefinite.[13]

It is to be noted that certain inventions were made by the chemists while they were upon the plaintiff's premises, and with the laboratory facilities, materials, funds, and property of the plaintiff. While the court conceded that the plaintiff could claim no proprietary interest in the inventions, in the absence of express agreement to that effect, it did give plaintiff a shop right to use what was actually built on its premises, and a shop right to use certain processes which were developed on its premises, and at least partially at its expense and which the chemists allowed the company to use.

Dalzell v Dueber Watch Case Mfg. Co.,[14] involved a suit for specific performance of an oral agreement, alleged to have been made by one Dalzell while in the company's employ, to assign to the company the right to obtain patents for his inventions in tools for making parts of watch cases. The court stated that upon the question as to whether the contract in question was

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13. 31 F2d at 193.

14. Dalzell v Dueber Watch Case Mfg. Co., 149 US 315, 37 L Ed 749, 13 S Ct 886 (1893).

made, the testimony of the employee and of the president and principal stockholder of the company was in irreconcilable conflict. Dalzell was a skilled workman in the manufacture of various parts of watch cases and was first employed by the company as an electroplater and gilder and then in its tool factory at a weekly wage. The company relied principally on conversations between the employee and the president of the company at the time of raising Dalzell's wages. The conversations were along the line that if Dalzell's wages were raised, the improvements he would make thereafter would justify the increase; but the court said: "This testimony tends to show no more than that Dalzell expressed a confident belief that, if his wages should be raised, the improvements which he would make during the coming year would justify the increase. It has no tendency to prove any such promise or contract as alleged in the bill, or any other promise or contract on Dalzell's part." After stating that a manufacturing corporation, which has employed a skilled workman, for a stated compensation, to take charge of its works, and to devote his time and services to devising and making improvements in articles there manufactured, is not entitled to a conveyance of patents obtained for inventions made by him while so employed, in the absence of express agreement to that effect, the court said:

> Bearing in mind that there was no proof whatever of any previous agreement between the parties on the subject, the contract as alleged in the bill and testified to by Dueber, by which Dalzell is said to have voluntarily offered, with no other motive than to prevent workmen from injuring the Dueber Company by communicating the inventions to rival companies, and for no other consideration than the payment by the Dueber Company of the expenses of obtaining patents, and without himself receiving any consideration, benefit or reward, and without the company's even binding itself, for any fixed time, to pay him the increased wages, or to keep him in its service, is of itself highly improbable; and it may well be doubted whether, if such a contract were satisfactorily proved to have been made, a court of equity would not consider it too unconscionable a one between

> employer and employed to be specifically enforced in favor of the former against the latter.[15]

Under the circumstances the court refused to find that the alleged contract had been so clearly and satisfactorily proved as to justify a decree for specific performance. It is to be noted that the court stated that whether the company, by virtue of the relations and transactions between the parties, had an implied license to use the patents in question, was not presented by the record in the case, but could be raised in further proceedings.



Texas Co. v Gulf Refining Co.,[16] involved a suit for infringement of U. S. Patent No. 1,424,574, for a process for converting, by the use of aluminum chloride, high-boiling petroleum oils into low-boiling products, including gasoline, which had issued to the defendant as the assignee of one McAfee. Plaintiff claimed beneficial ownership of the patent in suit on the ground that, at the time of the making of the invention, McAfee was its employee, under a contract express or implied, by which plaintiff was entitled to the results of his work including any invention made by him during his employment; and in the alternative, if there was no such express or implied agreement, then by reason of the nature and character of McAfee's employment, he held in trust for plaintiff any invention he made while engaged in such employment, affecting the problem of producing gasoline from petroleum.

The facts showed that McAfee became an employee of plaintiff soon after he obtained a degree of Doctor of Philosophy in chemistry from Columbia University. For some time, he was engaged in routine testing of petroleum and greases at Bayonne, N. J. He was later transferred to plaintiff's laboratory in Texas, where his superior was one Gray, and pursuant to Gray's orders, McAfee engaged in experimental work. Thereafter, Gray made application for a patent for a process for making gasoline by the use of aluminum cloride, and upon

15. 149 US at 323.

16. Texas Co. v Gulf Refining Co., 26 F2d 394 (1928, CA5 Tex).

learning of this, McAfee protested to Gray because his, McAfee's, name was not included in the application. McAfee also complained to the vice president and manager of plaintiff's refining department. But McAfee obtained no recognition by his employer of his claim, and thereafter resigned and became an employee of the Gulf Co., assigning to it his rights in the invention and making application for patent thereon. The Patent Office declared an interference between the patents first issued to Gray and McAfee's application. After a long drawn out contest, McAfee was declared the inventor, and the patent issued to him. Throughout the contest, plaintiff urged that Gray was the inventor of the process, and not McAfee. At no time, did plaintiff urge that if McAfee was the inventor, plaintiff was the equitable owner of the invention because of McAfee's relation to it at the time of the invention. In a letter written to defendant by plaintiff's president before the contest was terminated, he had stated: "I am not unmindful of the fact that, even if both of the pending cases are decided adversely to the Texas Company, it will, nevertheless, retain a shop right or non-exclusive license under the McAfee patents, inasmuch as McAfee's work was done while he was in the Texas Company's employ." In the present case, as so often happens in suits of this nature, there was the usual conflicting evidence as to the nature of McAfee's duties with plaintiff. In its opinion, the court said:

> The claim asserted by appellant was that in equity it was the owner of the invention or discovery in question, because of the inventor's relation to it as its employee at the time the patented process was discovered. If, in making that invention or discovery, McAfee did what he was employed and paid by appellant to do, appellant was the beneficial owner of the invention or discovery. Standard Parts Co. v Peck, 264 US 52, 44 S Ct 239, 68 L ed 560, 32 ALR 1033. But the mere fact that McAfee was an employee at the time he discovered the patented process did not make his employer the owner of that process. An independent invention, made by one while acting as another's employee, not due to any suggestion made by the employer, belongs to the inventor, though the employer may be entitled to a shop right or license to

> use the invention because of the inventor making use of his employer's tools or facilities in perfecting the invention and putting it into practice.[17]

In denying to the plaintiff the beneficial ownership of the invention in suit, the court took the position that plaintiff's stand throughout the interference contest was inconsistent with any recognition of McAfee as the inventor; that its conduct amounted to a representation that its claim to ownership of the invention was based on the claim that Gray was the inventor and not McAfee. The court held also that plaintiff's delay—a period of some nine years—in asserting its claim against the defendant, also estopped it from now successfully asserting such claim.

As further illustrative of the strict construction given to contracts to assign inventions, reference is made to the case of *Joliet Mfg. Co. v Dice,*[18] where the contract in question reads:

> Articles of agreement entered into between Joliet Mfg. Co. of Joliet, Ill., and Andrew F. Dice . . . The said A. F. Dice agrees to work for the Company named for a period of five years from the first to the 15th of November next, in such capacity pertaining to the manufacture of shellers and powers and disposing of the same, as the Company may consider for their best interests, as may be assigned by the president of the Company; that he will work for the best interests of the Company in every way that he can, and in whatever way such aid can be given shall belong to the Company—that is, improvements that he may make or cause to be made. For which services the Joliet Mfg. Co. agrees to pay the said A. F. Dice . . .

A few months after Dice entered the employ of plaintiff, he improved a machine on "check rowers" (for planting corn). The court held that Dice was entitled to his patent on the check rowers, stating:

> Where a mechanic, in laboring for an employer in the construction of a machine, invents a valuable improvement, the invention is the property of the inventor and not of the employer . . .

17. 26 F2d at 396-397.

18. Joliet Mfg. Co. v Dice, 105 Ill 649 (1883).

> nothing short of a clear and specific contract to that effect will vest the property of the invention in the employer to the exclusion of the employee . . . . (the) words (in the contract) clearly have reference only to the improvements to be made in 'shellers and powers' and have no reference to "check rowers."

In *White Heat Products Co. v Thomas,*[19] an employment contract agreeing to turn over all inventions relating to "bricks, stone products, earthenware products, and collateral products", the company being engaged in the making of building materials, was held not to include a composition abrasive wheel to be used for grinding iron, steel and other hard metals, invented during the employment but independently.

In *Detroit Testing Laboratory v Robison,*[20] the inventor was employed as an expert chemist and analyst under a written agreement to devote his entire time and attention to the development and supervision of the dairy and food department of the commercial testing laboratory. While so employed, but through outside incentive he developed a coffee-seasoning process. The court held that although the work was done in the testing laboratory, title to the invention was in the employee. In *Sharples v McCornack,* [1] the defendant was employed by plaintiff during two periods of time, between which there was a period when he was not so employed and during which latter period he made certain inventions. During his employment he was under contract to assign inventions to his employer, but the court held the contract of employment could not be expanded to cover inventions made during the time when he was not so employed.

In the *Jamesbury* case[2] the court clearly expressed the "shop right" doctrine saying: "The common law of 'shop right'

19. White Heat Products Co. v Thomas, 266 Pa 551, 109 A 685 (1920).

20. Detroit Testing Laboratory v Robison, 221 Mich 442, 191 NW 218 (1922).

1. Sharples v McCornack, 254 Pa 535, 99 A 153 (1916).

2. Jamesbury Corp. v Worcester Valve Co., 443 F2d 205, 170 USPQ 177 (1971, CA1 Mass).

entitles an employer to rights in an employee's invention to which the employer had made some contribution, such as the use of equipment. The ambiguity of this doctrine and the inability to predict how courts would apply it has led to the use of written contracts to allocate inventive rights. Where those rights are allocated by contract, the common law doctrine is superseded."

A shop-right or implied license in the employer to practice an invention, ordinarily without paying a royalty therefor, arises where an employee, during his hours of employment, working with his employer's materials, machines and facilities, conceives and perfects an invention for which he obtains a patent. In such case, the courts hold that the inventor must accord to his employer a non-exclusive right or license to practice the invention. As was stated in the case of *Neon Signal Devices, Inc. v Alpha-Claude Neon Corp.*,[3] "The doctrine of the shop right is of equitable origin. The principle involved is that where an inventor or owner of an invention acquiesces in the use of the invention by another, particularly where he induces and assists in such use without demand for compensation or other notice of restriction of the right to continue, he will be deemed to have vested the user with an irrevocable, equitable license to use the invention. This situation between the inventor and employer might, of course, arise by mutual agreement, but generally the situation arises where the inventor induces his employer to proceed and not only fails to object to the use, but stands by or assists, while permitting his employer to assume expense and put himself in a position where it would be to his detriment to be compelled to relinquish further use of the invention."

It is not wholly accurate to say that a shop right generally arises where an invention is made in the employer's time, with the employer's materials and on his premises, but rather that a shop right exists "where the circumstances are such as to estop

3. Neon Signal Devices, Inc. v Alpha-Claude Neon Corp., 54 F2d 793 (1931, DC Pa).

a patentee from denying the existence of such a license."[4] In other words, it is not the fact alone that the company's time, materials, machines or facilities were used by the employee, but the circumstance that after the invention was made, the inventor assented to or acquiesced in the use of the invention by the employer. As stated in *Gill v United States:*[5]

> The principle is really an application or outgrowth of the law of estoppel in pais, by which a person looking on and assenting to that which he has power to prevent, is held to be precluded ever afterwards from maintaining an action for damages. . . . The same principle is applied to an inventor who makes his discovery public, looks on and permits others to use it without objection or assertion of a claim for a royalty. In such case he is held to abandon his inchoate right to the exclusive use of his invention, to which a patent would have entitled him, had it been applied for before such use.

The principles stated in *Gill* were again discussed in *Kurt H. Volk, Inc. v Foundation for Christian Living,*[6] wherein District Judge Tenney stated:

> The premises that give rise to an implied license are, in reality, a specific application of the general doctrine of equitable estopped. . . .
>
> As a species of the general principal of estoppel, the doctrine of 'shop right' has evolved in patent cases. It usually arises when an inventor causes an employer to proceed to use an invention, and not only fails to object to the use but stands by while permitting his employer to assume expenses and puts himself in a position where it would be to the employer's detriment to relinquish further use of the invention. [citations omitted] However, a shop right is not restricted alone to the case of an

4. Edison Electric Light Co. v Peninsular Light, Power & Heat Co., 101 F 831 (1900, CA6 Mich). Note also, Keller v Clark Equipment Co., 210 USPQ 742 (1981, DC ND) ("Where an employee makes and reduces to practice an invention on his employer's time, using his employer's tools and the services of other employees, the employer is the recipient of an implied, non-exclusive royalty free license, or 'shop right'.").

5. Gill v United States, 160 US 426, 40 L Ed 480, 16 S Ct 322 (1896).

6. Kurt H. Volk, Inc. v Foundation for Christian Living, 534 F Supp 1059, 213 USPQ 756 (1982, SD NY).

> employer, as the doctrine is only a phase of the broad doctrine of estoppel. In Hillgren, [82 FSupp 546 at 555, 81 USPQ 178 at 185 (SD Cal, 1949)] the court found that the doctrine of shop right arises through permissive use of the invention and is broad enough to include a case of the permissive use by a person other than an employer. Id at 555. This permissive-use concept is also the linchpin of the doctrine of license estoppel.[7]

It would appear that a mere shop right, and not actual title to the invention, may result to the employer even in a case where there is an express contract of employment covering inventions made in the course of the employment. Such a situation arose in the case of *United States v Dubilier Condenser Corp.*[8] This case involved two government employees,[9] who were employed in the radio section of the Electric Division of the Bureau of Standards. The subject of "Airplane Radio" was assigned to the group of which Dunmore, one of the inventors in question, was chief, and Lowell, the other inventor, a member. The subject of "Radio Receiving Sets" was assigned to another group of which neither Lowell nor Dunmore was a member. Both Dunmore and Lowell were considering the problem of applying alternating current to broadcast receiving sets. This problem, the court stated, was not intimately connected with their work in the laboratory, but was entirely independent thereof and voluntarily assumed. While performing their regular tasks, they experimented at the laboratory in devising apparatus for operating a radio receiving set by alternating current with the hum incident thereto eliminated. Before the completion of this invention, no instructions were received from and no conversations relative thereto were held by these employees with the head of the radio section, or with any

7. 213 USPQ at 778.

8. United States v Dubilier Condenser Corp., 289 US 178, 77 L Ed 1114, 53 S Ct 554, 85 ALR 1488, 17 USPQ 154 (1933).

9. The same principles generally apply to private and government employees, except that employees of the Patent and Trademark Office are prohibited from obtaining patents during their employment [USC, Title 35, § 4], and except further that title to inventions made by employees of the Tennessee Valley Authority [by statute, USC, Title 16, § 831d(i)] vest in the Authority.

superior. Various other inventions were made by the two, and the court stated that they were permitted by their chief, after the discoveries had been brought to his attention, to pursue their work in the laboratory and to perfect the devices embodying their inventions. No one advised them prior to the filing of applications for patents that they would be expected to assign the patents to the United States or to grant the Government exclusive rights thereunder. Under the circumstances, the court held there was no basis for implying a contract to assign the inventions to the United States, or a trust in its favor, save as to a shop right, it being conceded that the government might practice the inventions without payment of a royalty.

The Supreme Court developed the concept of shop right as a form of equitable compensation for situations where the employer has financed an employee's invention by providing wages, materials, tools, and a workplace.[10]

The shop-right doctrine originated in American law in 1843 in the case of *McClurg v Kingsland,*[11] involved an employee, one Harley, who was employed by defendants at their foundry at a weekly wage. While so employed, he invented an improvement in the mode of casting metallic cylinders and cones which had long been desired by manufacturers. Harley's experiments were made in defendants' foundry, at their expense, while he was receiving his wages, which were increased because of his successful discovery. He continued in their employment for some time, using his invention in his work. He eventually

10. Mechmetals Corp. v Telex Computer Products, Inc., 709 F2d 1287, 219 USPQ 20, 23 (1983, CA9 Cal) ("A shop right also has some attributes similar to those of equitable estoppel. In particular, a shop right is most commonly found where the employee-inventor has induced the use of his invention by his employer or has acquiesced in such use over a period of time.").

11. McClurg v Kingsland, 42 US 202, 11 L Ed 102 (1843). In accord see, Wommack v Durham Pecan Co., 715 F2d 962, 219 USPQ 1153 (1983, CA5 Tex) ("A shop-right has often been found where the employee merely makes use of his employer's property or labor to develop his process. Such conduct can provide sufficient evidence of consent."); Mechmetals Corp. v Telex Computer Products, Inc., supra.

applied for a patent about the time he left the employment, and assigned the patent to plaintiffs. While Harley had worked for defendants, he proposed that they take out a patent and purchase his rights, which they declined to do. But he asked for no compensation for the use of his invention, nor did he give any notice that it was not to be used until he was severing his relations with defendants. This suit was brought by plaintiffs because the defendants continued to use Harley's improvement after he left their employ. It was held that under the circumstances, defendants had an implied license to use the invention. The court stated the general rule:

> [t]hat if an inventor makes his discovery public, looks on, and permits others freely to use it without objection or assertion of claim to the invention, of which the public might take notice, his abandons the inchoate right to the exclusive use of the invention, to which a patent would have entitled him, had it been applied for before such use.[12]

A further example of a situation where courts may imply a shop right rather than an agreement to assign an invention is found in the case of *Hildreth v Duff,*[13] which was a suit to compel the assignment of a patent. One Thibodeau, a skilled mechanic, was employed by one Hildreth, a candy manufacturer who was desirous of having perfected and manufactured a certain machine for use in the manufacture of candy. The contract of employment stated that Thibodeau would give Hildreth "my best services, and also the full benefit and enjoyment of any and all inventions and improvements which I have made or may hereafter make relating to machines or devices pertaining to said Hildreth's business." Since the court found in the contract no stipulation binding Thibodeau to assign his inventions to the plaintiff, it was held that the agreement conferred on Hildreth only a shop-right or mere license to use the invention.

12. 42 US at 207.

13. Hildreth v Duff, 143 F 139 (1906, CC Pa).

Wilson v American Circular Loom Co.,[14] involved an action on contract to recover compensation for the use of certain patented machines. Plaintiff had been superintendent of defendant's factory and while so employed invented an improvement in tubing machines, for which he secured a patent; he was also the owner of a patent relating to circular looms. During his employment, there were installed in defendant's factory 25 of these tubing machines and 2 of the circular looms. One of plaintiff's duties during his employment was the improvement of defendant's machines. He undertook to improve a certain machine, and completed such an improved machine, which was satisfactory. All the costs of his experiments were paid by defendant, as was the cost of obtaining a patent. The 25 tubing machines were constructed under plaintiff's direction, but at defendant's expense. The improved machines increased defendant's business; plaintiff's salary was increased from $1800 to $5000 a year; he was also elected a director of the company for a certain period. In addition to his salary, plaintiff had an interest in the profits of the business, since he was part owner of another patent, profits under which came into the business; and further he was a stockholder. Under the circumstances, the court held defendant had at least a shop right or implied license to use the machines in question without paying any compensation therefor, since there was no evidence of an express agreement to pay for such use and insufficient evidence to warrant the finding of an implied agreement to pay for the use.

Barton v Nevada Consol. Copper Co.,[15] was a suit for infringement brought by an employee after first unsuccessfully negotiating with his employer to allow him compensation for use of a process perfected by him during his employment. The defendant had installed in its concentrating and smelting plant

14. Wilson v American Circular Loom Co., 187 F 840 (1911, CA1 Mass).

15. Barton v Nevada Consol. Copper Co., 71 F2d 381, 21 USPQ 594 (1934, CA9 Nev).

an electric furnace for the purpose of making abrasive resistant steel-grinding balls, and liners for its mills for grinding ore. Prior to that time these balls and liners had been made in its furnace known as a "cupola" and results had been unsatisfactory. After installation of the electric furnace, defendant's general manager was anxious to develop a method of operation which would produce the desired ball mill metal as economically and as satisfactorily as possible. Plaintiff was employed by defendant as a steel metallurgist in the research department for the express purpose of operating the new electric furnace and developing a method of making abrasive resistant steel balls and liners for defendant's mills. While the invention was partly conceived prior to his employment by defendant, the process upon which plaintiff later received a patent was perfected during the course of his employment and solely at the expense of the defendant. Plaintiff used this process in the performance of his duties for defendant from the time it was perfected until after he applied for a patent. After making application for the patent, plaintiff took up with defendant the matter of receiving compensation for the use of the process, and no agreement having been reached, brought suit. The court held that since the plaintiff was employed for the express purpose of operating the new electric furnace and working out a method of making abrasive resistant metal, for which work he was paid, he could not now deprive defendant of the fruits of his labor by setting up his patent later obtained on this process.

Where the evidence clearly shows not only that the employer has no title to the invention, but that the claim of a shop right is non-existent, the employer will not be entitled to any rights.

The rule concerning shop-right does not require a "reduction to practice" as that term has no place in the question of the application of the shop-right doctrine.[16]

16. Dewey v American Stair Glide Corp., 557 SW2d 634, 200 USPQ 632 (1977, Mo App) ("The use of the small amount of company materials and equipment is not sufficient to establish a shop-right.").

In *Kny-Scheerer Corp. v American Sterilizer Co.,*[17] the court found that the plaintiff had not even been a general employee of the defendant, but had been employed merely to sell its products in a certain territory and that during the period of such employment he was employed by three other concerns. The evidence showed that he also had never consented to the use of his invention by defendant. The most that could be said, held the court, was that he had offered to sell his invention, but such offer of sale could not be construed as a license to practice the invention.

In *Beecroft & Blackman, Inc. v Rooney,*[18] the plaintiff gave direct notice to defendants that they were not to have a shop right. The court held that the time of defendants to protest, if they had any ground therefor, was at the time they received their notice. Their inaction and their failure to prove they had made any substantial investment on account of the invention, was held to defeat their shop right.

In *Massie v Fruit Growers' Express Co.,*[19] the inventor, while employed by defendant, disclosed to the latter an invention which he had made in floor racks. His employment was that of a mill carpenter. He did not, however, use the property of his employer either to develop his invention or to put it into practical form, nor did he assent to the use of the invention by his employer. When he made application for his patent, he notified the company and made an offer to sell it, but the company refused to buy. The company then prepared an assignment of a shop right to it, but the inventor refused to sign. He was told he would have a certain time to think it over, and construing this as a discharge, he left the company, but was called back and reengaged. Under the circumstances, the court held no shop right had arisen in the company.

17. Kny-Scheerer Corp. v American Sterilizer Co., 5 F Supp 273 (1932, DC NY).

18. Beecroft & Blackman, Inc. v Rooney, 268 F 545 (1920, DC NY).

19. Massie v Fruit Growers' Express Co., 31 F2d 463 (1929, DC Del).

Heywood-Wakefield Co. v Small,[20] involved an infringement suit of a patent for a base for reversible car seats for use in trolley cars and railroad coaches. Plaintiff had been employed as a draftsman by defendant in its factory, where it manufactured, *inter alia,* car seats; later he was promoted and made a "checker". While so employed, he invented the car seat in suit, for which he received a patent. There was a conflict of testimony as to what plaintiff's duties as checker involved; plaintiff's contention was that his job was to see that goods were made according to orders. The District Court, which was sustained by the Court of Appeals, found that "originating new developments was not part of plaintiff's duties," and the defendant was not entitled to an assignment of the patent. The court further found that the defendant was not even entitled to a shop right. The facts showed that plaintiff conceived the invention and made a miniature wooden model of it at home, out of business hours. The model was crude, but embodied the principle on which the base worked. He showed the model to his immediate superiors in the factory and also to persons higher in authority. By their orders, working drawings and patterns were made, and a full-sized seat constructed at the expense of the defendant. A number of different workmen were employed on this work, to some extent under plaintiff's direction, but it did not appear that he was relieved of his duties as checker in order to supervise the work. During this time, plaintiff was requested by his superiors to offer his invention to the defendant as a "suggestion", but he refused until he knew "what he was going to get for it." Subsequently, defendant had a patent application prepared in plaintiff's name, together with an assignment to it, but plaintiff refused to execute the papers. There was further dispute in the testimony as to whether, at a conference at the office of defendant's attorney, plaintiff, after having had the nature of a shop right explained to him, conceded that defendant had such a right. Nevertheless, the court of appeals,

20. Heywood-Wakefield Co. v Small, 87 F2d 716 (1937, CA1 Mass).

taking all the facts into consideration, concluded plaintiff had conferred no shop right upon defendant. The court differentiated previous cases in which a shop right had been granted, stating that in those cases the inventor had either made the invention on his employer's time, at the latter's expense, and as part of his duties, or he had stood by for a long period and permitted his employer to use the invention without protest before making claim for compensation.

The foregoing case is again illustrative of the extent to which some courts will go in refusing to deprive an inventor of the full benefit of his invention, even to denying a shop right to the employer in a situation where one might well have been implied. It makes clearer the necessity for a very definite understanding with respect to the nature of an employee's duties and his employer's rights in and to any invention made by the employee during the period of his employment.

The question often arises, where a shop right or implied license exists in favor of the employer, as to the extent of the right acquired, i.e., whether the license is terminated with the termination of the employment or whether it is perpetual in nature. In general, the law implies a license to the employer to continue his enjoyment of the invention even after the relations between himself and the inventor have been dissolved. The duration of his license in each case depends upon the nature of the invention. If it is an art, he may practice it indefinitely. If it is an article, he may use it until it is worn out and repair it as long as its identity can be retained. Ordinarily such a license is not transferable, although there are exceptions which will be hereinafter discussed.

As illustrative of the extent of the right conferred, several cases will now be discussed. *Barber v National Carbon Co.*,[1] involved a suit for infringement brought by a mechanical engineer, who had been employed by the defendant as such to devote his time and service to the cheapening of the process used by the company in making carbons. Nothing was said

1. Barber v National Carbon Co., 129 F 370 (1904, CA6 Ohio).

about inventions, the precise terms of employment being somewhat indefinite. In the course of his employment, plaintiff had invented a process and an apparatus for electroplating, and secured patents thereon. During his employment, six of the patented machines were constructed under his personal supervision for the company, and without any announcement of any purpose to claim a royalty for their use. The evidence showed that the machine was of costly character, occupying a great deal of space. To properly install these machines, special designs for buildings were prepared under plaintiff's direction, and machines were either built or started according to his plans before he was discharged. In one factory, there was space especially designed for another machine, and after plaintiff's discharge a seventh machine was built for the space thus prepared. The court held:

> In view of the fact that buildings specially designed for the use of Barber's process and apparatus were constructed under his direction, we think the presumption is that he intended to grant to the Carbon Company the right to use his process in connection with the machines, for which space in the several factories had been specially arranged with his knowledge and under his direction. The right of use presumed is the right to use such number of machines as had been prepared for, and that the right is not limited to the life of a particular machine but will include replacements so long as the Carbon Company continues in the manufacture of carbons. The scope of the license therefore includes the seventh machine, constructed after Barber was discharged, to occupy the place prepared for it under Barber's direction.

In *H. F. Walliser & Co. v F. W. Maurer & Sons Co.*,[2] one Arnold had been employed as a general machinist by defendant and under an agreement in writing was to build and design anything pertaining to the business of defendant and surrender all claims or rights in the same to defendant. Thereafter, the agreement was renewed, providing for the same character of

2. H. F. Walliser & Co. v F. W. Maurer & Sons Co., 17 F2d 122, 124 (1927, DC Pa).

service, but nothing was said about the surrender of all claims or rights. Arnold developed a machine while employed and several machines were completed before he left. He filed his patent application after leaving and assigned the same to plaintiff. Several additional machines were built by the defendant after he left their employ. It was held that the implied license in the defendant extended as well to machines constructed after Arnold left the employer as to those constructed before. The court stated:

> It would be unreasonable to say that the defendant cannot use all that it acquired through its employment of Arnold to design anything advantageous or pertaining to its business, and that the advantage derived therefrom was to cease, as far as the use of the design is concerned, at the termination of his employment by them, and that the use and advantage of his work in designing the machines is restricted to those actually built by him during his employment. The law gives it more than that. It gives it the right to a continuing use of the result of his work in designing the machine. What use is the design of the machine, unless, in carrying on its business, the defendant may construct, as its business necessities require, additional machines in accordance with that design?

It is sometimes said that the shop right is a personal one, and ends with the particular employer in whose favor it arose. This is not always the case, but the extent of the shop right will depend upon particular facts. For example, in *Wilson v J. G. Wilson Corp.*,[3] a new corporation was formed to acquire the entire assets and stock of the former corporation and the plaintiff continued in the employ of the new company for some six months. Thereafter, the plaintiff asserted a claim against the new corporation for royalties on patents obtained by him and it was held that the earlier corporation, having become entitled to an indefeasible license to use the patents in question, the successor corporation was likewise entitled to such a license. In its opinion the Court said:

> The suggestion that the right in and license to use said letters

3. Wilson v J. G. Wilson Corp., 241 F 494 (1917, DC Va).

> patent is a personal one, existing in favor of the James G. Wilson Manufacturing Company, and does not, in the absence of an express contract, pass to the defendant company, is not well taken, and cannot be maintained, for the reason that the defendant company is but a continuation of its predecessor company, and the complainant in good faith and fair dealing is as completely estopped from claiming the right here set up against one as the other.

In *Neon Signal Devices, Inc. v Alpha-Claude Neon Corp.*,[4] a dispute was involved as to the extent of a shop right. The court stated that, while in general, a shop right is a personal right and does not pass by mere assignment, nevertheless it does pass where there is a complete succession to the entire business and good will of the previous licensee.

However, the courts have consistently held that "shop-rights" do pass in a statutory merger.[5]

> The rule that prevents an employee-inventor from claiming infringement against a successor to the entire business and good will of his employer is but one feature of the broad doctrine of estoppel which underlies the shop-right cases.[6]

New Jersey Zinc Co. v Singmaster,[7] involved the case of one employed as superintendent of a plant, in which the following general instructions as to patents were issued:— "Ownership. All patentable ideas and devices originating with, or developed by, an employee of the Company, shall belong to the Company, and shall be formally assigned to the Company by the patentee." One of the patents involved in this case was not applied

4. Neon Signal Devices, Inc. v Alpha-Claude Neon Corp., 54 F2d 793, 12 USPQ 339 (1931, DC Pa).

5. PPG Industries, Inc. v Guardian Industries Corp., 428 F Supp 789, 196 USPQ 359 (1977, ND Ohio) ("As a general rule, shop-rights are personal and nonassignable but will pass to the surviving corporation in a merger or the resulting corporation in a consolidation. The major difference between the non-assignable features of a shop-right and the license involved herein is that the license involved in this case contains an express rather than an implied restriction on transferability.").

6. PPG Industries, Inc. v Guardian Industries Corp., supra.

7. New Jersey Zinc Co. v Singmaster, 71 F2d 277 (1934, CA2 NY).

for until after Singmaster left the plaintiff's employ. The Court found, however, that he had conceived the invention ten months before he left the employ and that under his contract the patent belonged to the Zinc Company. Later patents, covering improvements upon the basic patent, were found to have been conceived and reduced to practice by Singmaster after he left the Zinc Company's employ. Since, as to these inventions, the evidence did not show that they had been made or discovered while Singmaster was employed by the Zinc Company, the company was held not entitled to those patents.

In *Popp v Newport News Shipbuilding & Dry Dock Co.,*[8] the employee had signed a written agreement wherein he recited that he had invented a new and useful improvement in draft tubes for which he was about to make application for a patent and conveyed to the company "my entire right, title, and interest in and to said invention, as fully set forth and described in the application executed by me on the 5th day of September, 1923, and in and to any letters patent that may be granted in pursuance of said application or any division thereof." Thereafter, he applied for a Canadian patent and the company sued to obtain an assignment of the Canadian patent. The court held that the contract in question covered the assignment of the invention in its entirety as well as the United States application, so that the company was entitled also to the Canadian patent.

Other situations involving the extent of the right conveyed are found in *Withington-Cooley Mfg. Co. v Kinney,*[9]

Tin Decorating Co. v Metal Package Corp.,[10] and *Boston v Allen.*[11]

While it is settled that whoever first perfects an invention is

8. Popp v Newport News Shipbuilding & Dry Dock Co., 5 F2d 962 (1925, CA3 Pa).

9. Withington-Cooley Mfg. Co. v Kinney, 68 F 500 (1895, CA6 Mich).

10. Tin Decorating Co. v Metal Package Corp., 29 F2d 1006 (1928, DC NY), affd (CA2 NY) 37 F2d 5, cert den 281 US 759, 74 L Ed 1168, 50 S Ct 410.

11. Boston v Allen, 91 F 248 (1898, CA1 Mass).

the real inventor, although others may have previously had the idea and made some experiments towards putting it into practice, no one is entitled to a patent for that which he did not invent, unless he can show a legal title to the same from the inventor or by operation of law. Difficulty arises where a person has discovered an improved principle in a machine, manufacture, art or composition of matter, and employs other persons to assist him in carrying out that principle, and they, in the course of experiments arising from that employment, make valuable discoveries ancillary to the plan and preconceived design of the employer. The courts hold that such suggested improvements are in general to be regarded as the property of the party who discovered the original improved principle, and may be embodied in the patent as a part of his invention. As was said in the leading case of *Agawam Co. v Jordan:* [12]

> Suggestions from another, made during the progress of such experiments, in order that they may be sufficient to defeat a patent subsequently issued, must have embraced the plan of the improvement, and must have furnished such information to the person to whom the communication was made that it would have enabled an ordinary mechanic, without the exercise of any ingenuity and special skill on his part, to construct and put the improvement in successful operation. Persons employed, as much as employers, are entitled to their own independent inventions, but where the employer has conceived the plan of an invention and is engaged in experiments to perfect it, no suggestions from an employee, not amounting to a new method or arrangement, which, in itself is a complete invention, is sufficient to deprive the employer of the exclusive property in the perfected improvement. But where the suggestions go to make up a complete and perfect machine, embracing the substance of all that is embodied in the patent subsequently issued to the party to whom the suggestions were made, the patent is invalid, because the real invention or discovery belonged to another.[13]

In the *Agawam* case, the inventor had for many years been conducting experiments directed to perfecting machinery for

12. Agawam Co. v Jordan, 74 US 583, 19 L Ed 177 (1869).

13. 74 US at 603.

the manufacture of wool. He was engaged in the manufacture of wool and in the machine business and had commenced working on machinery in his early youth. One Winslow came into the inventor's employ while the experiments were in progress; he was a blacksmith by trade, but his job with the inventor was to make himself generally useful. The inventor asked Winslow for suggestions, which were made, some of which were rejected, a few being adopted by the inventor. The invention as claimed was for a combination of old elements. The court found that Winslow's suggestion, although valuable, was not the whole combination nor such a material part of the same that it conferred any right upon the party who made the suggestion to claim to be the inventor, or even a joint inventor.

It may sometimes happen that although one conceives an idea, the accomplishment of the desired end is left entirely to another. Such a situation was involved in *Pardy v J. D. Hooker Co.,*[14] where Hooker was engaged in manufacturing pipe and conceived the idea of making a machine to rivet such pipe, instead of doing the work by hand. Pardy was a mechanic employed to get up such a machine for Hooker, but on the evidence the court found that Pardy had really made the invention. Similar situations were involved in *Meier & Swift v Sullivan,*[15] and in *Pembroke v Sulzer.*[16]

In *Minerals Separation, Ltd. v Hyde,*[17] three individuals conceived the idea that a minute quantity of oil might be used to effect the separation of the metalliferous materials from the gangue of ore, and employed another to try out the process. Reports were made from time to time to the employers, but they planned and directed the investigations from day to day, conducting them in large part themselves. Under the circumstances, the court held that where an invention is the result of

14. Pardy v J. D. Hooker Co., 148 F 631 (1906, CA9 Cal).

15. Meier & Swift v Sullivan, 1916 CD 178, 226 OG 1799 (1916, App DC).

16. Pembroke v Sulzer, 49 App DC 356, 265 F 996 (1920).

17. Minerals Separation, Ltd. v Hyde, 242 US 261, 262, 61 L Ed 286, 37 S Ct 82 (1916).

experimentation on the part of an employee, but such experimentation is under the instruction and supervision of the employer, title is in the employer and not in the employee who happened to make the analyses and observations. The court in this case cited with approval the decision in *Agawam Co. v Jordan.*[18]

The foregoing rule does not apply where the invention can be said to be joint rather than the result of ancillary suggestions made by one to the real inventor. Thus, in *Larson v Crowther,*[19] two individuals disputed title to an invention involving a process for destroying bacteria by subjecting the same to gas. The evidence showed that both were employees of a university and that neither was the employee of the other. One had no knowledge of what the bacteriological results of his claimed process might be, and the other had little knowledge as to the necessary mechanical contrivances to make the process effective. Under the circumstances, the court found that both had contributed jointly to the development of the joint idea.

The situation was summarized in the case of *Robinson v McCormick,*[20] which involved a case where the mechanic discarded the suggestion of his superior and evolved a simpler and less expensive attachment. In awarding priority of invention to the mechanic, the court said:

> Inventors are often compelled to have their conceptions embodied in construction by skilled mechanics or manufacturers, whose practical knowledge often enables them to suggest and make valuable improvements in simplifying and perfecting machines or devices. These are things they are employed and paid to do. The inventor is entitled to protection from their efforts to claim his invention. At the same time, an employee is to be protected from the rapacity of his employer also; and if in doing the work assigned to him, he goes farther than mechanical skill enables him to do, and makes an actual invention, he is equally entitled to the benefit of his invention. Necessarily the relations between

18. Agawam Co. v Jordan, supra.

19. Larson v Crowther, 26 F2d 780 (1928, CA8 Minn).

20. Robinson v McCormick, 1907 CD 574, 128 OG 3289 (1907, App DC).

> them generally impose upon him the burden of showing that he has made an invention in fact. To claim the benefit of the employee's skill and achievement it is not sufficient that the employer had in mind a desired result, and employed one to devise means for its accomplishment. He must show that he had an idea of the means to accomplish the particular result, which he communicated to the employee, in such detail as to enable the latter to embody the same in some practical form.[1]

A similar situation was involved in *Ladoff v Dempster,*[2] where a chemist hired to assist another, discarded the latter's plan and carried out his own ideas.

§ 19:47 Remedies to Protect Patent Rights

The assignee of patent rights may obtain equitable relief against acts of the assignor in derogation of the rights which he has assigned,[3] and the assignor may obtain equitable relief to protect his rights where the remedy at law is inadequate.[4] In some jurisdictions the owner of a patent or an interest therein may maintain a suit in equity to establish ownership[5] or to quiet title thereto.[6] The assignor of patent rights may maintain suit in equity for an accounting against an assignee.[7]

Partition of a patent right, held by tenancy in common, may of course be made by the common consent and mutual action of all the owners of that right; but no such partition can be made against the will of either owner. But equity has jurisdiction to remove a cloud from a title to a patent, where that

1. 128 OG at 3291.

2. Ladoff v Dempster, 36 App DC 520 (1911).

3. New Era Electric Range Co. v Serrell, 252 NY 107, 169 Ne 105 (1929); Jefferson Chemical Co. v Mobay Chemical Co., 253 A2d 512, 162 USPQ 444 (1969, Del Ch).

4. Toner v Sobelman, 86 F Supp 369, 81 USPQ 304 (1949, DC Pa).

5. Perry v Cain, 81 NYS2d 307 (1948, Sup).

6. Rawlinson v Oregon Textile Machines, Inc., 164 Or 38, 99 P2d 999, 44 USPQ 704 (1940).

7. Oscar Barnett Foundry Co. v Iron Works Co., 81 NJ Eq 412, 87 A 160 (1912); Sylvester v Simplex Engineering Co., 326 Pa 235, 192 A 125, 33 USPQ 552 (1937).

cloud consists in an express or an implied assertion of adverse ownership or encumbrance.[8]

Injunction will lie to protect patent rights under an assignment or other transfer.[9] The court may grant a preliminary injunction to give such relief as the equities of the situation demand, but a preliminary injunction will not be decreed where it would cause irreparable damage to the defendant.[10] In any case, an injunction will not lie in the absence of grounds for equitable relief.[11] An assignee who proceeds to manufacture and sell the patented invention with knowledge that the inventor had contracted for the exclusive rights under the patent with another may be enjoined at the instance of the parties to the prior contract.[12]

Either party to the assignment of a patent may recover damages for a breach of a condition or covenant,[13] and in an action to recover such damages the general rules apply as to pleading,[14] evidence,[15] and damages.[16] In an action for damages for wrongful appropriation of invention, the measure of damages is the value of the invention,[17] and the price fixed by the

8. 28 USCS 118. See also, Columbia Nat. Sand Dredging Co. v Miller, 20 App DC 245, 253 (1902); Burpee v Guggenheim, 226 F 214 (1915, DC Wash).

9. New Era Electric Range Co. v Serrell, 252 NY 107, 169 NE 105 (1929).

10. Carpenter Chemical Co. v Lansdale Silk Hosiery Co., 2 F2d 976 (1924, DC Pa).

11. Flanigan v Ditto, Inc., 91 F2d 1, 35 USPQ 43 (1937, CA7 Ill); Lundquist v Iverson, 333 Ill 523, 165 NE 135 (1929).

12. Oscar Barnett Foundry Co. v Iron Works Co., supra.

13. General Finance Corp. v Dillon, 172 F2d 924, 80 USPQ 341 (1949, CA10 Okla); Continuous Zinc Furnace Co. v American Smelting & Refining Co., 61 F2d 958 (1932, CA2 NY).

14. Continuous Zinc Furnace Co. v American Smelting & Refining Co., supra.

15. General Finance Corp. v Dillon, supra.; Adamson v Alexander Milburn Co., 275 F 148 (1921, CA2 NY).

16. General Finance Corp. v Dillon, supra.

17. Childs v Le Brocq, 178 F 719 (1910, CA2 NY).

parties in the agreement is not to be taken as evidence of the actual value.[18]

An assignment or contract for the sale of a patent or interest therein may be rescinded or cancelled in equity where recognized equitable grounds therefor exist.[19] A party to an assignment may maintain a suit to rescind or cancel the transfer on the other party's breach of a covenant or condition,[20] especially where the instrument of transfer contains a positive provision for rescission or cancellation on breach of a covenant or condition.[1] The remedy has been held available for breach of implied, as well as express, covenants and conditions, such as where assignee breaches an implied covenant to render the subject matter of the assignment productive.[2] The party seeking to rescind or cancel must return any consideration received,—he must put the other party in the condition he would have been in had no assignment been made.[3]

Fraud constitutes ground for rescission or cancellation of an assignment or contract for the sale of a patent or interest therein.[4] In order to rescind on the ground of fraudulent and false representation, such representation must have been of material facts, constituting an inducement to the contract, whereon the other party had a right to rely, and did rely, and was thereby misled to his injury.[5] In order to constitute a ground of relief, the representation must be of facts then existing or preexisting, as distinguished from an opinion, a

18. Childs v Le Brocq, supra.

19. Operative Service Corp. v McIntyre Pump Co., 85 Colo 519, 277 P 773 (1929); Hicks v Stevens, 121 Ill 186, 11 NE 241 (1887); Roberts v Sears, Roebuck & Co., 471 F Supp 372, 202 USPQ 727, 731 (1979, ND Ill).

20. Neenan v Otis Elevator Co., 194 F 414 (1912, CA2 NY).

1. Operative Service Corp. v McIntyre Pump Co., supra.

2. Matzka Corp. v Kelly Dry-Pure Juice Corp., 19 Del Ch 359, 168 A 70 (1933).

3. Schurtz v Cushing, 347 Mo 113, 146 SW2d 591 (1940); Morgan v National Pump Co., 74 Mo App 155 (1898).

4. Hicks v Stevens, 121 Ill 186, 11 NE 241 (1887); Elkins v Kenyon, 34 Wis 93 (1874).

5. Thurston v Reed, 229 F 737 (1915, DC Mass).

promise, or an assumed future fact and these facts must be of a concrete character, as distinguished from a truth or principle.[6] Mere promises or predictions are not sufficient.[7] Misrepresentations amounting to mere trade talk are insufficient.[8] A representation by the seller of a patent that it is valid and does not interfere with prior patents is considered a mere matter of opinion and not a statement of fact,[9] but a different situation is presented where there was a prior patent covering the identical invention and the seller knew it.[10] A false assertion of value when no warranty is intended and a statement that the patent is new and useful, if untrue, are statements of opinion.[11] It has been held that the mere failure of assignee to perform a promise, not amounting to a condition forming the whole or part of the consideration inducing the assignment, does not give rise to a right of rescission,[12] but a gross misrepresentation of the capacity of a machine and the success in selling it and operating it, of which the purchaser was ignorant, has been held sufficient for rescission of a contract induced thereby.[13]

Courts have no power to set aside, on the ground of inadequacy of consideration, an assignment that was fairly made.[14] A patentee may by his acquiescence estop himself to claim cancellation of an assignment.[15]

A court of equity can compel an insolvent debtor or appoint a trustee, to execute an assignment of his patent rights.[16] Where

6. Wade v Ringo, 122 Mo 322, 25 SW 901 (1894).

7. Lederer v Yule, 67 NJ Eq 65, 57 A 309 (1904).

8. Des Moines Ins. Co. v McIntire, 99 Iowa 50, 68 NW 565 (1896); Pumphrey v Haffner, 18 Ohio CC NS 346.

9. Dillman v Nadlehoffer, 119 Ill 567, 7 NE 88 (1886).

10. Reeves v Corning, 51 F 774 (1892, CC Ind).

11. Dillman v Nadlehoffer, supra.

12. O'Neil v E. I. Du Pont de Nemours & Co., 12 Del Ch 76, 106 A 50 (1919).

13. Pierce v Wilson, 34 Ala 596 (1859).

14. Bowen v B. F. Goodrich Co., 36 F2d 306 (1929, CA6 Ohio).

15. Duff v Gilliland, 139 F 16 (1905, CA3 Pa).

16. Ager v Murray, 105 US 126, 26 L Ed 942 (1882).

the patent, upon plaintiff's own showing, conferred no title or right upon the defendant, a court of equity will not order him to assign to plaintiff.[17]

§ 19:48 Forms

The following forms are provided for the reader's convenience:

Assignment of Entire Interest in U. S. Letters Patent
Assignment of Undivided Interest in U. S. Letters Patent
Assignment of Territorial Interest in U. S. Letters Patent
Universal Assignment of Letters Patent, With Warranties
Universal Assignment of Letters Patent, Without Warranties
Assignment of Application

ASSIGNMENT OF THE ENTIRE INTEREST IN U. S. LETTERS PATENT

Whereas, I _____, of the City of _____, County of _____, and State of _____, did obtain Letters Patent of the United States for an improvement in _____, which Letters Patent are numbered _____, and bear the ____ day of _____, 19__; and whereas I am now the sole owner of said patent; and

Whereas, _____ of _____, County of _____, and State of _____, is desirous of acquiring the entire interest in the same:

Now, therefore, in consideration of the sum of One Thousand ($1,000.00) Dollars, the receipt of which is hereby acknowledged, I, _____, by these presents do sell, assign, and transfer unto the said _____, the whole right, title, and interest in and to the said Letters Patent therefor aforesaid; the same to be held and enjoyed by the said _____, for his own use and behoof, and for his legal representatives, to the full end of the term for which said Letters Patent are granted, as fully and entirely as the same would have been held by me had this assignment and sale not been made.

17. Kennedy v Hazelton, 128 US 667, 32 L Ed 576, 9 S Ct 202 (1888).