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COMPULSORY LICENSING OF PATENTS—A LEGISLATIVE HISTORY

STUDY OF
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PATENTS, TRADEMARKS, AND COPYRIGHTS
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COMMITTEE ON THE JUDICIARY
UNITED STATES SENATE
EIGHTY-FIFTH CONGRESS, SECOND SESSION
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STUDY No. 12



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FOREWORD

This study, by Catherine S. Corry of the Legislative Reference Service, Library of Congress, was prepared for the Subcommittee on Patents, Trademarks, and Copyrights as part of its study of the United States patent system, conducted pursuant to Senate Resolutions 55 and 236 of the 85th Congress. It was prepared under the supervision of John C. Stedman, associate counsel for the subcommittee, and is one of several historical digests covering important and recurring congressional proposals for amending the patent laws.

Ever since the Paper Bag decision in 1908, permitting a patentee to enforce his patent even though he was not himself using the invention, recurrent compulsory licensing proposals have been presented to Congress. The conditions under which such licenses would be required have varied considerably. They range from across-the-board compulsory licensing, to proposals designed to prevent monopoly, facilitate the use of improvements, prevent misuse and suppression, and promote the national defense. Some proposals are directed to specific fields, such as atomic energy, foreign-owned patents, Government-owned patents, and so on.

Nothwithstanding these varied and vigorous efforts, and despite the prevalence of compulsory licensing laws in many major countries, actual legislation in this field has been scant. Even so, there are large areas today in which patents cannot be used to exclude others from using the inventions covered by them. Thus, use by and for the Government is permitted, subject to payment of reasonable compensation. The same is true in most of the atomic energy field and under many antitrust judgments. In some antitrust judgments and where patents have been misused, even compensation may be denied. Government-owned patents are generally and freely available for use.

Whether these policies of the past should be the policies of the future, is a question that continues to come up for reexamination, most frequently from two disparate standpoints. On the one hand, the question arises whether, under certain circumstances, our patent laws should impose stricter limits than now exist upon the broad power to exclude. On the other hand, there are those who question whether the Government's unvarying policy of making its patented technology freely available to all users, is always in the public interest. In some circumstances, they suggest, that interest might better be served by more selective or restrictive licensing or by the collection of royalties. These questions press insistently for answer as more and more patents are concentrated in corporate hands and as Government research activity and consequent patent ownership steadily increase. Consequently, the present study, which traces the legislative efforts of the past and thereby provides insight into the problems of the present, is both timely and significant.

This study is presented as a result of the work of Miss Corry for the consideration of the members of the subcommittee. It does not represent any conclusion of the subcommittee or its members.

JOSEPH C. O'MAHONEY,
Chairman, Subcommittee on Patents, Trademarks, and Copyrights, Committee on the Judiciary, United States Senate.

JUNE 25, 1958.

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COMPULSORY LICENSING OF PATENTS: A LEGISLATIVE HISTORY BASED ON CONGRESSIONAL HEARINGS, REPORTS, AND DEBATES

INTRODUCTION

Within the last century, American patent history has been increasingly influenced by the growth of the industrial corporation. Corporations have assumed leadership in industrial research, and patent ownership no longer rests exclusively with the individual inventor who develops his own discovery.[1] Firms controlling many patents often find it unprofitable to use all of them; certain corporations have employed their patents as the basis and means of attaining monopoly power.

In response to the high concentration of patent control in corporate hands, many legislative proposals have advocated opening patents to more general use. Most of these suggestions have been limited specifically to those patents which are suppressed, and even the proposals for across-the-board licensing have been aimed at preventing nonuse. The suppression of patents deprives the public of inventions and new or improved products; this aspect of public interest has, in fact, been the motivating factor behind many of these bills. Closely related, however, is the concern for antitrust considerations. The patent grant is a grant of monopoly for a limited number of years as a reward for invention. This grant, when abused, is likely to conflict with our antitrust laws, and certain patent-licensing proposals have attempted to extend antitrust principles into the patent field. Still other bills have proposed the licensing of patents for defense purposes.

Since almost all of the licensing bills are concerned with the suppression of patents, a legislative history of these proposals will be presented, following which those bills which relate specifically to across-the-board licensing, antitrust, and defense will be noted separately. This will be followed by a discussion of legislative proposals dealing with the registration of patents voluntarily made available for licensing and of proposals advocating the dedication or licensing of Government-owned patents. A bibliography relating to the foregoing topics is also attached.

[1] Patent Office, Distribution of Patents Issued to Corporations (1939–55), Study No. 3, Senate Subcommittee on Patents, Trademarks and Copyrights, 84th Cong., 2d Sess. (1956)

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I. COMPULSORY LICENSING OF PRIVATELY OWNED PATENTS

A. Licensing To Combat Patent Suppression

Some bills dealing with patent suppression have proposed that the patent grant be annulled if the invention is not used. Examples of this type of legislation are H. R. 6864 (75th Cong.) which would invalidate patents unused for 5 or more years and H. R. 97 (79th Cong.), section 29, dealing with suppression—

> which has the effect of unreasonably limiting the supply of any article in commerce or of unreasonably excluding the supply of any article from commerce.

A less drastic alternative to such legislation is the requirement of compulsory licensing, which is the subject of this report. Although the first compulsory licensing bill was introduced in 1877,[2] there was no significant action in this field until the Oldfield bills of 1911 and 1912.

1. OLDFIELD AND RELATED BILLS (1911–15)

a. H. R. 8776 (62d Cong.), May 5, 1911, Oldfield; S. 2116 (62d Cong.), May 8, 1911, Gore

(1) Provisions

These bills provided for across-the-board licensing. Anyone wanting a license could apply to the Commissioner of Patents, who, under rules not specified in the bill but presumably to be made in the future, could grant a compulsory license and fix the terms and the royalty. If the patent owner did not obey the Commissioner's order, the patent was declared null and void.

(2) Action taken

None.

b. H. R. 23193 (62d Cong.), April 11, 1912, Oldfield; S. 6273 (62d Cong.), April 11, 1912, Brown

(1) Provisions

Section 17 of both bills provided:

> * * * If at any time during the term of the patent, except the first four years, the patented invention shall not be manufactured, or the patented process carried on within the United States, its Territories or possessions aforesaid, to an adequate extent by the owner thereof, or by those authorized by him, then any person demanding it shall be entitled to a license from the owner of the patent to manufacture the invention or to carry on the patented process, unless the owner shall show sufficient cause for such inaction. * * *

[2] Compulsory Patent Licensing by Antitrust Decree. 56 Yale L. J. 116, note 108 (1946). This article does not identify the specific bill and it has not been located.

If the patent owner refused to grant the license, the district court was to hold a hearing, and if it found that "the reasonable requirements of the public in reference to the invention have not been satisfied," it would order that the license be granted. Appeal would lie to the circuit court of appeals.

(2) Action taken

None.

c. H. R. 23417 (62d Cong.), April 16, 1912, Oldfield

(1) Provisions

Section 17 of this bill was similar to section 17 of S. 6273 and H. R. 23913 (62d Cong.), but the bill also provided for compulsory licensing of improvement patents, as follows:

> If at any time during the life of a patent a material and substantial improvement shall be patented, the manufacture of which would be an infringement of the original patent, the owner of the improvement patent may apply to the district court * * * to compel the granting of such a license as will enable the improvement to be manufactured.

The court here also was to consider "the reasonable requirements of the public" and provision was made for appeal to the circuit court of appeals.

(2) Oldfield hearings of 1912 [3]

(a) General description.—Hearings on H. R. 23417 were held before Subcommittee No. 1 of the House Committee on Patents from April 17 to May 25, 1912. The testimony in general tended to oppose the bill. There was marked disagreement concerning the degree to which patents were suppressed and the importance of this suppression. Many of the witnesses pointed out that some patents are not used because the company has found an invention which better accomplishes the same purpose. Those in favor of compulsory licensing urged care in framing a bill and often approved of the compulsory principle but felt that 4 years' protection against such licensing was too short a period, as it usually took longer for an invention to reach the manufacturing stage. The principal arguments advanced against the bill were that it would hurt the small corporation, especially in adding to the costs of litigation; that it would encourage secrecy; that it was unconstitutional; and that it impaired the valuable patent grant which purported to give the inventor an exclusive right to use his invention. There was almost unanimous opposition to the proposal for compulsory licensing of improvement patents. The point was raised that the improvement on the original invention might not even be an important one.

(b) Important testimony.—

William A. Oldfield, chairman of both the Committee and the Subcommittee on Patents:

> My idea of a compulsory license is this: That it will prevent the locking up of valuable inventions and valuable improvements, and at the same time will, to a degree, if not

[3] House Committee on Patents, hearings on H. R. 23417 (1912), 27 parts.

completely, destroy the situation whereby one manufacturer of a patented thing may take over all the competitors in similar things; and, it seems to me, compulsory license would prevent that (pt. 14, p. 10).

Thomas Ewing, Jr., counselor at law, New York:

I think that there is an exaggerated notion about the locking up of patents (pt. 10, pp. 25–30, at 27).

Frederick P. Fish, patent attorney, Boston:

What I am contending for is that, on this particular point of the suppression of patents, there is not a particle of evidence before the committee, there is not anything in print anywhere that I have seen, which indicates that that is a matter of the slightest consequence (pt. 26, pp. 3–30, at 12).

Thomas A. Edison:

I have heard and read numerous statements that many corporations buy valuable inventions to suppress them, but no one cites specific cases. I myself do not know of a single case. * * * Before any changes in the law are made, let the objectors cite instances where injustice has been worked on the public by the alleged suppression of patents for other reasons than those which were due to improvements (pt. 23, pp. 32–34, at 34).

Edwin J. Prindle, Prindle & Wright, counselors at law, New York:

Thus, I submit that the compulsory-license clause will tend to prevent invention instead of stimulating it. It would make a man conceal every improvement which would compete with the one he was then manufacturing, instead of making it (pt. 10, pp. 3–25, at 17).

F. L. O. Wadsworth, consulting and advisory engineer, Pittsburgh:

I know of instances where a number of my own patents were so suppressed * * * after the title of those inventions had been acquired by companies they had been deliberately shelved (pt. 21, pp. 10–31, at 13).

H. Ward Leonard, chairman of the legislative committee of Inventors' Guild, felt that inventors favored compulsory licensing, but only in a very restricted sense. He favored attacking the suppression problem through the antitrust laws rather than by making changes in the patent field (pt. 3, pp. 17–27).

Frank L. Dyer, president of Thomas A. Edison (Inc.), expressed his qualified approval of compulsory licensing—

where the patentee either actually suppresses the patent or seeks to impose unfair and unreasonable terms for its use (pt. 10, pp. 37–40, at 38).

He opposed the improvement clause, feeling that inventors would bring out insignificant improvements in order to secure licenses under important patents.

Walter H. Chamberlin, attorney at law, Chicago:

> Such a license I believe should be granted by the Federal court only after the court has satisfied itself by proof that the invention is being withheld or suppressed for the purpose of preventing competition, and it should not apply to the original inventor (pt. 23, pp. 3–26, at 5).

The *Association of Registered Patent Attorneys* (pt. 6, pp. 3–11), the *Merchants' Association of New York City* (pt. 19, pp. 3–7), and the *Patent Law Association of Washington* (pt. 27, pp. 3–34), were opposed to the proposed compulsory licensing.

(3) Reports

(a) Majority report[4]—H. R. 23417 was reported favorably from committee but in an amended form. As reported, section 1 provided:

> If the applicant shall allege and prove to the satisfaction of the court that the patented invention is being withheld or suppressed by the owner of the patent, or those claiming under him, for the purpose or with the result of preventing any other persons from using the patented process, or making, using, and selling the patented article in the United States in competition with any other article or process, patented or unpatented, used, or made, used, and sold, in the United States by the owner of the patent or those claiming under him or authorized by him, and also allege and prove that the application for said patent was filed in this country more than 3 years prior to the filing of such bill in equity, the court shall order the owner of the patent to grant a license to the applicant in such form and upon such terms * * * as the court, having regard to the nature of the invention and the circumstances of the case, deems just: *Provided, however,* That nothing herein contained shall be construed to authorize the court to compel the granting of a license by the original inventor who has not obligated himself or empowered another person to suppress or withhold such invention.

There could be appeal to the circuit court of appeals, and patents granted before passage of the bill were not to be affected.

The committee report stated that conditions had changed since the early days of the patent system and that companies now were basing monopolies on patent control. When there were alternative ways of production, the firms used only one, thus depriving the public of an important invention. Foreign countries had met this problem by compulsory licensing, and the committee urged the same solution for the United States. It based its proof of suppression not on the hearings but on certain court cases (*Columbia Wire Co.* v. *Freeman Wire Co.*, 71 Fed. 302 (1895); *Indiana Manufacturing Co.* v. *J. I. Case Threshing Machine Co.*, 148 Fed. 21 (1906); *National Harrow Co.* v. *Bement*, 21 Appellate Division N. Y. 290 (1897); the so-called *Lock* case, 166 Fed. 560 (1909); the so-called *Paper Bag Patent*, 150 Fed. 741 (1906), aud declared: "These citations are sufficient to show that the practice of buying up and suppressing patents is widely indulged" (p. 5). The report pointed out that the bill would not hurt the

[4] Revision of the Patent Laws, H. Rept. 1161 to accompany H. R. 23417, Aug. 8, 1912.

individual inventor, since an exception was made for his protection in the proviso at the end of section 1.

(*b*) *Minority report.*—The minority views were expressed in a later report [5] signed by Congressmen Bulkley, Morrison, Littleton, Currier, Henry, and Wilder. This report stated that compulsory licensing was not necessary since the Sherman Act would apply where needed, and it cited several cases mentioned in the majority report to show that the Sherman Act was adequate. The minority opposed compulsory licensing on the ground that it would discourage invention and felt that the hearings on H. R. 23417 supported their view. In addition, the report pointed out that the clause "in competition with any other article * * *" provided a loophole in the bill:

> This plainly is an invitation to the easy circumvention of the law by the simple expedient of assigning the patent which it is desired to suppress to some one not engaged in producing any article in competition with the patented invention (p. 7).

(*4*) *Further action taken*

None.

d. H. R. 1700 (63d Cong.), April 7, 1913, Oldfield; H. R. 15989 (63d Cong.), April 24, 1914, Oldfield; H. R. 3054 (64th Cong.), December 7, 1915, Oldfield.

(*1*) *Provisions*

Section 1 of H. R. 1700 and section 3 of H. R. 15989 and of H. R. 3054 were identical to section 1 of H. R. 23417 (62d Cong.), as it was reported from committee. (See p. 6.)

(*2*) *Legislative action*

(*a*) *Hearings on H. R. 15989.*[6]—The Committee on Patents, of which Congressman Oldfield was chairman, held hearings on H. R. 15989 from May 27 to June 17, 1914. There was little testimony on section 3 of the bill, and such as there was paralleled that of the 1912 hearings. The witnesses objected to the principle of compulsory licensing and made no distinction between the earlier H. R. 23417 and the present H. R. 15989.

(*b*) *Report on H. R. 15989.*[7]—H. R. 15989 was reported favorably from the Committee on Patents on August 12, 1914. The report was for the most part identical to the report on H. R. 23417 (62d Cong.), but it also stated:

> The opponents of the bill constantly emphasize the fact that many more persons have appeared before the committee to oppose the bill than to approve of and favor it. And so it is with every bill that affects adversely a few special interests and beneficially affecting the general public. It is not to be expected that isolated members of the public can afford to expend the time and means necessary to journey to the seat of government and insist upon the abuse of a particular law (p. 2).

(*c*) *Action taken.*—No action was taken on H. R. 1700 or H. R. 3054 and no further action was taken on H. R. 15989.

[5] Revision of the Patent Laws, H. Rept. 1161, pt. 2 to accompany H. R. 23417, February 26, 1913.
[6] House Committee on Patents, hearings on H. R. 15989 (1914), 171 pages.
[7] Revision of Patent Laws, H. Rept. 1032 to accompany H. R. 15989, August 12, 1914.

2. EDMONDS BILLS (1914–15)

a. H. R. 19188 (63d Cong.), October 8, 1914; H. R. 3082 (64th Cong.), December 7, 1915

(1) Provisions

Both bills provided:

> That any time 3 years after the application for a patent has been filed any person interested may file a bill in equity in any district court of the United States alleging that the reasonable requirements of the public with respect to the patented invention have not been satisfied and asking for the granting of a compulsory license (sec. 1).
>
> That for the purposes of this bill the reasonable requirements of the public shall not be considered satisfied if, by reason of the default of the patentee to work his patent or to manufacture the patented article in the United States to an adequate extent, (first) any existing industry or the establishment of any new industry is unfairly prejudiced, (second) the demand for the patented article is not reasonably met (sec. 3).

The district court would hold a hearing and order the granting of a compulsory license if the "reasonable requirements of the public" were not met. Appeal would lie to the circuit court of appeals.

(2) Action taken

None.

3. STANLEY BILLS (1921–22)

a. S. 1838 (67th Cong.), May 18, 1921; S. 3325 (67th Cong.), March 22, 1922; S. 3410 (67th Cong.), April 6, 1922

Although the three Stanley bills provided for compulsory licensine in cases of nonuse, they were more directly related to national defensg considerations. Hence, they are discussed under Part I, D: Licensing in Aid of National Defense, page 18. Consequently, the statement at this point is limited to a brief résumé of the licensing provision and the action taken.

(1) Provisions

These three bills in general provided that in certain cases when a patent was granted, the right was reserved to the United States for the Commissioner of Patents to grant licenses at reasonable royalties if "such patent so granted is not worked or put in operation so as to result in actual production in the United States of the article disclosed in such patent, in reasonable quantities, within a reasonable time, from the date of its issue."

(2) Action taken

S. 1838 was reported to Congress from the Committee on Patents on June 2, 1921,[8] but it was recommitted on August 5, 1921. Hearings were held on S. 3325 and S. 3410 before the Committee on Patents on April 6, 1922, and from May 1 to 4, 1922,[9] but no further action was taken on them.

[8] Amending Revised Statutes Relative to Patents, S. Rept. 110 to accompany S. 1838, June 2, 1921.
[9] Senate Committee on Patents, hearings on S. 3325 and S. 3410, bills to amend secs. 4886 and 4887 of the Revised Statutes relating to patents (1922), 302 pages.

4. KING BILLS (1926–35)

a. S. 3474 (69th Cong.), March 9, 1926

(1) Provisions

This bill, introduced by Senator William H. King, provided that 5 years after a patent grant a person may file a petition for a license on the ground that within the past year there has been "no use" of the patent. He then must present "evidence that the applicant is an interested party, financially responsible, and able to manufacture such patent for public use," must show that the granting of a license would be in the "public interest," and must make a definite offer (sec. 3). If the Commissioner of Patents should find the applicant's submission is true, he then publishes "notice of the application" and a time for hearing in the Official Gazette of the Patent Office (sec. 4). The hearing is held unless the patent owner "fails to appear to show cause why such license should not be granted or * * * fails to answer the notice," in which case a compulsory license is granted (sec. 5). At the hearing the owner may "set up a use within such period," show that plans are being made for such use, or "justify his failure to use." If the Commissioner accepts the showings of the patent owner, no one may apply for a compulsory license for a year; if the Commissioner rules in favor of the applicant, he orders that a compulsory license be granted and fixes the royalty and the terms. If the patent owner should refuse to grant such a license his patent is revoked (sec. 6). The license ordered by the Commissioner would contain a "minimum manufacturing requirement," a procedure for changing the terms, a provision that the patent owner cannot rebuy rights, and a statement of circumstances under which the license may be canceled. Appeal would lie to the Court of Appeals of the District of Columbia (sec. 8).

(2) Action taken

None.

b. S. 705 (70th Cong.), December 9, 1927; S. 203 (71st Cong.), April 18, 1929; S. 22 (72d Cong.), December 9, 1931; S. 290 (73d Cong.), March 11, 1933; S. 383 (74th Cong.), January 7, 1935

(1) Provisions

The bills are practically identical to S. 3474 (69th Cong.), except for a broader application to situations where there is "no use or insufficient use" (sec. 3). They also substitute the clause "able to manufacture such patent to supply the market" (sec. 3) for "able to manufacture such patent for public use" (sec. 3, S. 3474).

(2) Action taken

None.

5. M'FARLANE BILLS (1938)

a. H. R. 9259 (75th Cong.), January 31, 1938

(1) Provisions

H. R. 9259 provided for across-the-board licensing and differed from preceding bills in that it would grant an exclusive right to make, use, and vend for only 3 years:

> Every patent shall contain * * * a grant to the patentee, his heirs or assigns for the term of 17 years of the exclusive right to a royalty through the licensing of the invention or discovery or to vend the invention or discovery * * *. For the first 3 years of the patent grant the inventor shall have the exclusive right to make and use, in addition to the rights enumerated above, the invention or discovery (sec. 1).

The bill then provided:

> At any time after the expiration of 3 years from the date of issuance of a patent any person may file with the Commissioner of Patents an application for a license under said patent. The applicant shall file with the Commissioner of Patents:
>
> 1. Evidence that the applicant is an interested party financially responsible and able to manufacture such patent to supply the market;
>
> 2. A statement that the public interest will be advanced by issuing to him a compulsory license for such patent;
>
> 3. An offer which shall include specific terms, conditions, and royalties under which the applicant proposes to use such a patent, if his application for such license is granted (sec. 2).

The Commissioner was to rule on the application and hold a hearing; he could then issue a compulsory license. There was appeal to a special Board of Appeals set up in the Patent Office, and further appeal to a United States district court.

(2) *Hearings* [10]

(a) *General description.*—Hearings were held on H. R. 9259 and H. R. 9815 from March 21 to 31, 1938, before the Subcommittee on Compulsory Licensing of the Committee on Patents. H. R. 9815, is considered below under Part I, C: Licensing and Antitrust, p. 16. Although H. R. 9259 provided for across-the-board licensing, many of the arguments raised against it apply to compulsory licensing limited to cases of nonuse. Indeed, one objective of the bill was prevention of nonuse; consequently, the hearings are reported in this section. It should be remembered, however, that this bill was also aimed at the dangers of monopoly and was intended to alleviate the unemployment situation.

There was almost unanimous opposition to the McFarlane bill. The principal arguments against it were as follows:

(1) The bill strikes at the very foundation of the patent system. If the exclusive right to use a patent were limited to 3 years, there

[10] House Committee on Patents, hearings on H. R. 9259, H. R. 9815, and H. R. 1666 (1938), 565 pages.

would be little incentive for inventors and for the financing of investment.

(2) It takes longer than 3 years to develop most inventions, and development costs are high.

(3) Small business would be especially hurt for it would be forced to license its more specialized patents to large corporations with superior resources.

(4) Firms would be discouraged from finding alternative ways of production since they could get a license on the original invention.

(5) There is no need for such legislation, for if a patent is valuable it will be used.

(6) The bill would encourage secrecy and the hiding of inventions.

(7) The bill gives too much authority to the Commissioner of Patents.

(*b*) *Important testimony.*—The above arguments were repeated throughout the hearings. The most significant testimony was as follows:

Thomas Ewing, former Commissioner of Patents, was opposed to the determination of royalties by the Patent Office and felt that a royalty was an inadequate reward:

> * * * besides, men do not go into the development of new things for an ordinary competitive profit. They have got to see a speculative profit in it or they will not go into it (pp. 29–40, at 38).

He felt that companies would refuse to reveal their costs (so that royalties could be determined) and that some firms might apply for licenses only to learn the patent owner's costs (p. 538). Ewing thought 3 years was not long enough for the development of inventions (p. 539).

Thomas E. Robertson, former Commissioner of Patents:

> All during the 12 years, as I said before, that I was Commissioner of Patents, I heard a rumble every once in a while about suppressed patents, but not once did I know of any patent that controlled any industry that was being suppressed (pp. 440–462, at 448).

John P. Frey, president of the metal trades department of the American Federation of Labor, was opposed to the bill at this time as it was creating fear in small business and among the workers on patented products (pp. 171–174).

Lawrence Langner, Langner, Perry, Card & Langner, international patent solicitors, New York, discussed compulsory licensing in foreign countries. He stated that compulsory licensing had been introduced in those nations to meet a problem which did not exist in the United States:

> The reason we have those provisions in other countries is because foreigners used to use their patents in those countries to stop domestic manufacturers from manufacturing there, and they would supply the domestic market by importing the goods embodying the invention from abroad. In other words, they used those patents to the hurt of the domestic industry by holding up domestic manufacture and bringing in inventions from the foreign countries (pp. 405–425, at 409).

Even so, there was no indication that any really significant inventions had been suppressed in these countries; and Mr. Langner felt that compulsory licensing had been harmful:

> It is my opinion that compulsory licenses in foreign countries have not been beneficial but, on the contrary, have greatly reduced the incentive for European countries to make substantial expenditures in research work (p. 406).
>
> Such compulsory licenses exist largely as an undefined threat of additional lawsuits hanging over the patent owners and inventors—a sword of Damocles—adding an additional discouragement to the investment of capital in inventions (p. 416).

The *Association of American Railroads* (pp. 175–176), the *American Patent Law Association* (p. 467), and the *New York County Lawyers' Association* (pp. 399–405), all opposed the McFarlane bill.

Paul P. Horni, vice president of the Horni Signal Manufacturing Corp., New York City, stated that he knew of cases where valuable patents were suppressed. He favored the bill and felt that by helping competition it would increase employment. In referring to his own business, Mr. Horni explained:

> In the course of manufacturing, invariably I come across many inventions that may be somewhat allied but be applicable to other branches of industry, and with the possibility of someday going into them, we have filed for a patent and obtained a valid patent. However, not having the necessary funds, we were unable to manufacture and sell the devices, and that particular patent is placed on the shelf because of insufficient funds to go into that particular field, and it does not benefit the public, but does prevent others from manufacturing the product or the device that may be badly needed in the industry (pp. 507–516, at 510).
>
> If there is anything at all that looks like a product that can be promoted, the more there is of anything out, the more you can sell of it, and if we get some small royalty we are still going to have the advantage of a competitor, because we haven't that royalty to contend with and if we are unable to compete with a competitor that has a royalty to pay on top of it, then we ought to close shop, there is something wrong with our management * * * (p. 513).

George J. Schulz, former member of the faculty of the University of Maryland and former director of the Legislative Reference Service, Library of Congress:

> If voluntary cross-licensing and pooling is beneficial to monopoly, compulsory licensing under the conditions set up in this bill now before you will prove beneficial to the little-business man and to the general public, for it will enable the little-business man to enter a field now closed to him by the control of patents, and it will give the general public a larger supply in response to an expanding demand (pp. 516–521, at 521).

(*3*) *Action taken*

None.

(b) H. R. 10068 (75th Cong.), March 28, 1938

(1) Provisions

H. R. 10068, introduced during the hearings on H. R. 9259, was designed to correct certain provisions in H. R. 9259 which had been criticized at the hearings. Section 2 of the bill gave the exclusive right to make and use the patent grant for 5 years rather than 3 years, but in all other respects it was identical to section 1 of H. R. 9259. Section 3 read:

> At any time after the expiration of 5 years from the date of issuance of a patent where satisfactory evidence is submitted showing that a patent is not being used or that the domestic supply is insufficient to satisfy the public demand or that unfair prices or trade practices prevail, any person may file with the Commissioner of Patents an application for a license under said patent, setting forth under oath his reasons why such license should be granted. The applicant shall file with the Commissioner of Patents * * *. [The bill then repeats the three requirements called for in section 2 of H. R. 9259—see p. 9, supra.]

Thus, H. R. 10068 did not provide for across-the-board licensing but for licensing only in certain cases, such as nonuse. Appeal under H. R. 10068 was to the United States Court of Customs and Patent Appeals or to a United States district court.

(2) Action taken

None.

6. TNEC STUDY

(a) Hearings [11]

Extended hearings were held before the Temporary National Economic Committee, Congress of the United States, pursuant to Public Resolution No. 113 (75th Cong.). These hearings investigated the concentration of industrial power, and detailed testimony was given regarding economic conditions in many industries. The entire hearings thus provided occasion for determining the need for compulsory licensing, but the testimony on compulsory licensing per se was very limited. The more important submissions follow:

Senator William H. King, member of the TNEC:

"It is my view that it would be unwise to compel the compulsory licensing of patents" (pt. 31–A, pp. 18036–18038, at 18038).

Dr. Vannevar Bush, president, Carnegie Institution of Washington, knew of no instances of suppressed patents other than those in which the suppression was harmless, i. e., where a company had two ways of making the same product or where the company considered it better for the change to reach the public gradually (pt. 3, pp. 884–887).

Conway P. Coe, Commissioner of Patents, felt that many abuses charged to the patent system might result from other corporate prac-

[11] TNEC hearings pursuant to Public Res. No. 113 (75th Cong.), authorizing and directing a select committee to make a full and complete study and investigation with respect to the concentration of economic power in, and financial control over, production and distribution of goods and services, pt. 3, proposals for changes in law and procedure (1939), pp. 835-1148.

Same. Pt. 31–A, supplemental data submitted to the Temporary National Economic Committee (1941), pp. 18011–18489.

tices, and he wished further investigation of this. He urged caution in the framing of proposals and then presented his own recommendation regarding compulsory licensing:

> Where a single control or ownership of a group of patents has the effect of permitting the owner to dominate an industry or directly restrain interstate commerce to the detriment of the public, rights under such patents shall be made available to others on such terms and conditions as may be determined as reasonable by the Court before whom the facts are developed.
>
> The test as to the restraint of interstate commerce to the detriment of the public shall be whether or not the articles covered by the patents are made available to the public in such quantity as to satisfy the demand, and at a reasonable price (pt. 31–A, pp. 18473–18483, at 18483).

Thurman Arnold, Assistant Attorney General, in a written rejoinder to Commissioner Coe's suggestion, contended that the first paragraph merely dealt with what the antitrust laws already condemned, but that the second paragraph added "a new and different test" which it would be impossible and unwise for the courts to administer. He stated:

> The practical effect of this proposal, if adopted, would be to preclude the Government from dealing with situations which it is now free to attack and to remedy under the antitrust laws. In short, this is a proposal, somewhat obscured by its form, to strengthen the economic position of groups which dominate industries in reliance upon the patent privilege at the expense of the public generally and particularly at the expense of the low-income groups (pt. 31–A, pp. 18483–18489, at 18488).

(b) Report [12]

The final report and recommendations of the TNEC summarized its findings on the patent grant as follows:

> It has been used as a device to control whole industries, to suppress competition, to restrict output, to enhance prices, to suppress inventions, and to discourage inventiveness (p. 36).

Among other patent recommendations, it proposed:

> In order to eliminate the use of patents in ways inimical to the public policy inherent in the patent laws, as well as that of the antitrust laws, we recommend that the Congress enact legislation which would require that any future patent is to be available for use by anyone who is willing to pay a fair price for the privilege.

Administrative machinery was to be established to rule on the royalties (p. 36).

[12] Final Report and Recommendations of the TNEC, S. Doc. 35, March 31, 1941, Washington (1941).

7. O'MAHONEY-BONE-LAFOLLETTE BILL (1942)

a. S. 2491 (77th Cong.), April 28, 1942

(1) Provisions

The bill provided for compulsory licensing where there was nonuse and conflict with the antitrust laws:

> If the Commissioner of Patents finds * * * (1) that the patentee has failed for a period of three years after the issuance of the patent to make, use, and vend the invention or discovery covered thereby and that there is no reasonable justification for such failure, or (2) that there has been such a failure and the patentee has refused for a period of three years after the issuance of the patent to allow any other person under a licensing system or otherwise to make, use, and vend the invention or discovery npon the payment of just and reasonable compensation to the patentee, and if the Commissioner further finds that such failure and refusal has resulted or is likely to result in a violation of the antitrust laws, or is otherwise detrimental to the puhlic interest, then the Commissioner may order the patentee to make the invention or discovery available to the public under such reasonable terms and conditions (including the granting of licenses to others and the payment of just and reasonable compensation to the patentee) as he may prescribe (sec. 2).

Thc procedure for the complaint, hearing, etc., was similar to that proposed in the other patent bills.

(2) Hearings [13]

Hearings held before the Committee on Patents from April 30 to August 21, 1942, included S. 2491, hut primary attention was directed to another bill, S. 2303, designed to provide for the use of patents in the national defense. (See p. 22.) Consequently, there were no specific references to S. 2491 in the testimony and no discussion of the wisdom of compulsory licensing. The hearings concerned patents primarily as they related to antitrust, with the testimony directed to the economic history and present conditions of various monopolies and cartels. The only relevant testimony follows:

Allen Dobey, special assistant to the Attorney General, Antitrust Division, Department of Justice:

> I simply suggested that in order to secure full production and eliminate questions as to whether a particular practice under the patent law does violate the antitrust laws, where in some cases there may he a real question of doubt, that we provide, first, to outlaw all agreements in patent licenses or patent assignments that restrict the production, distribution or exportation of patented articles. Secondly, that we supplement that by a provision for compulsory licensing on a reasonable royalty basis, so that anyone can get a license. That would take care of a situation where a single holder of a patent refuses to license at all, instead of licensing with limitations that affect production (p. 536). [This testimony

[13] Senate Committee on Patents, hearings on S. 2303 and S. 2491 (1942), pts. 3-10, pp. 1360-5258.

was given in the hearings on S. 2303, before the introduction of S. 2491.]

Allen C. Phelps, attorney, Federal Trade Commission, proposed a bill providing that in cases of patent suppression for 3 or more years the Federal Trade Commission would require a compulsory license if it found in an inquiry that there was public demand for the product, that there were persons wishing to manufacture it, and that there was or would be violation of the antitrust laws. The Federal Trade Commission would determine the reasonable royalty (pp. 1747–1750).

(*3*) *Action taken*

None.

8. CLEMENTS BILL (1950)

a. H. R. 9304 (81st Cong.), August 2, 1950

(*1*) *Provisions*

The bill provided that, if after 5 years the patent owner had not made or sold his invention or issued licenses under the patent and there was "no reasonable justification for such failure," the Commissioner of Patents, after an inquiry, would issue a compulsory license and fix the terms and the royalty.

(*2*) *Action taken*

None.

9. CONCLUSION

Since H. R. 9304, no bill has been introduced providing for compulsory licensing in cases of patent suppression. It should be kept in mind that, in addition to the hearings on specific compulsory-licensing proposals, numerous court cases and antitrust hearings have contained material relevant to the possible need for compulsory licensing. These however, lie outside the scope of this report.

B. ACROSS-THE-BOARD LICENSING

1. H. R. 8776 (62d Cong.), May 5, 1911, Oldfield; S. 2116 (62d Cong.), May 8, 1911, Gore; H. R. 9259 (75th Cong.), January 31, 1938, McFarlane

There have been only three across-the-board licensing bills. Since these were closely related to more limited licensing proposals, they have been considered in Part I, A: Licensing To Combat Patent Suppression, pp. 2–15. H. R. 8776 and the identical S. 2116 were not acted upon, and in his later bills Congressman Oldfield provided for licensing only in cases of nonuse. H. R. 9259 (75th Cong.) also had the effect of across-the-board licensing. This bill was strongly opposed, however, and, in a later bill, H. R. 10068 (75th Cong.), Congressman McFarlane limited compulsory licensing to nonuse situations. (See p. 12.)

C. Licensing to Promote Antitrust Objectives

1. CONNERY AND FAY BILLS (1938–39)

a. H. R. 9815 (75th Cong.), March 10, 1938, Connery; H. R. 7192 (76th Cong.), July 13, 1939, Fay

(1) Provisions

The bills provided for compulsory licensing where patentees combined their patents to restrain trade. Licensing was not limited to cases of nonuse. Section 1 provided:

> That when two or more persons in competition with each other and each owning or controlling at least one letters patent of the United States of America shall bring their interests in and under such letters patent within a single control whereby industry and trade are dominated and interstate commerce is substantially restrained to the detriment of the public, and it shall have been so established by a trial of the issues in and thereafter finally decreed by a United States district court, the court so decreeing may order that a nontransferable license under any one or all of said patents shall be granted to a responsible complainant under such reasonable terms and conditions as shall be fixed by the court (sec. 1).

The bills also provided that an "injured" person could sue for such a license in a United States district court (sec. 2).

(2) *Hearings on H. R. 9815* [14]

H. R. 9815 was considered in the same hearings as those held on H. R. 9259. (See Part I, A: Licensing To Combat Patent Suppression, p. 9.) Most of the testimony given related to the McFarlane bill, although the objection was made to the Connery bill that the problem should be met through antitrust legislation rather than by changes in the patent law. The most important comments on H. R. 9815 follow:

Marc Resek, chief engineer, Perfection Stove Co., Cleveland, Ohio, objected to the bill because of its vagueness, and stated:

> Where a person has an exclusive right to a thing but shares that right with another he is not increasing the extent of the monopoly. He is decreasing it. Where two competing people each have an inclusive right to a separate invention, and where neither invention is useful without the other, it is certainly not to the detriment of the public for each to allow the other to use his invention. Such interchange of licenses has in many cases been the means of building up an industry (pp. 256–262, at 261).

He felt bringing patents under a single control was good in five cases:

> First, a patentee makes a basic invention and receives a broad patent. Another patentee invents an improvement on this basic invention which makes it much more practical or

[14] House Committee on Patents, hearings on H. R. 9259, H. R. 9815, and H. R. 1666 (1938), 565 pages.

salable. The inventor of the improvement cannot use his invention without infringing the basic patent.

* * * * * * *

Second, two competitors each have a patent which they claim the other is infringing.

* * * * * * *

Third, a person holds a patent on a detail of construction which a competitor infringes.

* * * * * * *

Fourth, two or more competitors may own patents under which they desire to license certain others in the industry.

* * * * * * *

Fifth, if joint control of patents of competing companies is restricted in the manner set forth in this bill it will be practically impossible for one manufacturer to buy patents from several different inventors (pp. 261–262).

Thomas Ewing, former Commissioner of Patents:

Now, if it [an antitrust suit] has been prosecuted and the court has found that there is an infringement of the antitrust laws, then the question might be raised, and the license granted if it appears to be valuable to do that, but just to reverse that and say that anybody who is sued under a patent can make that defense and set up an antitrust law act, it commends the business of prosecuting suits under patents (pp. 29–40, at 33).

Dean S. Edmonds, of the New York Patent Law Association, felt that any harm from a dominant pool could best be met by legislating that others outside the pool would be able to use the pool's patents on reasonable terms. He thought the Connery bill would bring too much delay in granting the licenses (pp. 425–437).

Both the *New York County Lawyers' Association* (pp. 399–403) and the *New York Patent Law Association* (pp. 403–405) expressed their opposition to the general principle of H. R. 9815.

(*3*) *Action taken*

No action was taken on either H. R. 7192 or H. R. 9815.

2. OTHER ANTITRUST ACTION

a. TNEC study; S. 2491 (77th Cong.), April 28, 1942, O'Mahoney, Bone, and LaFollette

The TNEC hearings, considered under Part I, A: Licensing To Combat Patent Suppression, p. 12, were concerned with the antitrust aspects of patents. In addition, S. 2491 (77th Cong.), reported in Part I, A, p. 14, provided for compulsory licensing in cases of violation of the antitrust laws. It differed from H. R. 9815 (75th Cong.) (see p. 16) in that there also had to be nonuse of the patent.

D. Licensing in Aid of National Defense

1. PATENT USE BY THE GOVERNMENT GENERALLY

Before examining the various bills that would provide for compulsory licensing in the interests of national defense, it is necessary to look at earlier background legislation which gave the United States Government broad rights in the use of patents for governmental purposes generally. Title 28 of the United States Code, as it now reads, provides as follows:

> Whenever an invention described in and covered by a patent of the United States is used or manufactured by or for the United States without license of the owner thereof or lawful right to use or manufacture the same, the owner's remedy shall be by action against the United States in the Court of Claims for the recovery of his reasonable and entire compensation for such use and manufacture.
>
> For the purposes of this section, the use or manufacture of an invention described in and covered by a patent of the United States by a contractor, a subcontractor, or any person, firm, or corporation for the Government and with the authorization or consent of the Government, shall be construed as use or manufacture for the United States (28 U. S. C. 1498 (1952)).

This provision of the code was based on the Act of June 25, 1910, ch. 423, 36 Stat. 851, as amended by the Act of July 1, 1918, ch. 114, 40 Stat. 705.

Prior to 1910 patent owners had no assurance that they would receive compensation for patents used by the Government. The United States Government can only be enjoined or sued for damages with its consent, and earlier court cases had given patent owners compensation only where there appeared to be an express or implied contract. The 1910 act thus enlarged the rights of patent owners by permitting them to sue for compensation in the Court of Claims. In 1918 the provisions of this act were extended to cover Government contractors.

Although this legislation was enacted to give patent owners the right to compensation rather than to increase the Government's power, it did in fact facilitate Government use of private patents. Since the law provided that the "entire compensation" for the patent owner would be that secured from the Government in the Court of Claims, Government officials and contractors could no longer be held personally liable, thereby enabling them to act more freely in the Government interest than had previously been the case. The act also recognized in statute the already existing right of the Government to use patents without license. Although the basis of this act may be said to rest on the right of eminent domain, it should be noted that there is a sharp difference between mere Government use of patents without license and the actual taking of patents by eminent domain as proposed by later legislation.

2. STANLEY BILLS (1921–1922)

a. S. 1838 (67th Cong.), May 18, 1921; S. 3325 (67th Cong.), March 22, 1922; S. 3410 (67th Cong.), April 6, 1922

(1) Provisions

The Stanley bills all had similar provisions and provided for compulsory licensing by the Government. Although phrased broadly in terms of general compulsory licensing on grounds of nonworking within a reasonable time, the bills were largely inspired by experiences in and prior to World War I growing out of the existence of substantial numbers of German-owned United States patents.

S. 3410 stated that the patent grant as issued should reserve to the Commissioner of Patents or another designated Government agency, the right to grant licenses thereunder

> if such patent so granted is not worked or put in operation so as to result in actual production in the United States of the article disclosed in such patent, in reasonable quantities, within a reasonable time, from the date of its issue.

Thus, the compulsory licensing authorized under S. 3410 was to be based upon provisions written into the patents rather than upon the power of eminent domain of the Government.[15]

S. 1838 and S. 3325 differed somewhat in that S. 3325 applied only to persons who had previously filed patent applications in foreign countries, and S. 1838 applied only to foreigners. S. 1838 set a 2 year time limit after which compulsory licenses could be granted, and S. 3325 stated that the "reasonable time" should "in no case * * * be less than 2 years nor more than 5 years."

(2) Legislative action

(a) Action taken on S. 1838.—S. 1838 was reported favorably from the Committee on Patents on June 2, 1921. The report [16] stated that Germans, including Frederick Krupp of Essen, Germany, had applied for many American patents. The War Department had investigated 228 of these applications and had found that patents had not yet been granted on a number of them. The report then listed some of the patent applications. Twenty-six were for artillery fire control devices, 18 for electric-control apparatus, and 9 for fuses for projectiles. The list then went on to enumerate 90 more applications, all of which seemed of a strategic nature.

On June 20, 1921, Senator Stanley explained the provisions of the bill to the Senate. He stated:

> These same inventions which the Americans used during the war, and are now using, but which they did not patent, have been patented by foreigners and sold to the Krupps or other foreign concerns, so that we cannot use our own patents for our own defense at this time; and the Secretary (of War) has very warmly urged the immediate passage of legislation of this character (61 Congressional Record, 4969–4997).

[15] See the account of the Stanley bills in Part I, A: Licensing to Combat Patent Suppression, p. 7.
[16] Amending Revised Statutes Relative to Patents, S. Rept. 110 to accompany S. 1838, June 2, 1921.

On August 5, 1921, S. 1838 was recommitted to the Committee on Patents as certain amendments had been suggested (61 Congressional Record, 4969–4997).

(*b*) *Hearings on S. 3325 and S. 3410.*[17]—Hearings on S. 3325 and S. 3410 were held before the Committee on Patents, of which Senator Hiram W. Johnson was chairman, on April 6, 1922, and from May 1 to May 4, 1922. The more important testimony follows:

Col. Joseph I. McMullen, Judge Advocate General of the United States Army, War Department, explained that at the time of American entry into World War I and following this, the Germans had taken out patents on such strategic materials as optical glass, magnetos, and synthetic medicines. The United States thus could not manufacture these products, and when it came into the war, it lacked the technical know-how. In addition, German patents were not specific in showing how the materials were produced, and it was, therefore, difficult to set up strategic American industries. During the war the Germans also examined unpatented American devices and took out patents on them. Other nations had United States patents, but these patents did not cover strategic inventions. As a result of this, Colonel McMullen stated:

> In other words, the main aim is to prevent the use of our patent law to set up industries in Germany, for instance; that is, we might well admit we are aiming at Germany * * * (pp. 5–26, at 25).

Colonel McMullen stated the basic principle that should be followed:

> That every patented invention which has present or prospective value for national defense, should, like other property, be subject upon declaration of the executive branch of the Government to be charged with public interest when in fact such public interest is present or prospective, and when so charged, the Government should have the right to issue a compulsory license for the establishment of an industry necessary in the public interest, irrespective of the ownership of the patent (pp. 85–88, at 85).

Thomas E. Robertson, Commissioner of Patents, opposed compulsory licensing in general but did not discuss the question from the defense aspect. He felt that companies often needed a "line of patents," for even if they did not use all the patents, they should not have to face competitors who could hurt them with the less favorable ones on inventions they themselves had developed. Commissioner Robertson also raised the question of the treatment of improvement patents under the proposed bill. In certain cases the owner of the original patent might choose not to purchase the improvement patent, and the holder of the improvement patent would be unable to manufacture under it without infringing the original patent. The Commissioner pointed out that after "a reasonable time" under S. 3410 the holder of the improvement patent would apparently be forced to license it to the original patent owner although it lay idle through no fault of his own. Thus, the effect of the bill would be to force the holder of the improvement patent to manufacture with infringement of the original patent (pp. 57–63). Colonel McMullen commented on this

[17] Senate Committee on Patents, hearings on S. 3325 and S. 3410, bills to amend secs. 4886 and 4887 of the Revised Statutes relating to patents (1922), 302 pages.

question: "Oh, yes; there would be infringement, but the courts would not move, that the law had the right to compel anybody to do an illegal act; that would be absurd" (p. 63).

Frederick P. Fish, Boston, felt the United States had not manufactured strategic materials before the war since there was no demand for them and not because of the existing patent situation. Even if the patent problem were a serious one, he felt that it should be remedied by extension of the Government's right of eminent domain to patents owned by foreigners rather than by applying compulsory licensing to Americans merely because this would be necessary under international convention if it were extended to foreigners. Mr. Fish was opposed to compulsory licensing and felt that companies with many patents should manufacture from the best invention and not "confuse" the public by selling inferior products (pp. 63–78).

Henry Howard, chemical engineer, Grasselli Chemistry Co., Cleveland, president of the American Institute of Chemical Engineers, and chairman of the executive committee of the Manufacturing Chemists' Association, proposed a statute along the following lines:

> Two years after the date of issue of any United States patent, if it can be shown that the invention covered by such patent is being worked in a foreign country and that the owner refused to work it in the United States and refused to offer the patent for sale or to grant license under such reasonable terms as would make practicable its use in the United States,

a manufacturer may petition for, and the court grant, a nonexclusive license

> unless the owner of the patent can prove that he has been and is using reasonable diligence in bringing about the bona fide working of said patent either himself or through the aid of licenses, on a scale sufficient to supply the probable demand in the United States * * *.

After 3 years there could be a hearing to change the royalty (pp. 88–97, at 95, 96).

Otto R. Barnett, Barnett & Truman, Chicago, representing the committee on legislation of the Patent Law Association of Chicago and the Patent Council of the American Bar Association, described the bill he was trying to frame, as follows:

> Roughly, the scheme is this, that in certain industries declared essential by the President, that the parties seeking compensation might by due judicial proceeding have an inquiry by the court, first, as to whether or not the industry was so essential, and second, as to whether the specific patent is essential to the maintenance of the industry (pp. 130–138, at 134).

William W. Dodge, Dodge & Sons, Washington, D. C., felt that the Stanley bills would encourage foreigners to keep their inventions secret and that such legislation was not necessary because of the 1910 and 1918 acts, which provided for governmental use of patented inventions subject to the payment of just compensation (pp. 197–222).

The *New York Patent Law Association* opposed the general principle of the legislation, but favored the bills so far as they were essential

for national defense (pp. 97–102). The *Federated Engineering Societies* (pp. 102–110), the *Board of Directors of the National Association of Manufacturers* (p. 117), and the *Committee on laws and rules of the American Patent Law Association* (pp. 143–183) were opposed to the Stanley legislation. The *American Institute of Chemical Engineers* supported the proposal of Henry Howard (pp. 90–91).

On May 3, 1922, Senator Stanley presented an amended version of S. 3410 which provided:

> That 2 years after the issuance of any United States patent, or at any time after the expiration of that period, if it is shown that the invention covered by such patent is being worked in a substantial manner in a foreign country, and that the owner thereof has failed to work it in the United States and has refused or refuses to grant licenses thereunder upon such reasonable terms as would make it practicable to practice the patent in the United States * * *

citizens could apply to the appropriate United States circuit court of appeals and aliens could petition the Court of Appeals of the District of Columbia for a license.

> The burden of proof shall be upon the owner of the patent to show that he has been and is using reasonable diligence in bringing about the bona fide working of said patent whether by himself or through the aid of licenses in the United States on a scale sufficient to show a bona fide establishment of the industry therein * * *.

The court, if it found that the facts warranted, could then grant a nonexclusive license on reasonable terms. Three years after this there could be a hearing to change the royalties. The bill further provided:

> That nothing in this act shall be construed to prevent the parties to such a license to [sic] agreeing among themselves as to the royalties to be paid.

Colonel McMullen stated that the amended S. 3410 was acceptable to the War Department as it covered the requirements of defense. He added, however, that "it goes farther than the War Department's needs in protecting national defense" (pp. 261–262).

(*c*) *Action taken on S. 3325 and S. 3410.*—None.

3. O'MAHONEY, BONE, LAFOLLETTE, AND ROWAN BILLS (1942–43)

a. S. 2303 (77th Cong.), February 23, 1942, O'Mahoney, Bone, and LaFollette; H. R. 3762 (78th Cong.), December 1, 1943, Rowan

(*1*) *Provisions*

The bills provided for an increase in the powers of the President during a national emergency. They stated:

> That whenever, during any war in which the United States may be engaged, the President shall find and declare that the manufacture, use, or sale of any material, article, product, or commodity, or that the expansion of facilities or capacity for such manufacture, use, or sale is in the interest of national defense or of the prosecution of war—

> The President may grant a license to any person under any patent or patents in respect to such manufacture, use, or sale upon such terms and for such period of time as the President may prescribe: *Provided,* That the President * * * shall determine and shall prescribe a reasonable royalty to be paid by the licensee to the owner or owners of the patent or patents (sec. 1, a);
>
> Notwithstanding the provisions of sections 67 and 70 of title 35 of the United States Code, no injunction based upon an alleged infringement of any patent or patents, in or by such manufacture, use, or sale shall issue, be continued, or enforced during the period specified by the President in the said finding and declaration, and the sole remedy of a patent owner against an infringer on account of all such infringements of any patent occurring during said period shall be to recover a reasonable royalty fee under such patent for such period * * * (sec. 1, b).
>
> Whenever the President shall determine it to be in the interest of national defense, he is authorized, during time of war or during any period of national emergency declared by him to exist, to acquire patents, applications therefor, inventions, or licenses under any of the foregoing, by donation, purchase, taking, or otherwise, and to issue licenses and partial licenses thereunder (sec. 2).

Section 1 (a) thus provided for a type of compulsory licensing whereby the President could issue licenses if he ruled that the product was essential to the national defense. An alternative and more sweeping method was authorized by section 2, which extended the power of eminent domain by permitting the President to take over patents, or rights in or under them, and issue licenses on them.

(*2*) *Legislative action*

(*a*) *Hearings and action taken on S. 2303.*—Hearings on S. 2303 were held from April 30 to August 21, 1942 before the Committee on Patents.[18] The major portion of the testimony gave detailed accounts of the patent practices of certain powerful American corporations and was significant in showing the alleged need for such legislation. A summary of the testimony given in these hearings is found in the discussion of S. 2491, a bill primarily concerned with patent suppression but also related to the antitrust problem. (See p. 14.) Other relevant statements follow:

Francis M. Shea, Assistant Attorney General, Claims Division, Department of Justice, gave an extensive explanation of S. 2303 and stated:

> The plain objective of S. 2303 is to facilitate the all-out production of materials and commodities essential to the effective prosecution of the war, by removing any obstacles to such production which may be attributable to United States patents. I believe that the bill is well adapted to achieve this important objective (pp. 21–37, at 21).

[18] Senate Committee on Patents, hearings on S. 2303, a bill to provide for the use of patents in the interest of national defense * * * and on S. 2491, a bill to amend the patent laws, to prevent suppression of inventions * * * (1942), 10 parts, 5258 pages.

Zay Jeffries, chairman of the board of the Carboloy Co., Cleveland, Ohio:

> * * * nothing short of what is equivalent to a seizure may answer this question for the war purpose. Any time the matter of compensation has to be either determined or negotiated, it is time-consuming; and speaking from my personal conviction, I would be willing to see the President have the power to seize any patent and make it available for use in connection with war production. Perhaps if that were done without necessity for compensation, it could be done quickly; and speed might be more important than compensation in this critical time (pp. 474–518, at 494, 495).

Thurman W. Arnold, Assistant Attorney General, Antitrust Division, Department of Justice:

> I think my testimony can be summed up as follows: That the bill before the committee is a very useful thing but does not affect the fundamental cartel problem. It is not the kind of bill which is going to clean up this situation after the war, and therefore I hope this committee will give consideration to the barter aspect of this patent problem. It happens to be the most important cartel problem simply because the developments are in the field where patents have been used as instruments of economic control rather than as instructions [sic] to sell the most goods and to get the most royalty (pp. 626–662, at 653).

No action was taken on S. 2303.

(*b*) *Action taken on H. R. 3762.*—None.

4. KRAMER BILL (1942)

a. H. R. 6852 (77th Cong.), March 25, 1942

(*1*) *Provisions*

Section 1 of H. R. 6852 stated:

> That whenever the President, during the period of any war in which the United States is engaged, determines that (1) the use of rights under any patent or patents is necessary for the manufacture, servicing, or operation of any machine, article or manufacture or composition of matter needed for the defense or safety of the United States; (2) such need is immediate and impending and such as will not admit of delay or resort to any other source of supply; and (3) all other means of obtaining the use of such rights under patents for the defense or safety of the United States upon fair and reasonable terms have been exhausted, he is authorized to require the owner of such patent or patents to grant a license under such patent rights for the duration of such period. * * *

The President would set the royalty, but later the patent owner could sue for a larger royalty in a district court (sec. 2).

(2) Action taken

None.

5. ROSIER AND EDMISTON BILLS (1942)

a. S. 2721 (77th Cong.), August 17, 1942, Rosier for Kilgore; H. R. 7591 (77th Cong.), September 23, 1942, Edmiston

(1) Provisions

The bills established an Office of Technological Mobilization, which was authorized and directed, in addition to its other powers:

> To dissolve hindrances to the voluntary adoption of improved products, processes, and materials by compelling the licensing of all patents, secret processes, and special technical information at reasonable compensation in order to foster their wide utilization, and by taking similar vigorous action in overcoming all other obstructions to maximum technical efficiency in war production. Reasonable compensation shall be determined by the Office, subject to review by the courts (sec. 6, c).

(2) Legislative action

(a) Hearings and action taken on S. 2721.—Hearings on S. 2721 were held before the Subcommittee on Technological Mobilization of the Committee on Military Affairs from October 13 to December 19, 1942.[19] Most of the testimony dealt with the problems of mobilizing the Nation's resources for the war effort, and there was little discussion on the effects of section 6 (c).

In explaining section 6 (c), however, Senator Kilgore stated that the bill would provide "an honest way of infringing on a patent for the benefit of the Government as a whole" (p. 499). The act of June 25, 1910, recognized the Government's power of eminent domain to a limited extent, but Senator Kilgore felt there was need for a law "which would be limited, of course, to emergencies, which give them [certain Government departments] not only the remedy for infringement, but the right to infringe upon adequate compensation" (pp. 79–80). Although no explanation of the exact meaning of the phrase "compelling the licensing" contained in section 6 (c) was given in the hearings, it appears from Senator Kilgore's statements that the authority of the Office of Technological Mobilization would extend beyond that of compelling the grant of licenses to the Government and would include a type of general compulsory licensing. The authority of the Office of Technological Mobilization would resemble that given to the President in S. 2303 (77th Cong.), which stated that he could grant licenses under certain patents. (See p. 22.) Thus, Senator Kilgore in questioning a witness asked:

> The bill, and I admit, as a lawyer, that it is not as well drawn as it should be on one phase, presents this: Would you see anything objectionable in such a bill to give such agency the power to license the manufacture of a patented article, paying a royalty to be agreed upon and to be fixed by the Court of Claims, where the inventor refused to cooperate otherwise?

[19] Senate Committee on Military Affairs, hearings on S. 2721, a bill to establish an Office of Technological Mobilization, and for other purposes (1942), 3 vols., 949 pages.

> Getting completely away from the idea of taking any title to the patent in the Government, or anything of that sort, but just merely the Government taking the right to direct its manufacture where the inventor would not cooperate? (p. 53).

The significant testimony on the patent section of S. 2721 follows:

W. S. B. Lacy, chief, Foreign Information Section, Office of Price Administration, felt that the Government should be entitled to use processes and inventions which were covered by patents (pp. 26–40).

Henry J. Kaiser, president, Henry J. Kaiser Co. (pp. 233–257) and *A. F. Whitney*, president, Brotherhood of Railroad Trainmen (pp. 914–919) favored the compulsory licensing provision of S. 2721.

Robert C. Brown, Jr., chairman, associated defense committee of the Chicago Technical Societies, and consulting director, Technical Development Section, War Production Board, approved the use of compulsory licensing in wartime provided there were adequate safeguards (pp. 41–56, 74–75, 80).

Maj. Gen. O. P. Echols, Chief of the Materiel Command, Army Air Forces, did not comment specifically on the patent licensing provisions, but stated:

> In my opinion a centralized office of research and development is not needed for war purposes and the creation of such an office with these vast powers would not be in the best interests of the war effort (pp. 673–684, at 676).

Paul Harrison, president, Velocity Steam Systems, Chicago (pp. 227–228) and *Jerome C. Hunsaker*, chairman, National Advisory Committee for Aeronautics (pp. 921–923) were opposed to the power over patents given to the Office of Technological Mobilization.

Warren N. Watson, secretary, Manufacturing Chemists' Association:

> The sections of the bill which relate to patents disregard the statements which have been made before congressional committees on behalf of the Army, the Navy, and the War Production Board. These statements have been uniformly to the effect that patents are not impeding the war effort in any significant degree (pp. 897–989).

No action was taken on S. 2721.

(*b*) *Action taken on H. R. 7591.*—None.

II. REGISTRATION OF PATENTS VOLUNTARILY MADE AVAILABLE FOR LICENSING

A. Boykin Bill (1945)

1. H. R. 2630 (79th Cong.), March 15, 1945

a. Provisions

Section 1 provided for the voluntary registering of patents available for licensing in the United States Patent Office and stated that the offer "may or may not specify terms and conditions of such licenses."

Section 2 stated:

> In the event the offerer of a license under a patent upon the register refuses or fails to grant a license to a person seeking the same, the applicant for a license may apply to the Commissioner of Patents, and the Commissioner is empowered after notice and opportunity for hearing, to fix reasonable terms and conditions thereof to the extent they are not stated in the offer and the parties have been unable to agree thereon, and thereafter to order a license, the terms and conditions of which shall be binding upon the parties.

The patent owner could withdraw his offer upon 90 days notice, but this would "not affect licenses in force or application for license then pending before the Commissioner" (sec. 3). Appeal from the Commissioner's determination would lie to the United States Court of Customs and Patent Appeals (sec. 4).

b. Hearings [20]

Hearings on H. R. 2630 were held before the Committee on Patents from May 29 to June 6, 1945. The significant testimony follows:

Richard J. Dearborn, chairman, Committee on Patents, National Association of Manufacturers: The Association approved of the public registration, but felt there should not be compulsory licensing if the patent owner refused to grant a license. There might be cases in which companies were willing to grant licenses only in certain parts of the country. The Association suggested the following substitution for sections 2, 3, and 4:

> Sec. 2. The offer to grant a license provided for in section 1 hereof may be modified or withdrawn from the register by the owner of the patent upon notice of the intention so to do given to the Commissioner of Patents. Modification of the offer or the removal of the offer from the register shall not affect licenses in force (pp. 1–3, at 2).

John C. Stedman, Claims Division, Department of Justice: The Department of Justice favored H. R. 2630 and felt the last three

[20] House Committee on Patents, hearings on H. R. 2630, a bill to provide for the public registering of patents available for licensing; H. R. 2631, a bill to limit the life of a patent to a term commencing with the date of the application; and H. R. 2632, a bill to require the recording of agreements relating to patents (1945), 123 pages.

sections of the bill were necessary. It thought there should be public notice of the withdrawal of the offer (pp. 5–6, 9).

Chester L. Davis, chairman, committee on legislation, patent, trademark, and copyright section, American Bar Association: The association had taken no official action, but Mr. Davis felt it would favor only section 1. He thought that patent owners would often want different terms with different licensees (pp. 9–10).

Karl Fenning, patent attorney, Washington, D. C., editor of the United States Patent Quarterly, former Assistant Commissioner of Patents, and former special assistant to the Attorney General in the Patent Section, approved of H. R. 2630, but felt it should be extended to cover the selling of patents in addition to the licensing of them (pp. 11–12).

Conder C. Henry, Assistant Commissioner of Patents, stated that the Patent Office had recently established a register of licenses but there was no legal provision for sueh a register. He favored extension of the bill to the sale of patents, and thought that the Commissioner of Patents should help small inventors fix their license terms. He suggested:

> I would be willing to amend that line [the provision in sec. 1 for the registration of patents] so that the bill would not only provide that the license itself might contain and specify the terms and conditions, but also that the offerer may also specify the conditions on which he would be willing to grant a license—that "I will make this offer on condition that I myself, the offerer, shall determine whether the licensee is financially responsible and trustworthy" (pp. 13–17, at 16).

The *New York Patent Law Association* approved of section 1, but disapproved of section 4. The report stated:

> Section 2 would probably be approved by the association if amended to empower the Commissioner of Patents to fix the terms and conditions of a license only upon the written consent of both the offerer of a license and the applicant for a license.

It suggested that section 3 provide that the patent owner could withdraw his offer or change the terms 30 days after notification to the Commissioner (pp. 18–19).

c. Action taken

None.

B. Second Boykin Bill (1945–46)

1. H. R. 3757 (79th Cong.), July 11, 1945

a. Provisions

Section 1 was the same as section 1 of H. R. 2630 (79th Cong.), but it extended the provisions of the bill to those wishing to sell patents. Section 2 of the bill gave the Commissioner the same powers as those granted to him in section 2 of H. R. 2630; however, it added to the section:

> *Provided*, That the patent owner has previously authorized the Commissioner of Patents to so act.

Section 3 provided that upon 30 days notice the patent owner could withdraw his offer or could amend it—

> to add other terms or conditions to those stated in the offer, and/or modify the terms and conditions stated: *Provided*, That the offer may be withdrawn at any time in case such owner sells or assigns his interest in the patent, or upon the issuance of a license under the patent.

Notice would be published in the Official Gazette of the Patent Office. Section 3 also contained a provision similar to that in H. R. 2630 that—

> removal of the offer from the register shall not affect licenses in force or application for license then pending before the Commissioner.

Section 4 was identical to section 4 of H. R. 2630.

b. Action taken

H. R. 3757 was reported favorably from the Committee on Patents on July 20, 1945. The report [21] stated that H. R. 3757 was a substitute for H. R. 2630 and had been introduced to correct the objections to H. R. 2630 given in the hearings. The report then explained the provisions of the bill.

On February 18, 1946, Congressman Fritz G. Lanham explained the purpose of the bill in the House of Representatives:

> It is for the protection of the inventor who is not familiar with markets, and it will give the manufacturers an opportunity to see upon the register what is offered (92 Congressional Record 1432).

H. R. 3757 was taken from the Consent Calendar and passed by the House of Representatives on February 18, 1946 (92 Congressional Record 1434). No further action was taken on the bill.

H. R. 2630 (79tb Cong.) and H. R. 3757 (79th Cong.) are the only proposals which have been introduced for registration of patents voluntarily made available for licensing.

C. Patent Office Action

Although no legislation was passed providing for a register in the Patent Office, the register referred to above in Mr. Henry's testimony (see p. 28) was established on June 1, 1945, by Order 3936 of the Commissioner of Patents.[22] As previously recommended by the National Patent Planning Commission, those patents voluntarily made available for licensing were recorded on the register, with entries published in the Official Gazette of the Patent Office. No fee was charged, and the owner could withdraw his patent from the register at any time. The register established by the Commissioner's order differed from the ones proposed in the Boykin bills in that the patent owner incurred no legal obligation to license.

[21] Public Registering of Patents Available for Licensing, H. Rept. 933 to accompany H. R. 3757, July 20 1945.

[22] 575 Official Gazette of the U. S. Patent Office (June 5, 1945).

The public register remained in the Patent Office until June 30, 1954, when it was discontinued for economy reasons.[23] Because of interest in the register's service, however, it was resumed on October 29, 1954.[24] Under the revised rules a charge is made for the entry of patents upon the register, and notices in the Official Gazette no longer include an abstract of the patents.

The United States is not the only country which has established a register of patents available for license or sale. In Great Britain, where an annual tax must be paid on patents after the first 4 years, the tax is reduced to one-half if the owner gives notice that he will license his patent. The Patent Office publishes a list of these patents and settles the terms of licenses on which the private parties cannot agree. The declaration of willingness to license may be withdrawn, but the licenses already granted or pending are not affected, and the patent owner must resume paying the full patent tax.[25]

A provision in the German law is similar to that of Great Britain with the exception that an offer to license cannot be withdrawn.[26]

Other countries with similar provisions are Greece and the Union of South Africa.

[23] 680 Official Gazette 544 (March 16, 1954).
[24] 688 Official Gazette 627 (November 23, 1954).
[25] Secs. 35 and 36 of the Patents Act, 1949.
[26] Sec. 14 of the Patent Act of 1936.

III. DEDICATION AND COMPULSORY LICENSING OF GOVERNMENT-OWNED PATENTS

Bills providing for the licensing of Government patents have varied from those merely authorizing specific agencies to license to those requiring the compulsory licensing of patents. A history of these proposals will be presented here, but as these bills are closely related to the field of Government assistance to invention and research, only the licensing aspects will be discussed.[27]

A. Licensing by Federal Trade Commission

1. S. 5265 (65th Cong.), January 2, 1919, Kirby; H. R. 14944 (65th Cong.), January 23, 1919, Charles B. Smith; S. 3223 (66th Cong.), October 14, 1919, Norris; H. R. 9932 (66th Cong.), October 14, 1919, Nolan; H. R. 11984 (66th Cong.), January 22, 1920, Nolan

a. Provisions

The bills provided for the licensing of Government patents by the Federal Trade Commission. Section 1 of the first four bills read:

> That the Federal Trade Commission be, and hereby is, authorized and empowered to accept assignment of, or license under, to develop, to issue or refuse to issue licenses under, to encourage the industrial use and application of, and otherwise to administer, on behalf of the United States, under such regulations and in such manner as the President shall prescribe, inventions, patents, and patent rights which said commission deems it to the advantage of the public to be so accepted, as these may from time to time be tendered it by employees of the various departments or other establishments of the Government, or by other individuals or agencies; and to cooperate, as necessity may arise, with scientific or other agencies of the Government in the discharge of the duties herein set out.

The Federal Trade Commission was to turn over the fees and royalties from the licenses to the Treasury, and part of this money was to be used to pay inventors for their patents.

b. Legislative action

(1) *Hearings on S. 5265* [28]—Hearings were held on S. 5265 before the Committee on Patents on January 27 and 28, 1919. The testimony was favorable to the proposal. The more important statements follow:

Edward S. Rogers, attorney at law, Chicago, representing the Federal Trade Commission, favored the bill. He pointed out that there was

[27] The legislative history of other aspects of Government assistance to invention and research are considered in a separate report under preparation by the Legislative Reference Service, Library of Congress, for the Patents Subcommittee of the Senate Committee on the Judiciary: Legislative Reference Service, Government Assistance to Invention and Research, Study No. —, Senate Subcommittee on Patents, Trademarks, and Copyrights, 85th Cong., 2d sess. (1958).

[28] Senate Committee on Patents, hearings * * * on S. 5065, * * * S. 5066, a bill amending * * * the act of March 3, 1883, and S. 5265, a bill authorizing the Federal Trade Commission to accept and administer for the benefit of the public and encouragement of industry, inventions, patents, and patent rights, and for other purposes (1919), 36 pages.

no standard procedure for dealing with Government patents and as a result the public was not getting maximum use from them. He stated:

> Some bureaus permitted inventions developed in their service to be patented by the inventor and then required that the patent be dedicated to the public, which did not result in any benefit to anybody. Some of the bureaus forbade the patenting, but permitted the inventor to read a paper before some scientific body, or publish the results of his research in an official bulletin and get what meager satisfaction he could out of recognition of that sort. Some of the other bureaus permitted a patent to be taken by the inventor on condition that the Government would be licensed and allowed the inventor to make what money he could on the outside. There was no uniformity about it, and there is not now any uniformity about it. The public is not getting all benefit from the result of the work that is being done in the Government service, some of which is exceedingly useful (pp. 4–8, at 4).
>
> Experience has shown that the dedication of patents and publications of inventions without patent is the surest way to kill them, because many of these things require some commercial development, and no sane businessman is going to put money into a new thing without some measure of protection (p. 5).

The Federal Trade Commission had been chosen for the administration of the licensing as it had had similar experience under section 10 of the Trading With the Enemy Act during the war.

Frederick G. Cottrell, Bureau of Mines, felt that the bill was a good and necessary one and that it would not impose too great a task on the Federal Trade Commission since the number of Government patents was "relatively small" (pp. 9–13).

James T. Newton, Commissioner of Patents, favored the bill and stated:

> There are other people, scientific men, who have a prejudice against taking out patents at all, and it is the object of this bill to let those men simply have the patent to a valuable invention and assign it over to the Federal Trade Commission to be administered for the benefit of the Government, and for the benefit of the inventor also (pp. 15–17, at 16).

E. B. Rosa, Chief Assistant, Bureau of Standards (pp. 17–21), and *Thomas Ewing*, former Commissioner of Patents (pp. 21–22), were in favor of the bill although Mr. Ewing offered several minor amendments.

(2) *Action taken on S. 5265.*—S. 5265 was reported to the Senate on February 24, 1919, by Senator Kirby who explained the purpose of the bill. No action was taken (57 Congressional Record, 4148).

(3) *Hearings on H. R. 14944.*[29]—The hearings on H. R. 14944 were held before the House Committee on Patents on January 27, 1919.

[29] House Committee on Patents, hearings on H. R. 14944, an act authorizing the Federal Trade Commission to accept and administer for the benefit of the public and the encouragement of industry, inventions, patents, and patent rights, and for other purposes (1919), 51 pages.

The testimony was similar to that given on S. 5265, as many of the same persons testified. Important statements included the following:

Edward S. Rogers:

> Indeed, I don't see how there can be any serious objection to it. The purpose is to have merely an enabling act. The matter of technical and detailed administration will have to be worked out later; but the present situation is really acute * * *. That is to say, much has been developed during the war that will have a far-reaching peacetime use, and as demobilization goes on further a great deal of this is in danger of being lost (pp. 3–11, at 8).

Frederick G. Cottrell:

> I think the fundamental argument there is that at present we have no means of any control whatever of the patents that are developed in the Government service, and that any attempt to allow individual employees to simply go out and license their patents as individuals is more dangerous than putting them through a definite channel of this kind that will be standardized (pp. 24–33, at 27).

In answering the question as to whether there might be an opportunity to give large advantages to certain corporations through the patent licensing, Dr. Cottrell replied:

> I think not, because my feeling is that this whole thing is so directly open to public examination and check and control that it is not likely that anything of that kind would develop (p. 27).

Dr. C. L. Alsberg, Chief of the Bureau of Chemistry, Department of Agriculture, favored the bill (pp. 37–38, 44–46).

(4) *Action taken on H. R. 14944.*—H. R. 14944 was reported to the House on March 3, 1919. The report [30] urged passage of the bill for seven reasons. The two which were the most important for the present discussion were:

> There is no fixed or general policy dealing with inventions and patents developed by Government employees in the course or as a result of their official duties, and consequently no governmental administrative machinery for translating such inventions and patents into actual public service.
>
> There is no way at present by which patentees in or outside the Government service can dedicate their patents to the public with the assurance that the public will reap the full benefit therefrom, because an invention covered by a patent so dedicated does not interest capital, and because it may be excluded from public use by patents subsequently taken out by others.

A letter of Presidential approval was included in the report. The report also pointed out:

> As it is merely an enabling act, it will be self-eliminating if found impracticable because, in that case, no further

[30] Inventions, Patents and Patent Rights, H. Rept. 1169 to accompany H. R. 14944, March 3, 1919.

patents will be offered the Federal Trade Commission for assignment.

No further action was taken on H. R. 14944.

(5) *Hearings on S. 3223 and H. R. 9932.*—Joint hearings were held on these bills on November 5, 1919,[31] but most of the statements were given by those who had testified during the earlier hearings. In explaining the value of exclusive licenses, *Frederick G. Cottrell* argued:

> The idea is to give sufficient protection to effect the development of the invention by limiting the licensing to what would insure a fair return for the capital expended (p. 8).

A further hearing was held on S. 3223 and H. R. 9932 before the Senate Committee on Patents on January 23, 1920.[32] *Dr. Andrew Stewart,* Bureau of Mines, stated:

> But it is under the discretion of the President, and that is the reason why we made that provision in the bill, in order that it shall be as elastic as possible; because this is an experiment in economic research, and the measure should have every possible safeguard * * *. But—and here is a bigger safeguard—this thing is entirely open to public inspection and criticism. And, furthermore, the Federal Trade Commission will be under the eye of every department and bureau that intrusts its patents to it. If they do not carry out the provisions of this measure wisely, no more patents will be forthcoming and that will be the end of it * * * The strongest point in this bill is that it is not mandatory; it is purely permissive (pp. 3–15, at 6 and 7).

The testimony on the bills was all favorable.

(6) *Action taken on S. 3223 and H. R. 9932.*—S. 3223 was reported favorably from committee on January 31, 1920, by Senator Norris. The report [33] included a broadening amendment whereby the Federal Trade Commission was empowered to accept "other rights or powers" in addition to "assignment of, or license." The report was almost identical to House Report 1169 on H. R. 14944 (65th Cong.) but it included a letter of approval from Franklin K. Lane, Secretary of the Interior. Later on February 3, 1920, H. R. 9932 was reported from the House Committee on Patents in a report [34] identical to that on S. 3223. Subsequent action was limited to S. 3223, however, and no further action was taken on H. R. 9932.

On February 4, 1920, Senator Norris explained the provisions of S. 3223 before the Senate. He mentioned the approval of the bill:

> first, by the President of the United States; second, by the Commissioner of Patents, by the Secretary of the Interior, by the Bureau of Mines, and by all the other scientific bureaus

[31] Senate and House Joint Patent Committee, hearings on S. 3223 and H. R. 9932, an act authorizing the Federal Trade Commission to accept and administer for the benefit of the public and the encouragement of industry, inventions, patents, and patent rights, and for other purposes (1919), 41 pages.

[32] Senate Committee on Patents, hearing on S. 3223 and H. R. 9932, a bill authorizing the Federal Trade Commission to accept and administer for the benefit of the public and the encouragement of industry, inventions, patents, and patent rights, and for other purposes (1920), 15 pages.

[33] Authorizing the Federal Trade Commission to Accept Inventions and Patents, S. Rept. 405 to accompany S. 3223, January 31, 1920.

[34] Administration of Patents by the Federal Trade Commission, H. Rept. 595 to accompany H. R. 9932, February 3, 1920.

> and departments of the Government. [He pointed out that] the employees who would be affected for the most part are employees engaged in chemical work, employees in the Bureau of Standards and in the Bureau of Mines doing work of a scientific nature (59 Congressional Record 2430).

Senator Reed Smoot objected that the Secretary of the Interior rather than the Federal Trade Commission should administer the patents (59 Congressional Record 2430). On March 22, 1920, after a short discussion, S. 3223 was passed by the Senate (59 Congressional Record 4682).

S. 3223 was reported favorably from the House Committee on Patents on May 12, 1920, in a report [35] identical to Senate Report 405 (66th Cong.). No further action was taken on S. 3223, but as indicated below, its provisions were incorporated into H. R. 11984 and became the subject of further debate and action.

(7) *Action taken on H. R. 11984.*—On March 5, 1920, H. R. 11984, dealing with the Patent Office, had passed the House of Representatives and was before the Senate Committee on Patents. That committee proceeded to insert therein as section 10 of the bill, the provisions of S. 3223 and in this amended form reported the bill favorably on May 18, 1920. The report [36] on section 10 was practically identical to Senate Report 405 on S. 3223.

Section 10 of H. R. 11984 was debated in the Senate on June 4, 1920 (59 Congressional Record 8484–8486). Senator Smoot objected to the provision permitting persons not Government employees to assign their patents to the Federal Trade Commission. Senator Charles S. Thomas was very much opposed to section 10. He stated:

> I may be mistaken, but my opinion is that under the operation of this proposed law the Federal Trade Commission will be transformed from a semijudicial body into an administrative bureau, and its time will be practically monopolized by its administration of a new patent system of which the Government is to be the owner (p. 8485).
>
> The man, however, whose patent is not accepted by the public is discontented; he is unhappy; he believes that the merits of the invention are being ignored; possibly it is subject to obstruction; that, whatever the reason, it has not had a fair chance. Under this bill, therefore, he will rush to the Federal Trade Commission, representing the Government, to make an assignment of his patent and then insist upon the issuance of licenses, doubtless encouraging men to apply for such licenses, since the bill provides that he shall have a proportion, to be fixed by rules and regulations, of the income derived by the Government under the patent system (p. 8485).

The patent licensing section was amended in the Senate, omitting the explicit right of the Federal Trade Commission to "refuse to issue licenses." H. R. 11984 was passed by the United States Senate on June 4, 1920 (59 Congressional Record 8490).

[35] Administration of Patents by the Federal Trade Commission, H. Rept. 970 to accompany S. 3223, May 12, 1920.
[36] Increase of Force and Salaries in Patent Office, S. Rept. 596 to accompany H. R. 11984, May 18, 1920.

The Committee on Patents of the House of Representatives considered the revised H. R. 11984, and on December 9, 1920, it reported that it was opposed to the Senate amendments and desired a conference.[37] The bill was then referred to a conference committee which agreed on a section very similar to that passed by the Senate.[38] Section 11 (formerly sec. 10) read as follows:

> That the Federal Trade Commission be, and hereby is, authorized and empowered to accept assignment of, on behalf of the United States, under such regulations and in such manner as the President shall prescribe, inventions, patents, and patent rights which said commission deems it to the advantage of the public to be so accepted, as these may from time to time be tendered it by employees * * * of the Government * * * and to cooperate, as necessity may arise, with scientific or other agencies of the Government in the discharge of the duties herein set out, and the Federal Trade Commission is hereby authorized and empowered to license and collect fees and royalties for licensing said inventions, patents, and patent rights in such amounts and in such manner as the President shall direct * * * *Provided*, That nothing herein shall be construed to give to said commission or any other governmental agency any authority to engage in the manufacture of any such invention or patented article.

Employees of the Patent Office were excluded from the provision of section 11.

The conference report was debated in the House on February 15 and 16, 1921 (60 Congressional Record 3228–3230, 3264–3269). The most significant arguments follow:

Congressman John I. Nolan:

> There has been a good deal of opposition to this particular section. Some very influential gentlemen appeared before the conferees fearful of the consequences of it. The conferees figured, however, that the Government of the United States and the people of the United States are entitled to some consideration as far as patents that we are responsible for are concerned (p. 3229).

Congressman Schuyler Merritt:

> I do not think that when a man goes into the Government employ he should assign all his rights in an invention which is the production of his brain and his work any more than a man who goes into the Government employ and who writes a book should assign the copyright of that book to the United States (p. 3264).
>
> * * * but what I say is, if this bill is passed it will put those powers in the hands of the Federal Trade Commission, and inevitably, when they get those powers, like every other commission, they will want to exercise them, and they will

[37] To Increase Force and Salaries in the Patent Office and to Authorize the Federal Trade Commission to Accept and Administer, for the Benefit of the Public and Encouragement of Industry, Inventions, Patents, and Patent Rights, and for Other Purposes, H. Rept. 1115 to accompany H. R. 11984, December 9, 1920.

[38] Conference report on bill for increase of force in Patent Office, S. Doc. 379, February 9, 1921, and H. Rept. 1294 to accompany H. R. 11984, February 4, 1921.

> think they know more about how things should be done than any manufacturer or inventor (p. 3264).

Following the debate on February 16, 1921, the House agreed to the conference report (p. 3269).

Debate on the conference report in the Senate was held on February 21, 1921 (60 Congressional Record 3535–3539). Senator James A. Reed, in particular, objected to the provisions of the bill, as he thought that no burdens of this kind should be placed on the President and that the Federal Trade Commission was incompetent to carry out the licensing. Senator Reed opposed the principle of government licensing as an aggrandizement of government power. There was no vote on the report in the Senate, however, as the time remaining in the session was too short.

B. Licensing by Interdepartmental Patents Board

1. S. 2387 (68th Cong.), February 7, 1924, Ernst; H. R. 7273 (68th Cong.), February 25, 1924, Lampert

a. *Provisions*

The bills provided that the President would establish an Interdepartmental Patents Board consisting of members of the various Government departments and agencies. This Board was then empowered

> to issue nonexclusive licenses under patents owned by the United States to such individuals, firms, or corporations, and on such terms as may in the said board's judgment be in the public interest * * * (sec. 2).

b. *Action taken*

None.

C. Licensing by the President

1. S. 4360 (69th Cong.), May 26, 1926, Wadsworth; H. R. 12412 (69th Cong.), May 25, 1926, Morin; S. 2162 (70th Cong.), January 4, 1928, Metcalf; H. R. 6105 (70th Cong.), December 7, 1927, Vestal

a. *Provisions*

The bills provided:

> That the President is hereby empowered to issue licenses under patents owned by the United States to such individuals, firms, or corporations, and on such terms and conditions as he may by regulation establish to be in the public interest. * * *

The licensing was to be effected by a commission of the Secretary of War, the Secretary of the Navy, and the Secretary of Commerce. The money from the licenses was to be paid to the Treasury.

b. *Legislative action*

(1) *Action taken on S. 4360.*—None.

(2) *Hearings and action taken on H. R. 12412.*[39]—Hearings on H. R. 12412 were held before the Committee on Patents on June 18, 1926. The significant testimony follows:

Col. Joseph I. McMullen, Judge Advocate, War Department, stated that the Bureau of the Budget and the War Department were behind

[39] House Committee on Patents, hearings on H. R. 12412, a bill to authorize the licensing of patents owned by the United States (1926), 23 pages.

the drafting of the bill. The Government had licenses on about 30,000 patents, and it owned over a thousand patents, so that the need for the bill was great. Colonel McMullen felt that it was necessary to give certain "monopoly rights" to those who developed the patents, but he thought that exclusive licenses should be granted only in special instances and then only with Presidential approval (pp. 1–9).

Pickens Neagle, Office of the Judge Advocate General, Navy Department, stated that the Navy Department had few patents for peacetime use and that in licensing its important radio patents the Department followed the policy of exchanging its licenses for the licenses of private manufacturers. In response to the question whether "the Navy Department has been opposed to any legislation of this character," Mr. Neagle indicated that it had been "on the basis of the patents that the Navy Department owns and knows about" (pp. 1–22, at 18). He felt that the Government should be able to issue exclusive licenses, but it should have "some control" of the manufacturer's price (p. 14).

Thomas E. Robertson, Commissioner of Patents, after stating that "the Patent Office has no direct or indirect interest in this matter" (pp. 22–23, at 22), pointed out that if there were no action soon on the licensing proposal, many of the Government patents would expire. He included in his testimony a letter from Herbert Hoover, Secretary of Commerce, who favored the bill.

(3) *Action taken on S. 2162 and H. R. 6105.*—None.

2. H. R. 12695 (70th Cong.), April 4, 1928, Vestal; S. 415 (71st Cong.), April 22, 1929, Reed; H. R. 1932 (71st Cong.), April 24, 1929, Vestal; H. R. 8984 (72d Cong.), February 8, 1932, Sirovich

a. *Provisions*

The bills provided:

> That under such regulations as the President may prescribe, licenses under patents or applications for patents owned by the United States may be issued to individuals, firms, or corporations upon such terms and conditions as may best serve the public interest: *Provided,* That no exclusive licenses under said patents and applications for patents shall be valid unless approved by the President * * *.

The money received from the licenses was to go to the Treasury.

b. *Legislative action*

(1) *Action taken on H. R. 12695.*—On April 12, 1928, the Committee on Patents reported H. R. 12695 to the House. The report [40] urged passage of the bill, stating that during the war the Government had taken up much research and that it ought to develop these inventions in accordance with the purposes of article I, section 8, of the Constitution by licensing the patents. It was felt by the Attorney General that it was legal for the Government to license its patents, but that this power should be provided for in legislation. The Departments of Agriculture, Commerce, War, and Navy owned the most patents, but the bill had the "approval" of all Government departments. The

[40] Authorize Licensing of Patents Owned by United States, H. Rept. 1245 to accompany H. R. 12695, April 12, 1928.

report then went on to say that although the bill would bring revenue to the Government, the important purpose was the public use of the invention. The committee explained:

> The Government does not itself manufacture for sale or disposition the devices covered by patents which it owns except for Government use. If it grants no license under the patents owned by it the invention is practically buried and unavailable for the life of the patent, the public is deprived of the advantage of the invention, and so the object of the constitutional provision is substantially nullified or evaded with no consequent advantage to the Government but distinct loss, because of the greater cost of the restricted article both to the Government and eventually the public, because the wider the field and the greater the production, the cheaper the article which has been the history of industry well known to all.

On May 28, 1928, H. R. 12695 was taken from the Consent Calendar and considered in the House. Congressman Fiorello H. LaGuardia proposed an amendment:

> *And provided further,* That rights are reserved to the United States to manufacture, produce, or acquire any article covered by said patents without the payment of royalty or other fee.

The bill with the amendment was passed by the House of Representatives on the same day (69 Congressional Record 10388).

The Senate Committee on Patents then considered the bill and submitted a report [41] to the Senate on January 14, 1929. The report quoted a statement from Dwight Davis, Secretary of War:

> The present powers of the President to issue nonexclusive revocable licenses under patents is not adequate to meet this situation, as no industry would deem it prudent to make any substantial investment for the manufacture of a patented article unless assured that its patent rights were irrevocable and also that its competitors would not be granted similar powers as to the same patent. This means that the licenses issued to industries should be exclusive and irrevocable.

The remainder of the report was similar to House Report 1245 on H. R. 12695.

On January 26, 1929, there was a brief discussion in the Senate of H. R. 12695 (70 Congressional Record 2282–83), but no action was taken.

(2) *Action taken on S. 415 and H. R. 1932.*—None.

(3) *Report on H. R. 8984.*[42]—The House Committee on Patents issued a favorable report on H. R. 8984 (72d Cong.) on June 20, 1932. The report stated:

> If there were authority of law for the issue of an exclusive license for the manufacture of articles under a Government-

[41] Licensing of Patents Owned by United States, S. Rept. 1447 to accompany H. R. 12695, January 14, 1929.
[42] Licensing of Patents Owned by United States, H. Rept. 1674 to accompany H. R. 8984, June 20, 1932.

owned patent, private industries would be warranted in setting up plants for their general production, thus extending to the public a benefit not now available and at the same time providing facilities for increased production for use of the Government in case of emergency.

No further action was taken on H. R. 8984.

3. H. R. 16570 (70th Cong.), January 24, 1929, Vestal

a. *Provisions*

Section 4 of the bill provided:

> The President is authorized to sell or license on such terms and conditions as he may prescribe any invention or patent, or application for patent or other transferable patent interest owned by the United States, when in his judgment the interests of the Government and the public may be best served thereby.

The money from the licenses was to go into a patent fund at the Treasury.

b. *Action taken*

None.

D. Licensing Through Individual Agencies

1. H. R. 6901 (77th Cong.), April 6, 1942, Kramer

a. *Provisions*

The bill provided for the licensing of Government patents through the individual agencies, stating:

> Sec. 4. Under such regulations as the President of the United States may prescribe—
>
> (a) Licenses under inventions or patents in which the United States has or may hereafter acquire licensable rights may be issued by the head of the agency controlling said rights to any person or persons, except officers or employees of the United States, upon such terms and conditions, including the granting of exclusive rights, as may best serve the public interest * * *.

Information on the Government patents and licenses was to be furnished by the Government agencies for a register in the United States Patent Office (sec. 4 (b), 5).

b. *Action taken*

None.

E. Office of Scientific and Technical Mobilization

1. S. 702 (78th Cong.), February 11, 1943, Kilgore; H. R. 2100 (78th Cong.), March 5, 1943, Patman

a. *Provisions*

The bills set up an Office of Scientific and Technical Mobilization and specified the organization and the duties of the Office. Section 7

granted exclusive power over licensing all Government patents to the Office of Scientific and Technical Mobilization, stating:

> SEC. 7. (a) Any provision of law to the contrary notwithstanding, the Office is hereby vested with the exclusive right to use, and with the exclusive right to license others to use, (1) any invention, discovery, patent, or patent right which has heretofore resulted, or shall hereafter result, from research or invention for the carrying on of which the United States or any department, agency or establishment thereof either has heretofore contributed at any time since the declaration of national emergency on May 27, 1941, or shall hereafter contribute any money, credit, physical facilities, or personnel; and (2) any invention, discovery, patent, or patent right which is * * *, or shall hereafter become, to any extent the property of the United States or of any department, agency, or establishment thereof.

Section 7 (b) provided that the Office could then grant "nonexclusive" licenses to the departments and other agencies of the Government. Section 7 (c) gave to the Office the general power over granting licenses to those outside the Government:

> The Office is authorized to grant to others * * * a nonexclusive license to use any invention, discovery, patent, or patent right * * * : *Provided*, (1) That no such license shall be granted unless the Administrator shall first be satisfied and shall find that no monopoly, monopolistic practice, or unfair competitive advantage will be promoted thereby * * *

The Office was to determine the terms of the licenses and the fees.

b. *Legislative action*

(1) *Hearings and action taken on S. 702.*[43]—Hearings on S. 702 were held before the Subcommittee on Scientific and Technical Mobilization and then later before the Subcommittee on War Mobilization of the Committee on Military Affairs from March 30, 1943, to May 10, 1944. Most of the witnesses considered the monopoly situations in various industries, and little of the testimony related specifically to section 7 of the bill. The relevant testimony given on the patent provisions follows:

Thurman Arnold, judge of the United States Court of Appeals and former Assistant Attorney General in charge of the Antitrust Division, favored the licensing proposals since the granting of nonexclusive licenses would help small firms (pp. 8–28).

William Stix Wasserman, investment banker, Philadelphia, felt that if the Government spent money for research, there was no reason why the invention shouldn't be "thrown open to all companies" (pp. 103–109, at 108).

Henry A. Wallace, Vice President of the United States:

> Every business and institution should have full access to all patents and research findings which have been developed at Government expense (pp. 703–711, at 708).

[43] Senate Committee on Military Affairs, hearings on S. 702, a bill to mobilize the scientific and technical resources of the Nation, to establish an Office of Scientific and Technical Mobilization, and for other purposes (1943–44), 1,728 pages.

Wendell Berge, Assistant Attorney General of the United States, presented many exhibits showing the existence of cartels (pp. 713–770, 959–980, 1047–1063, 1117–1138, 1349–1379) and "the abuses which may be committed in the name of privately subsidized nonprofit research foundations" (p. 740). He was very much opposed to monopolistic practices and approved of S. 702, although he did not discuss its specific provisions. No further action was taken on S. 702.

(*2*) *Action taken on H. R. 2100.*—None.

F. Licensing Through Department of Commerce

1. S. 1248 (79th Cong.), July 9, 1945, Fulbright

a. *Provisions*

The bill established a Bureau of Scientific Research in the Department of Commerce. Inventions submitted to this Bureau for development would be subject to the licensing provisions of section 6:

> Sec. 6. (a) Any person, corporation, or other organization desiring to use any invention, product, or process, which is developed under the provisions of this Act, shall, upon proper application, * * * be granted, without further limitation, a nonexclusive license for the utilization of such invention, product, or process for such periods of time as the Administrator deems advisable; *Provided, however*, That the Bureau shall refuse to grant a license to, or shall revoke the license of, any applicant upon a report in writing made by the Department of Justice to the Administrator that the granting of such license, or operation under such license, will tend to promote or result in a monopoly or a practice which is in restraint of trade within the purview of the antitrust laws.

The Bureau could set royalties and could declare an invention secret for security reasons.

b. *Hearings* [44]

Hearings were held on S. 1248 before a subcommittee of the Committee on Commerce from December 12 to 14, 1945. Senator Fulbright amended his bill to provide for the creation of an Office of Technical Services in the Department of Commerce rather than a Bureau of Scientific Research. The qualification that a license would not be granted if it would aid the growth of monopoly was omitted from the bill, and the Secretary of Commerce could issue licenses "on a more exclusive basis," if no licenses were granted in the first year. The more important testimony on the revised patent provisions of S. 1248 follows:

Henry A. Wallace, Secretary of Commerce:

> The setting up of a central Government clearinghouse and disseminating agency for Government-controlled patents will do much to place into productive use technical information which is already public property (pp. 14–22, at 18).

[44] Senate Committee on Commerce, hearings on S. 1248, a bill to establish an Office of Technical Services, and for other purposes (1946), 112 pages.

Dr. S. B. Fracker, Research Coordinator, Agricultural Research Administration, Department of Agriculture:

> The Department of Agriculture is in favor of a policy of unrestricted nonexclusive licensing of inventions developed from federally financed research so long as such a policy is effective in bringing new discoveries into use (pp. 35–44 at 38).

Dr. Fracker felt that exclusive licenses were permissible when industry had to make a large investment to develop an invention, for it was better for the public to benefit from the invention than for the Office to grant no licenses.

R. J. Dearborn, chairman, Patents Committee of the National Association of Manufacturers: The association was opposed to the patent proposals of S. 1248 and felt that the bill might "overlap" the provisions of S. 1285 (79th Cong.), a bill which is discussed on page 45 (pp. 107–108).

c. *Report*

A further revised version of S. 1248 was reported by the Committee on Commerce on January 29, 1946.[45] The bill provided for the compulsory granting of "a royalty free nonexclusive license (including irrevocable licenses)" on patents acquired by the Secretary of Commerce under the bill. If "no outstanding active licenses" were granted under a patent in the first year, the Secretary could revoke the issued licenses and license more exclusively (sec. 7 (a)). S. 1248 also provided that the Office might loan money to inventors to help in the development of their ideas, but only on the condition that the Government would receive a license and that the inventors would—

> grant nonexclusive licenses to any applicant therefor bearing reasonable royalties on any patent or patents which may be received on said invention, product, or process, unless the Secretary finds that licensing on a more exclusive basis is necessary in order that such invention, product, or process may be introduced into commercial use, in which case such licenses shall be issued on such terms and conditions as the Secretary shall determine * * * (sec. 5. (b) (1) (B)).

In cases where one submitting an invention wished "to make it available to the public on a royalty-free basis," the invention would either "be dedicated to the public" or be subject to the provisions of section 7 (a). (Sec. 5 (b) (2).) The Secretary could declare any invention subject to security regulations, but he had to have the "written consent" of the person submitting the invention (sec. 7 (b)).

The Committee on Commerce favorably reported S. 1248, stating:

> The testimony was almost universally favorable as regards both the bill's general objectives and its detailed provisions as incorporated in the later drafts. The committee found practically no opposition to the bill as a whole.
>
> * * * * *

[45] Office of Technical Services, S. Rept. 908 to accompany S. 1248, January 29, 1946.

> The purposes of the bill have been endorsed by the Department of Commerce, the Department of Agriculture, and the Smaller War Plants Corporation.
>
> * * * * *
>
> Without prejudicing the interest of any economic group, this act should increase the national prosperity by encouraging maximum use of war-developed and other industrial and commercial science and know-how. This legislation should also help maintain the scientific and technical preeminence of American industry which in recent years is being challenged by other nations. American business has indicated, on the basis of surveys, that it needs such a service. Your committee finds that the national interest requires it.

d. *Further action taken*

S. 1248 was debated in the Senate on March 1, 1946. It was argued by Senators Revercomb and Taft that the provisions of S. 1248 overlapped the provisions of bills setting up a National Science Foundation and that, therefore, all the bills should be discussed together. Senator Mead, on the other hand, contended:

> The proposal represented by the other bills deals with basic research and basic science. Senate bill 1248 deals with the application of the sciences and research work to the problems of today (92 Congressional Record 1818).

Nevertheless, discussion of S. 1248 was postponed (92 Congressional Record 1818–1819).

On June 29, 1946, during the discussion of S. 1850 (79th Cong.) Senator Mead again discussed S. 1248. He stated:

> I am confident that two facts will stand out during consideration of this bill. In the first place, there is no sound opposition to the bill, because it does not prejudice the interests of any group. In the second place, the bill is one of the most useful and practical small-business measures yet proposed (92 Congressional Record 7937).

No further action was taken on S. 1248.

2. H. R. 6118 (79th Cong.), April 13, 1946, Priest

a. *Provisions*

The bill was identical to the reported version of S. 1248 (79th Cong.). (See p. 42.)

b. *Action taken*

None.

Although the proposal for an Office of Technical Services was considered in later legislation, and enacted, the licensing provisions were omitted.

G. National Research Foundation

1. S. 1285 (79th Cong.), July 19, 1945, Magnuson

S. 1285 established a National Research Foundation, which was authorized under section 7 (d):

> To acquire by purchase, or otherwise, hold and dispose of by sale, lease, loan, or otherwise, real and personal property of all kinds necessary for, or resulting from, scientific research or scientific development without regard to the provisions of law relating to the acquisition, holding, or disposition of property by the United States.

This section did not relate specifically to patent licensing, but it is important to note it here, since S. 1285 was discussed in the hearings on S. 1297, which is considered below.

H. National Science Foundation

1. S. 1297 (79th Cong.), July 23, 1945, Kilgore, Edwin C. Johnson and Pepper

a. *Provisions*

S. 1297 established a National Science Foundation. It provided:

> Sec. 305. (a) The materials or equipment purchased or furnished by Federal funds in connection with research and development projects, and any invention, discovery, or finding resulting from such federally financed projects shall be the property of the United States * * *
>
> (b) Any citizen, corporation, or other organization desiring to use any invention, discovery, or patent, which is or may hereafter become the property of the United States, shall, upon proper application, in accordance with procedures to be established by the Foundation, be granted, without further limitation, a nonexclusive license, for which there shall be made no charge: *Provided, however,* That the Foundation shall refuse to grant a license to, or shall revoke the license of, any applicant upon a finding in writing by the Department of Justice that the granting of such license will tend to promote or result in a monopoly or a practice which is in restraint of trade within the purview of the Sherman Act.

Certain patents could be declared secret.

b. *Hearings* [46]

Hearings on S. 1297 and related bills were held from October 8 to November 2, 1945, before the Subcommittee on War Mobilization of the Committee on Military Affairs. Senator Kilgore presided over the hearings, which were attended by members from the subcommittees of the Committee on Commerce which were considering S. 1248 and S. 1285. (See pp. 42–45.) Before hearing testimony on the bill, Senator Kilgore introduced into the hearings a revised and renumbered version of S. 1297, which he and Senator Magnuson proposed. This

[46] Senate Committee on Military Affairs, hearings on science legislation (S. 1297 and related bills), authorizing a study of the possibilities of better mobilizing the national resources of the United States (1945–46), 1210 pages.

bill, which established a National Research Foundation, provided for the dedication of patents rather than for the granting of nonexclusive licenses, and omitted the antitrust qualification.

Pertinent provisions of this revised bill read as follows:

> SEC. 7. (c) Except as hereinafter provided, any invention, discovery, patent, patent right, or finding produced in the course of federally financed research or development activities shall be the property of the United States and shall be freely dedicated to the public * * *.
>
> (d) Any contract made hereafter by any department or agency of the Government with a private organization (other than a nonprofit organization) providing for federally financed research or development may contain a provision * * * that, if the Director determines that it [a particular invention, discovery, patent, patent right, or finding] was substantially developed by such contractor without such aid, any provision or requirement that such invention, discovery, patent, patent right, or finding shall be the property of the United States and shall be freely dedicated to the public shall be set aside or modified to such extent as the Director may prescribe as being fair and equitable and consistent with the national interest. No research or development shall be authorized under a contract containing such a provision unless the contracting department or agency determines that adequate arrangements for such research or development cannot be made without entering into a contract containing such a provision.

The President could exempt inventions necessary for defense from the dedication provision (sec. 7 (e)).

A summary of the important testimony on licensing is given below:

Irving Langmuir, associate director of the laboratory, General Electric Co.:

> * * * of course, the Government automatically gets full rights under the patent to do anything it wants with it, but the point is we do not want to give all advantages to our competitors by giving all rights to the Government and then having them make nonexclusive licenses to everyone (pp. 24–44, at 37, 38).

C. F. Kettering, president and general manager, General Motors Research Corp. and president, American Association for the Advancement of Science, speaking as Chairman of the National Patent Planning Commission, stated:

> Our recommendation on the Government-owned patents was that a Government-owned patent—that the Government is the people, and, therefore, when the Government owned the patents, if not for military purposes, they ought to be thrown open to everybody (pp. 67–78, at 78).

Harold D. Smith, Director of the Bureau of the Budget:

> While I do not wish to suggest the specific extent to which legislative provisions will be required on the subject of patents, it seems to me that, if Federal funds are to be used for

> the support of research, the results of such research should be devoted to the general public interest, and not to the exclusive profit of any individual or corporation (pp. 95–112, at 102).

Lewis G. Hines, legislative representative, American Federation of Labor, urged caution in the administration of section 7 (d), and stated:

> In the case of Government ownership of such patents full information should be made available to all with opportunity for nonexclusive license (pp. 117–120, at 119).

Russell Smith, legislative secretary, National Farmers Union, favored section 305 of the original S. 1297 rather than sections 7 (c) and (d) of the amended S. 1297. He felt that Government inventions should be made available to all except where monopoly would be aided. He commented:

> We cannot believe that Congress will say that such dedication to the public interest of the discoveries for which the public has paid can be set aside by any private interest whatever (pp. 120–136, at 129).

Henry A. Wallace, Secretary of Commerce, approved of the patent provisions of the amended S. 1297 (pp. 137–159).

Dr. Vannevar Bush, Director, Office of Scientific Research and Development, felt that the Government should receive patent rights only in limited instances but that in most cases it should get royalty-free licenses from the patent owners. He explained:

> You know, Senator, I would be much more enthusiastic about securing patent rights for Government if I felt that the United States Government utilized its patent rights well after it obtained them. * * * when government receives a patent today in its hands, what does it do? It effectively destroys that patent. It licenses, ordinarily, all comers at no royalty, so that the effect is exactly the same as though no patent had been issued (pp. 199–227, at 225).

Nevertheless, Dr. Bush realized the dangers of granting exclusive licenses to large firms.

Harold L. Ickes, Secretary of the Interior, favored Government ownership of patents based on federally sponsored research and thought they should be made "available to the public as freely, and as widely as possible" (pp. 335–344, at 340).

Bruce K. Brown, vice president in charge of development, Standard Oil Co. (Indiana):

> However, I believe that the greatest good will be served the greatest number of people, and that the private-enterprise system will best be preserved if all Government-owned patents * * * are thrown upon the entire public without any governmental regulation or restriction (pp. 413–426, at 419).

Howland H. Sargeant, Chief, Division of Patent Administration, Office of the Alien Property Custodian:

> Our third conclusion is, our own experience leads me to the conclusion that a Government agency will make the most effective use of the patent rights under its control through the adoption of a policy of nonexclusive, royalty-free licensing, which is in fact, the program the Alien Property Custodian has been carrying on. (pp. 675–696, at 677).

Mr. Sargeant favored this policy since the patents belonged to the people of the United States and since it would be difficult to determine a reasonable royalty rate. In distinguishing between the patent proposals of the two versions of S. 1297, he stated:

> It would be my honest impression, Senator Kilgore, that the method of obtaining a public patent and not requiring a licensing procedure would be, in the long run, the most effective (p. 690).

Casper W. Ooms, Commissioner of Patents, felt that getting patents on Government inventions brought too much delay. Concerning the bill proposals, he said:

> The objectives of the foundation, recited in both acts, are to assure the widest possible use of the scientific knowledge yielded by the enterprise. Patenting would restrict this use. Any licensing plan, with its necessary technicalities, would discourage it (pp. 696–705, at 698).

R. J. Dearborn, chairman of the patent committee of the National Association of Manufacturers: The association felt that the National Research Foundation bill should not contain patent provisions and that too much authority was given to the Department of Justice in section 305 of the original S. 1297 (pp. 169–187).

c. Action taken

No action was taken on S. 1297, although the bill formed the basis for subsequent proposals discussed below.

2. S. 1720 (79th Cong.), December 21, 1945, Kilgore, Edwin C. Johnson, Pepper, Fulbright, and Saltonstall

a. Provisions

The bill established a National Science Foundation. Section 8 (c) which provided for the public dedication of all Government patents, read as follows:

> Except as provided in subsection (d) below, all rights in inventions, discoveries, or patents now or hereafter owned by or vested in the United States or any Government agency shall be freely dedicated to the public, and any invention, discovery, patent, patent right, or finding hereafter produced in the course of federally financed research or development shall be freely dedicated to the public.

In certain cases where a private organization substantially developed an invention without Federal aid, the organization could keep the patent and the Government would be granted a license (sec. 8 (c)).

b. Action taken

S. 1720 was introduced following the hearings on S. 1297 and the Subcommittee on War Mobilization reported it favorably to the Committee on Military Affairs.[47] No further action was taken, however.

3. S. 1850 (79th Cong.), February 21, 1946, Kilgore and others; H. R. 6672 (79th Cong.), June 4, 1946, Celler; S. 525 (80th Cong.), February 7, 1947, Elbert D. Thomas; H. R. 942 (80th Cong.), January 14, 1947, Celler; H. R. 359 (81st Cong.), January 3, 1949, Celler

a. *Provisions*

The provisions were very similar to those of S. 1720 (79th Cong.), but the licensing section, section 8 (c), differed slightly, reading as follows:

> All inventions, discoveries, or findings in which the United States (or any Government agency) now or hereafter, hold any rights, including patent rights, shall be made available to the public on a nonexclusive and on a royalty-free basis to the extent the United States or such agency is entitled to do so under the rights held by it. Except as provided hereafter in this subsection and in subsection (d), any invention, discovery, or finding hereafter produced in the course of federally financed research and development shall, whether or not patented, be made freely available to the public and shall, if patented, be freely dedicated to the public.

Section 8 (d) was similar to section 8 (c) of S. 1720, allowing modifications for certain inventions financed by private funds. The President could exempt patents from the bill for security reasons.

b. *Legislative action*

(1) *Report on S. 1850.*—The Committee on Military Affairs favorably reported S. 1850 to the Senate on April 9, 1946.[48] The report included a report from the subcommittee of the Committee on Military Affairs, in which the subcommittee stated its approval of licensing to the public both those patents resulting from Government-financed research and those patents presently owned by the Government.

Senators Bridges, Austin, Gurney, Wilson, Revercomb, and Hart expressed the minority views of the Committee on Military Affairs on May 24, 1946,[49] contending that the patent provisions of S. 1850 were contrary to the concept of exclusivity contained in the patent provision of the Constitution. Their report stated:

> The public gets the benefit of the discovery and the inventor suffers the injustice of having his work enrich those who had no part in its production and wholly without profit to him.
>
> * * * * *

[47] Committee on Military Affairs, National Science Foundation, Preliminary Report on Science Legislation * * *, Subcommittee Report 7 to accompany S. 1720, December 21, 1945.
[48] National Science Foundation, S. Rept. 1136 to accompany S. 1850, April 9, 1946.
[49] National Science Foundation, S. Rept. 1136, pt. 2 to accompany S. 1450, May 24, 1946.

> There is no limitation in the bill determining where Federal money ceases to control the direct, or indirect, results of federally financed research, except the Administrator's findings.

(2) *Further action taken on S. 1850.*—S. 1850 was debated in the Senate from July 1 to 3, 1946. Senator H. Alexander Smith introduced a substitute bill, the patent section of which did not provide for licensing of Government patents. This amendment was offered also on behalf of Senators Byrd, Walsh, Willis, Hart, and McClellan (92 Congressional Record 8099).

In explaining the provisions of S. 1850, Senator Kilgore stated:

> Therefore, there will be provided for the first time by statute a policy for the administration of Government-owned patents by all governmental agencies (p. 8036).

The proponents of S. 1850 all argued that it would bring no change in the existing patent law, and that it would merely give back to the public that which their money had developed. Senator Kilgore attacked the Smith amendment on the ground that it contained no specific patent provisions but only provided that inventions should be dealt with in a way which would "protect the public interest" (p. 1840).

Senator Revercomb opposed the S. 1850 patent provisions, contending that, except in cases of national defense, the inventor should be allowed to keep his invention. He also felt that section 8 (d) was too limited. In conclusion, he stated:

> The point which I am making is that, if we leave that language in the bill we have virtually, so far as Government-financed invention is concerned, destroyed forever the incentive which the Constitution of this country recognized by prescribing the power of Congress to enact patent laws (p. 8118).

In answer to Senator Revercomb's arguments, Senator Magnuson stated:

> The provision to which the Senator refers is exactly the same provision as the one which the War Department and the Navy Department put into contracts during the war (p. 8118).

On July 2, 1946, the Smith amendment to S. 1850 was rejected by the Senate in a vote of 24 for the amendment, 39 against it, and 33 not voting (p. 8147).

Senator Smith then offered the patent section of his amendment as a separate amendment to section 8 of S. 1850 (p. 8218). On July 3, 1946, that amendment was defeated by a vote of 31 for, 41 against, and 24 not voting (p. 8228).

S. 1850 was passed by the Senate on July 3, 1946, with 48 Senators voting for the measure, 18 voting against it, and 30 not voting (p. 8242). The bill was then referred to the Committee on Interstate and Foreign Commerce of the House (p. 8347), but no further action was taken.

(3) *Action taken on H. R. 6672 and S. 525.*—None.

(4) *Hearings and action taken on H. R. 942 and H. R. 359.*—Hearings were held on H. R. 942 [50] and on H. R. 359 [51] with testimony similar to that on the earlier bills. No further action was taken on them.

4. H. R. 6448 (79th Cong.), May 15, 1946, Mills

a. Provisions

H. R. 6448 also provided for the establishment of a National Science Foundation. Section 9 of the bill read:

> (a) Each contract executed by the Foundation which relates to scientific research or development shall contain provisions governing the disposition of inventions produced thereunder in a manner calculated to protect the public interest and the equities of the individual or organization with which the contract is executed. Such objectives may usually be accomplished, within the discretion of the Foundation in particular cases, by making freely available to the public or, if patented, by freely dedicating to the public, inventions produced in the course of basic or fundamental scientific research or scientific research or development completely financed by the Foundation, and by providing for the United States to receive an irrevocable, nonexclusive, royalty-free license for governmental purposes under inventions produced in the course of applied scientific research or development financed by the Foundation but to which the contractor contributes substantially through past or current research or development activities financed by it.
>
> (b) All inventions produced by employees of the Foundation during the course of their assigned activities for the Foundation shall be made freely available to the public or, if patented, shall be freely dedicated to the public.

b. Hearings [52]

Hearings on H. R. 6448 were held on May 28 and 29, 1946, before the Public Health Subcommittee of the Committee on Interstate and Foreign Commerce. The important testimony on the bill's patent provisions follows:

Congressman Wilbur D. Mills pointed out that the bill applied only to the Foundation's work and not to all Government patents (pp. 15–29).

Robert P. Patterson, Secretary of War:

> I have given careful consideration to the features of H. R. 6448 which deal with patents. I find that since they are not retroactive and apply only to contracts executed in the future, they are satisfactory to the War Department (pp. 24–30, at 26).

The *Navy Department* (pp. 41–46) and the *National Association of Manufacturers* (pp. 65–68) approved of section 9 of the bill.

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[50] House Interstate and Foreign Commerce Committee, hearings * * * on H. R. 942, H. R. 1815, H. R. 1830, H. R. 1834, and H. R. 2027, bills relating to the National Science Foundation (1947), 279 pages.

[51] House Committee on Interstate and Foreign Commerce, hearings * * * on H. R. 12, S. 247, and H. R. 359, bills to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense, and for other purposes (1949), 208 pages.

[52] House Committee on Interstate and Foreign Commerce, National Science Foundation Act, hearings on H. R. 6448 (1946), 94 pages.

c. *Action taken*

None.

5. S. 526 (80th Cong.), February 7, 1947, Smith, Cordon, Revercomb, Saltonstall, Magnuson, and Fulbright; H. R. 1815 (80th Cong.), February 10, 1947, Clifford P. Case; H. R. 1830 (80th Cong.), February 10, 1947, Mills; H. R. 1834 (80th Cong.), February 10, 1947, Priest; H. R. 2027 (80th Cong.), February 18, 1947, Hays; H. R. 4852 (80th Cong.), January 8, 1948, Priest

a. *Provisions*

Section 11 (a) of these bills, providing for a National Science Foundation, stated that Foundation contracts would provide for—

> the disposition of inventions produced thereunder in a manner calculated to protect the public interest and the equities of the individual or organization with which the contract or other arrangement is executed.

Section 11 (b) of S. 526, which was identical to section 9 (b) of H. R. 6448 (79th Cong.), made the inventions of Foundation employees "freely available to the public."

b. *Legislative action*

(1) *Report on S. 526.*[53]—S. 526 was reported to the Senate from the Committee on Labor and Public Welfare on March 26, 1947, but section 11 (b) was changed and no longer provided for the dedication of patents.

(2) *Hearings and action taken on H. R. 1815, H. R. 1830, H. R. 1834, and H. R. 2027.*—Hearings were held on these four bills on March 6 and 7, 1947, before the Committee of Interstate and Foreign Commerce.[54] No further action was taken on the bills.

(3) *Action taken on H. R. 4852.*—None.

6. National Science Foundation Act of 1950 (Public Law 507)

The National Science Foundation Act as finally passed did not provide for licensing or dedication of Government patents. Section 11 (e) gave the Foundation authority—

> to acquire by purchase, lease, loan, or gift, and to hold and dispose of by sale, lease, or loan, real and personal property of all kinds necessary for, or resulting from the exercise of authority granted by this act.

This section applied to property in general. Section 12 (a) dealt with patents and stated that each contract should provide for—

> the disposition of inventions produced thereunder in a manner calculated to protect the public interest and the equities of the individual or organization with which the contract or other arrangement is executed * * *

[53] National Science Foundation, S. Rept. 78, March 26, 1947.

[54] House Interstate and Foreign Commerce Committee, hearings on H. R. 942, H. R. 1815, H. R. 1830, H. R. 1834, and H. R. 2027, bills relating to the National Science Foundation (1947), 279 pages.

I. Licensing of Surplus Patents

1. H. R. 5506 (79th Cong.), February 18, 1946, Voorhis

a. *Provisions*

The bill provided:

> That no patents, processes, techniques, or inventions which may be declared surplus under the terms of the Surplus Property Act by any department or agency of the United States shall be disposed of by sale. Such patents, processes, techniques, or inventions shall be recorded in the Department of Commerce which shall pursue a continuous policy of granting royalty-free nonexclusive licenses for the use of any such patents, processes, techniques, or inventions.

b. *Action taken*

None.

J. Dedication

1. H. R. 5940 (79th Cong.), March 29, 1946, Lanham

a. *Provisions*

Section 2 of H. R. 5940 stated that all Government patents—

> shall be, and they hereby are, made available for the free use and enjoyment of the citizens of the United States, its Territories, and possessions, and no fee or license shall be exacted or required for such use, and such citizens and each of them may make, use, or sell such inventions * * * as if such patents had not been granted.

The only qualifications were given in section 3, which stated that the bill was not to interfere with existing Government contracts or with World War II legislation on "the rights of any enemy, or ally of an enemy."

b. *Hearings* [55]

The Committee on Patents held hearings on H. R. 5940 from June 4 to 6, 1946. The significant testimony follows:

R. J. Dearborn, president, Texaco Development Corp., and chairman, committee on patents and research, National Association of Manufacturers: The National Association of Manufacturers approved of the dedication, as the Government should not have the power to choose to license only certain persons (pp. 3–6).

Casper W. Ooms, Commissioner of Patents, favored the bill in general but suggested several amendments. He proposed extending the bill's provisions to foreigners whose governments granted reciprocal privilege and adding a clause to provide that those persons, firms, or corporations using the Government's patented inventions should grant licenses on their patents for Government use (pp. 13–18).

[55] House Committee on Patents, hearings on H. R. 5842, a bill fixing the date of the termination of World War II for special purposes, and H. R. 5940, a bill to make Government-owned patents freely available for use by citizens of the United States, its Territories, and possessions (1946), 103 pages.

Conder C. Henry, patent attorney and former Assistant Commissioner of Patents:

> I think that all of us, or at least the most of us, will agree that the Government ought not to be in the business of commercializing patents and competing with its citizens, and that economic power of this kind, which is susceptible of political exploitation, should not be concentrated in bureaucratic hands. To do so would enable the Government to grant rights under its patents to selected favorites for political purposes or what amounts to the same thing, to exclude for political reasons particular individuals or companies from using inventions patented by the Government (pp. 18–21, at 19).

Mr. Henry felt that the Government should not use its patents for bargaining purposes.

James E. Markham, Alien Property Custodian:

> I am in complete sympathy with the objective of furthering the royalty-free use by American citizens of patents vested from nationals of enemy countries, and by administrative action I have sought to effectuate that objective by granting nonexclusive royalty-free licenses under those patents (pp. 35–41, at 37).

He agreed with the principle of H. R. 5940.

W. John Kenney, Assistant Secretary of the Navy, favored the bill but thought that there ought to be exceptions for cases where patents were essential for the national security and for instances in which the cost of development would make exclusive licenses more suitable (pp. 41–45).

R. S. Ould, patent attorney:

> If the Government's title and ownership of a given patent has been subjected to general dedication to the public, there may arise jurisdictional questions as to whether the Government can prosecute proceedings to determine priority of invention, on the ground that the Government has no more title to the invention than the other party to the interference has as a member of the general public, and that hence the issue of priority is moot, and further, it may be difficult to secure appropriations to support such litigation on behalf of the Government if the Government does not own the inventions.
>
> For these reasons, this bill might in some instances result as a practical matter in dedicating a Government invention, not to the public, but to give it to some second or third or later inventor who filed a patent application which the Government could not contest. Such an event would operate to defeat the announced purposes of this bill (pp. 53–60, at 56, 57).

John Stedman, Department of Justice: The Department of Justice approved of the general purpose of H. R. 5940. Mr. Stedman thought some solution was needed for the situation in which firms with monop-

oly control might receive all the benefits from Government inventions (pp. 60–77).

Chester L. Davis, attorney-at-law, representing the American Bar Association, stated that although the American Bar Association had taken no action on H. R. 5940, in the past it had opposed bills which tended to have an opposite effect (pp. 31–34).

The *New York Patent Law Association* (pp. 6–11) and the *War Department* (pp. 11–12) approved of the bill.

c. *Action taken*

None.

K. Bills Relating to Specific Government Patents

It may be said in conclusion that, in addition to the legislative proposals discussed above, there have been bills on Government licensing which related to specific agencies and to the field of atomic energy. Although detailed discussion of such bills lies beyond the scope of this report, a list of the important bills follows:

1. Atomic Energy:
   - S. 1463 (79th Cong.), October 3, 1946, Edwin C. Johnson
   - S. 1717 (79th Cong.), December 20, 1945, McMahon (Public Law 585)
   - S. 1824 (79th Cong.), February 9, 1946, Edwin C. Johnson
   - H. R. 4015 (79th Cong.), September 12, 1945, Voorhis
   - H. R. 4280 (79th Cong.), October 3, 1945, May
   - H. R. 4566 (79th Cong.), November 1, 1945, May
   - H. R. 5364 (79th Cong.), February 4, 1946, Helen Gahagan Douglas
   - H. R. 5365 (79th Cong), February 4, 1946, Holifield
   - H. R. 6197 (79th Cong.), April 18, 1946, Biemiller
   - S. 3323 (83d Cong.), April 19, 1954, Hickenlooper
   - S. 3690 (83d Cong.), June 30, 1954, Hickenlooper
   - H. R. 8862 (83d Cong.), April 15, 1954, W. Sterling Cole
   - H. R. 9757 (83d Cong.), June 30, 1954, W. Sterling Cole (Public Law 703)
   - H. R. 1777 (84th Cong.), January 10, 1955, W. Sterling Cole
   - H. R. 5167 (84th Cong.), March 23, 1955, W. Sterling Cole
2. Department of Agriculture:
   - S. 1824 (77th Cong.), August 7, 1941, Bone
   - H. R. 5599 (77th Cong.), August 18, 1941, Leavy
3. Synthetic Liquid Fuels Act:
   - S. 1243 (78th Cong.), June 18, 1943, O'Mahoney (Public Law 290)
   - H. R. 2309 (78th Cong.), September 14, 1943, Randolph
4. Tennessee Valley Authority:
   - H. R. 5081 (73d Cong.), April 20, 1933, Lister Hill (Public Law 17)
5. Trading With the Enemy:
   - S. 2445 (65th Cong.), June 12, 1917, Fletcher
   - H. R. 4704 (65th Cong.), May 25, 1917, Adamson
   - H. R. 4960 (65th Cong.), June 11, 1917, Adamson (Public Law 91)

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[60] This section contains only a few selected articles, since the subject is not discussed in detail in the accompanying report.

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GOVERNMENT PATENT POLICY

(The Ownership of Inventions Resulting From Federally Funded Research and Development)

Summary of Hearings Held in 94th Congress

PREPARED FOR THE

SUBCOMMITTEE ON SCIENCE, RESEARCH AND TECHNOLOGY

OF THE

COMMITTEE ON SCIENCE AND TECHNOLOGY

U.S. HOUSE OF REPRESENTATIVES

NINETY-FIFTH CONGRESS

SECOND SESSION

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LETTER OF TRANSMITTAL

HOUSE OF REPRESENTATIVES,
COMMITTEE ON SCIENCE AND TECHNOLOGY,
Washington, D.C., April 28, 1978.

Hon. OLIN E. TEAGUE,
Chairman, Committee on Science and Technology,
House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: In the 94th Congress, the jurisdiction of the Committee on Science and Technology was expanded to include special oversight over all nonmilitary research and development funded by the Federal Government. In my capacity as chairman of the Subcommittee on Domestic and International Scientific Planning and Analysis, I initiated a study of several aspects of the nation's commitment to science and technology. The significant role patent policy can play as an incentive in the innovative process was brought to the attention of our subcommittee in hearings ranging from mechanisms for the intergovernmental exchange of technology to international cooperation in energy research and development.

With our special oversight function in mind and aware that it must be exercised so as to complement and not displace the oversight responsibilities of committees with principal jurisdiction, the DISPA subcommittee concluded the 94th Congress with a series of 5 days of hearings on the general subject Government Patent Policy: The Ownership of Inventions Resulting From Federally Funded Research and Development. These hearings looked at patent policies across the Federal agencies and developed a well-rounded perspective of their impact.

The Science, Research and Technology Subcommittee has continued the study of government patent policy in the 95th Congress. Hence this summary and analysis of the DISPA hearings on this subject has been developed by Ms. Karen Guarisco of the Science Policy Research Division, Congressional Research Service. It is a concise, informative document and I believe that it will help provide a base for possible future hearings.

I commend this document to your attention and to the attention of our colleagues on the Committee on Science and Technology and in the House of Representatives.

Sincerely,

RAY THORNTON,
Chairman, Subcommittee on Science, Research, and Technology.

LETTER OF SUBMITTAL

THE LIBRARY OF CONGRESS,
CONGRESSIONAL RESEARCH SERVICE,
Washington, D.C., May 2, 1978.

Hon. RAY THORNTON,
Chairman, Subcommittee on Science, Research and Technology, Committee on Science and Technology, U.S. House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: I am pleased to submit this report entitled "Government Patent Policy," which analyzes the testimony presented at hearings before the Subcommittee on Domestic and International Scientific Planning and Analysis on September 23 to October 1, 1976.

The report was prepared by Mrs. Karen J. Guarisco of the Science Policy Research Division. We believe that the report will be useful to the committee in its continuing concern with Government patent policy.

Sincerely,

GILBERT GUDE,
Director.

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I. INTRODUCTION

On September 23, 27, 28, 29 and October 1, 1976 the Subcommittee on Domestic and International Scientific Planning and Analysis of the House Committee on Science and Technology held hearings entitled "Government Patent Policy: The Ownership of Inventions Resulting From Federally Funded Research and Development." In his opening statement, Chairman Thornton cited reasons for the hearings and the basis for his subcommittee's interest in the topic. He noted:

> It has been brought to the attention of our subcommittee in hearings ranging from mechanisms for the intergovernmental exchange of R&D results to international cooperation in energy research and development that there is no single Government patent policy.
>
> Congress is given authority to develop patent policy by the Constitutions directive in article I, section. 8. "To promote the Progress of Science and useful Arts by securing for limited Times to Authors and Inventors the exclusive Right to their respective writings and discoveries." Notwithstanding that directive, the Federal Government has developed patent policies primarily on an agency-by-agency basis resulting in some 20 different approaches.
>
> A Presidential memorandum and statement of Government patent policy issued in 1971 does provide some cohesion. The implications of patent policies developed in this way is what our subcommittee is interested in determining.
>
> I should note the charge given to the newly formed Office of Science and Technology Policy that:
>
> > Federal patent policies should be developed, based on uniform principles, which have as their objective the preservation of incentives for technological innovation and the application of procedures which will continue to assure the full use of beneficial technology to serve the public.
>
> Thus the timeliness of our current efforts. It is appropriate for this subcommittee, established with special oversight responsibility for analysis and advanced planning studies on all nonmilitary research and development, to begin to bring together the various sources of knowledge and experience in this area. (Thornton, pp. 1-2)

In preparation for these hearings the subcommittee published two committee prints 1/ containing background materials on Government patent policies. Volume I consists of Presidential statements, Executive orders, and statutory provisions which relate to the ownership of inventions resulting from federally-funded research and development, while volume II contains reports of committees, commissions and major studies.

The subcommittee heard the testimony of ten witnesses representing both the public and private sectors. Seven of the witnesses were from the Government -- two from the Department of Commerce, Dr. Betay Ancker-Johnson and Dr. Howard I. Forman; two from the Energy Research and Development Administration, James A. Wilderotter and James E. Denny; one from the National Aeronautics and Space Administration, S. Neil Hosenball; one from the Department of Health, Education and Welfare, Norman J. Latker; and one from the Department of the Navy, William O. Quesenberry. There were two witnesses who testified repreaenting the industry sector, Franz O. Ohlson and Charles S. Haughey; and one witness from academia, Raymond J. Woodrow. A summary and analysis of these witnesses' testimony before the subcommittee appears below. Following an introductory section is an analysis presenting the observations and opinions of the witnesses under these major subject areas:

1/ U.S. House of Representatives. Committee on Science and Technology, Subcommittee on Domestic and International Scientific Planning and Analysis, 94th Congress, 2nd session, Serial MM; Background Materials on Government Patent Policies: The Ownership of Inventions Resulting from Federally Funded Research and Development; Volume I -- Presidential Statements, Executive Orders, and Statutory Provisions; Volume II -- Reports of Committees, Commissions, and Major Studies. Washington, U.S. Govt. Print. Off., August 1976.

The Effects of Government Patent Policy on the Utilization of Inventions and on Contractor Participation

- Aspects of Government Patent Policy Affecting the Utilization of Inventions
- The Effects of Government Patent Policy on Contractor Participation in Federally-Funded Research and Development

Elements of a Sound Government Patent Policy

- Uniform Patent Policies and Procedures
- Rights in Inventions Made Under Government Contracts
- Rights to Inventions Made by Government Employees

The analysis concludes with a summary of each witness' observations and opinions regarding the issues surrounding Government patent policy.

II. THE EFFECTS OF GOVERNMENT PATENT POLICY ON THE UTILIZATION OF INVENTIONS AND ON CONTRACTOR PARTICIPATION

A major objective of these hearings before the Subcommittee on Domestic and International Scientific Planning and Analysis was to examine the effects of present Government patent policies. This section reviews the testimony regarding the effects of Government patent policies on the utilization of inventions, and on contractor participation in federally-funded research and development.

Aspects of Government Patent Policy Affecting the Utilization of Inventions

For many years there has been debate over what the Government's policy should be concerning the ownership of inventions resulting from Government-sponsored R&D. It is generally agreed, however, that whatever the policy, it should be one that promotes the utilization of inventions. A prime concern of the Government regarding its patent policies and practices should be to ". . . foster the means for making each invention contribnte as much as possible of its potential utility to the Nation's welfare." (Forman, p. 13) It is maintained that a Government patent policy that fosters the utilization of inventions protects the public's investment in research and development, serves the public's interest, and is in keeping with the constitutional directive to ". . . promote Science and the useful Arts."

But while the consensus is that ". . . the public benefits most when patents are utilized . . ." (Ohlson, p. 89), experience shows that only a small percentage of Government-owned patents has been utilized. The Government owns about 28,000 patented inventions available for licensing, but only about 5% have been subject to some type of licensing action (Forman, p. 8; Ancker-Johnson, pp. 896-897).

It has been suggested that some of the remaining 22,000 or 23,000 patents have not been utilized perhaps because they are not commercially viable -- that they are simply ". . . patents for which there is no commercial market." (Thornton, p. 528) While this may be true of some of the Government-owned inventions, a number of witnesses were concerned that aspects of Government patent policy have affected the utilization of these inventions.

Critics maintain that there are several problems with Government patent policies that contribute to their ineffectiveness in promoting the utilization of inventions and furthering the progress of the arts and sciences. Some believe that two problem areas are the title-taking policies and the nonexclusive licensing practices of some Government agencies regarding contractor inventions resulting from federally-funded R&D and that these policies are the reasons for non-utilization.

Acquisition of Patent Title. Who should retain title to inventions arising out of Government-sponsored R&D -- the Government or the contractor? Some critics of Government "title-taking" policies argue that leaving title with the Government contributes to the nonuse of these inventions. They maintain that contractor ownership of patent rights assures better commercial development and utilization of an invention. Mr. Latker of HEW, in the context of a discussion about title waivers, suggested that when in his opinion title to an invention should have been waived to the contractor, ". . . the ownership in the Government resulted in nothing ever happening." (Latker, p. 818) Mr. Ohlson, a witness representing the industry sector, also noted: "You will find that the originating inventing organization has the greatest incentives to take advantage of their inventions and get it [sic] into the commercial area." He continued, "These incentives are all lacking when the title goes into the Government." (Ohlson, p. 281)

On the other hand, however, it was pointed out ". . . that merely to leave the rights to inventions in the hands of private ownership will not, per se, guarantee their exploitation or utilization." (Forman, p. 13) Another witness corroborated this view:

> Does leaving title to inventions with the contractors move the technology to the commercial marketplace for use by the public? Each time someone looks into use made of contractor-retained inventions, the same disappointing picture appears. The most optimistic study of record found only 13 percent ever used. (Quesenberry, p. 738)

Licensing of Government-Owned Inventions. Differing views on whether Government or contractor-acquisition of title would better promote invention utilization were presented, but there was general agreement that any policy lacking provisions for the implementation of invention utilization can contribute to the nonuse of those inventions. It is contended that when the Government retains title to inventions, utilization can be provided for in the licensing of those inventions (since the Government itself is not in the practice of commercializing inventions). Yet, several witnesses expressed opinions that certain Government licensing practices suppress rather than promote use of inventions.

It is the Government's policy to grant, upon request, nonexclusive royalty-free licenses to all inventions for which it holds title. In the event that there are no takers on a nonexclusive basis, the invention may then be offered on an exclusive basis. The policy of granting nonexclusive licenses is based on the belief that inventions generated with tax dollars should be made freely available so as to benefit all taxpayers. It is often argued, however, that the public may actually benefit less from the increased availability of Government-owned inventions. The reasoning behind this argument is in the paradox: "what belongs to everyone belongs to no one." (Forman, p. 17) It is a curious paradox of economic reality that "something free for all is of little use to anyone." (Quesenberry, p. 880) Accordingly, the argument against nonexclusive

licensing of Government-owned patents claims that this practice negatively affects the utilization of inventions.

In his prepared statement before the subcommittee Dr. Howard Forman stated, "It is an erroneous concept, unfortunately held by some persons who do not understand the practical aspects of operating a business or industry, that patents can be effectively utilized even if they are made available to interested practitioners on a nonexclusive basis." (Forman, p. 15) He explained:

> It is only when a party has the right to exclude all others from practicing an invention, at least for some limited time, that it may be economically feasible for that party to make the necessary investment. The lead time furnished by the exclusive right which the patent makes possible will give the developer an opportunity to recoup his investment and possibly to make a deserved profit before the invention is opened up (by expiration of the patent's exclusive right) to its practice by competitors. Thus, if patents are to be capable of performing their intended function, they can best be utilized if they convey an exclusive right to practice the patented invention for some minimum period of time. (Forman, p. 15)

Countering the argument against exclusive licensing of Government-owned inventions Dr. Forman continued:

> It has been contended that "the people pay, the people should own," i.e., "inventions financed with public funds should inure to the benefit of all the public, and should not become a purely private monopoly under which public-financed technology may be suppressed, used restrictively, or made the basis of an exaction from the public to serve private interests" (Att'y Gen., Report and Recommendations to the President, Investigation of Government Patent Practices and Policies, Vol. III at 28 (1947)).
>
> This narrow view does not take into account what may happen to the inventions in question; it only concerns itself with the merits of leaving or not leaving any rights to the inventions with the Government contractor or employee. If the Government takes title to the inventions and presumably permits practically anyone to practice the inventions this conceivably would make for the widest possible availability of the inventions to the public at large. Will this increased availability, improve the chances that the inventions will accelerate scientific achievement, help the economy, benefit the consumer, promote competition, and give more work opportunities to everyone? Not very likely, for unless there is a strong incentive to invest in the development of the invention, merely to maximize the availability of the invention (as by granting everyone who asks a royalty-free license) rarely serves as such an incentive. If by and large the inventions are not used, then the policy of merely increasing their availability to greater numbers of people could hardly be considered in the public interest. (Forman, p. 15)

Dr. Robert Ellert, Assistant General Counsel for Science and Technology of the Department of Commerce, who accompanied Dr. Ancker-Johnson to the hearings, also discussed nonexclusive licensing as a reason for the nonuse of Government-owned patented inventions. He noted:

> . . . how can we dispose of 28,000 patents. They are just sitting there. Again, it goes back to the fact many people don't want nonexclusive licenses. They want exclusive rights. This is a problem and we are thinking of ways to get the inventions in this portfolio utilized.
>
> (Ellert, p. 899)

Mr. Quesenberry's statement supported the notion that a patent offered on a nonexclusive basis has ". . . very little interest shown by the public in licensing its use." (Quesenberry, p. 796) Mr. Quesenberry gave two examples of private industry interest in commercializing Government-owned inventions in the event that exclusivity could be assured (p. 796) and he noted, "We're [Department of the Navy] having experiences right now of considerable private sector interest in our technology if there can be exclusivity under the patent system." (Quesenberry, p. 803)

Mr. Latker, of the Department of Health, Education and Welfare testified that when the pharmaceutical industry ran a boycott of Government-owned inventions it was at a time when the department had no capability of licensing industry on an exclusive basis. He noted that as a result their entire patent portfolio was virtually dormant. (Latker, p. 723)

The above testimony of the witnesses lent support to the argument that the licensing policies and practices of the Federal Government affects the utilization of Government-owned inventions and that specifically, nonexclusive licensing practices discourage the commercialization of these inventions. In Dr. Forman's opinion these policies constitute a form of suppression of patents:

> . . . I hold that the U.S. Government, by acquiring 28,000 patents and not seeing to their utilization for the public good, is also guilty of suppression of patents. It amounts to the same thing as the charge made against corporations that acquire many patents and don't use them.

> When the Government says it will license anybody who wants it and nobody comes and takes a license, that is negative suppression. It is suppression just as much as if they refused to grant a license, or refused to exploit the patented invention. (Forman, p. 11)

The Effects of Government Patent Policy on Contractor Participation in Federally-Funded Research and Development

Several witnesses testified that Government patent policies have inhibited contractor participation and have deterred competent and qualified contractors from seeking Federal R&D contracts. The conclusions of a 1968 study conducted for the Federal Council for Science and Technology, by Harbridge House, Inc., were cited in support of this notion [the study referred to appears in Committee Print, Background Papers, Volume II, pp. 69-140]:

> The study concluded inter alia that Government patent policy had major adverse effects on industry participation in Government research programs, such as program delay, loss of participants and diversion of private funds from Government lines of research. (Ohlson, p. 90)

> It has been documented that in many cases, such as those cited in the famous Harbridge House report, . . . adverse patent and data policies of a Government agency have been a major cause of companies shying away from potential contracts with that agency. (Haughey, p. 172)

While a majority of witnesses suggested that aspects of Government patent policy adversely affect contractor participation in federally-funded research and development, one witness doubted that ". . . the record shows that patent rights provisions have turned away able and capable contractors." Mr. Queaenberry explained:

> Mr. Chairman, I have heard, and I have for 30 years been listening to comments made on Government patent policy, the comment that this corporation or that corporation does turn down a contract. In my opinion, this is normally brought to the hearings in Congress by the patent lawyers. We patent lawyers like the patent system, and we want everyone to appreciate the benefits of it.
>
> But I don't think the record shows this. I think that the Congress has had comments on this by others. For example, Admiral Rickover spoke in his capacity with the Atomic Energy Commission -- and this was a title agency. As I recall in his testimony years ago, Admiral Rickover made it

very clear that he had no problem with finding able and willing research contractors to take the research.

I have many times heard the counsel of the Senate Subcommittee on Patents, Trademarks and Copyrights appear before patent professional groups and say, "The chairman of our subcommittee would like to support you. Give him evidence of such instances." There may have been a few submitted, but the last I knew it was very discouraging. The captains of industry did not come forward and say, "We turned down research and development."

So I guess, Mr. Chairman, what I'm saying is that you will find we patent lawyers will raise these precautions to you frequently, but I don't think the record shows that patent rights provisions have turned away able and capable contractors. (Quesenberry, pp. 803-804)

The general consensus, however, was that there are aspects of Government patent policies that adversely affect contractor participation. Drawn from the testimony of several witnesses, the following were cited as inhibiting factors:

(1) Lack of a uniform Government patent policy and resulting administrative burdens;

(2) Government agency title-taking policies; and,

(3) Mandatory or compulsory licensing of background patents.

Lack of a Uniform Government Patent Policy. Dr. Betsy Ancker-Johnson felt that the diversity in Government agency patent policies and practices and the administrative burdens associated with this lack of uniformity deterred competent and qualified contractors. She testified that the administrative burden of deciding the type of patent rights clause to be used and the uncertainty associated with that decision, ". . . has deterred both small businesses and the most competent of our larger concerns from taking Government contracts." (Ancker-Johnson, p. 900) In an explanation of the various agency policies concerning the allocation of rights to inventions resulting from federally-funded R&D, Dr. Ancker-Johnson discussed how this diversity may be burdensome to contractors thereby inhibiting their participation:

> An examination of the Federal patent policies mentioned above discloses a significant diversity in agency practices in this important area. As you have noted, Mr. Chairman, some agencies are obligated because of statutory requirements to use a clause acquiring title to all inventions resulting from the contract. Other agencies are required to use a clause acquiring title to all inventions made under the contract, but may waive title to the contractor under certain circumstances. In addition, other agencies may use any one of several clauses, either acquiring title, acquiring only a license, or deferring the allocation of rights determination until an invention is made under the contract, as provided by the 1971 Presidential statement.
>
> As a result of the diversity in agency practices, there is an enormous and needless administrative burden placed on both the Federal agencies and their contractors as extensive negotiations occur respecting the rights to be granted the contractors and those to be retained by the Government. This administrative burden often deters the most qualified and competent contractors from seeking Federal R&D contracts, thus inhibiting competition and curtailing the widespread utilization of inventions resulting from such research. (Ancker-Johnson, p. 889)

Government Title-Taking Policies. Two witnesses cited examples to support the opinion that Government title-taking policies may discourage contractor participation. Mr. Jesse Lasken of the National Science Foundation, who accompanied Mr. Latker to the hearings, stated:

> . . . there was one large company that was doing work in geothermal, had quite a portfolio in drilling, and that sort of thing, and they wouldn't have entered into these efforts if they had thought that they were going to lose rights in patents that might arise under drilling techniques and other things that they were doing. (Lasken, p. 807)

And, as one of the representatives from the industry sector Mr. Haughey testified: "We have in many cases in our own company been discouraged from pursuing technology useful to those agencies that control the field or work in the field where there is a title policy." (Haughey, p. 379)

Mandatory Licensing of Background Patents. It was brought to the attention of the subcommittee that the issue of the Government acquiring rights to a contractor's background patents ". . . is perhaps the most controversial and emotional issue of all." (Denny, p. 433) Background patents may be defined as those patents covering inventions made by the contractor before or outside of

the contract effort which are necessary to practice the subject matter of the contract work. Under certain circumstances the Government can require mandatory or compulsory licensing of a contractor's privately-developed background patents. Mr. Ohlson, a witness from the industry sector, suggested that the mandatory licensing of background patents ". . . has not been accepted by industry and, where made applicable to Government procurements, has usually led many companies to refrain from competing in such procurements." (Ohlson, p. 90) In answer to a question posed by Chairman Thornton and in support of his above statement, Mr. Ohlson further explained:

> Take the position of a company that has a strong patent portfolio in a particular area. The Government expresses a desire for research, generally through a request for a proposal, an RFP as it is called, or invitation to bid. Such a firm has two alternatives. They can compete for that contract and should that contract contain mandatory licensing, the company puts their patent portfolio into jeopardy. On the other hand, they can refuse to bid and stand by. If the end results of the contract infringes any one of their patents, the company can bring action against the Government in the Court of Claims and recover. Actually, the only cost is legal fees.
>
> If they decide to participate in the program they jeopardize their competitive position and may have to grant a license under their patents to their toughest competitor. There is an old expression in marketing: "Macey's don't tell Gimbel's how it runs its business." And that is the same way. When you expose your background technology, it is your competitor who may benefit. (Ohlson, pp. 114-115)

Mr. Haughey, another representative from industry, when asked by Chairman Thornton what was a major factor ". . . in inhibiting a company from entering into an agreement when proprietary rights may be surrendered . . .", answered: "The loss of control of your background is obviously a major factor." (Haughey, p. 284) Dr. Ancker-Johnson also noted: "It certainly was my experience in the private sector that private companies, those for whom I worked, were very reluctant to enter into contracts with the Federal Government because of the possible loss of rights already held by the company . . ." (Ancker-Johnson, p. 905)

III. ELEMENTS OF A SOUND GOVERNMENT PATENT POLICY: OBSERVATIONS AND OPINIONS

As noted in section II of this analysis, several witnesses at the hearings suggested that Federal patent policies have adverse effects on contractor participation and invention utilization. With this notion as an underlying theme, the testimony presented throughout the five days of hearings concentrated on three main topics:

(1) The concept of a uniform Government patent policy;

(2) Rights to inventions made by Government contractors; and,

(3) Rights to inventions made by Government employees.

A sound Government patent policy would appear to be one that addresses itself to these three main topics of concern and one that best responds to the objectives of maximum invention utilization and contractor participation. Examining the issues surrounding the three above-mentioned topics, this section of the analysis will present suggestions made at the hearings for alleviating the adverse effects of Government patent policies and the witnesses' observations and opinions on the elements of a sound Government patent policy.

Uniform Patent Policies and Procedures

A study of the patent policies and practices of the various Government agencies reveals that there is significant diversity in this area. As Chairman Thornton pointed out in his opening statement: ". . . the Federal Government has developed patent policies primarily on an agency-by-agency basis resulting in some 20 different approaches." (Thornton, p. 2) While the 1971 Presidential memorandum and statement of Government patent policy does provide some cohesion, not all agencies are governed by the administrative regulation because " . . . the patent policies of some agencies are dictated by provisions of their enabling legislation . . ." (Forman, p. 18) and the policy statement does not apply to

those agencies ". . . whose patent policies have been laid down by statutes which originated them or by amendments to those statutes." (Forman, p. 13) As a result, Government patent policy was characterized as " . . . still a kaleidoscope of individual agency practices . . ." leaving the ". . . situation as muddled as ever." (Quesenberry, p. 738)

As previously noted in section II of this analysis, Dr. Ancker-Johnson testified that the diversity in agency patent practices places enormous and needless administrative burdens on both the Federal agencies and their contractors and that in turn, these administrative burdens often deter qualified and competent contractors from seeking Government R&D contracts. (Ancker-Johnson, p. 889) Several witnesses expressed the opinion that while the differing missions of the various Government agencies require different patent policies because of the varied kinds of technologies the individual agencies deal with in discharging their responsibilities, nevertheless, some degree of uniformity might be desirable. Mr. Latker of HEW stated, ". . . our scientists don't view things on a mission-oriented basis at all, and I have no difficulty in perceiving some general principles of patent management that every agency could abide by in managing their portfolio." (Latker, p. 811) Mr. Wilderotter of ERDA suggested that ". . . it would be in the public interest to have some degree of uniformity between and among Government agencies." (Wilderotter, p. 440) And Mr. Hosenball of NASA gave his opinion on the issue:

> I think generally NASA supports the concept of some degree of uniformity, and I think legislation could be drafted providing that uniformity, at the same time that provisions are in the legislation to assure that the agency -- the particular agency -- carries out its statutory mission.
>
> So I think there certainly is a case for uniformity, recognizing that you do need some degree of flexibility in that uniform policy to allow agencies to carry out their own particular missions. (Hosenball, p. 488)

While several witnesses felt that uniformity could be desirable, some witnesses expressed stronger opinions on the degrees to which uniformity in Government patent policies should be implemented. As cited above, Dr. Ancker-Johnson felt that uniformity was necessary in order to lessen the administrative burdens associated with the complex and diverse patent policies of Government agencies. She also noted that it was the desire of the [former] Federal Council for Science and Technology to formulate a uniform Federal patent policy and that the Committee on Government Patent Policy was established in 1965 for the purpose of providing a forum for developing such a position. (Ancker-Johnson, p. 861)

When Mr. Ohlson, a witness from the Aerospace Industries Association of America, Inc. (AIA), was asked if he saw a need for different patent policies he gave AIA's stand on the issue:

> We felt the time had come for the Congress to take a real hard look to see whether or not a single patent policy would not be proper at this time. Since that time, we have continually examined the question and have included it in our proposed bill. We think it is time that there is a single policy and that it be uniformly administered. (Ohlson, p. 380)

Mr. Quesenberry of the Department of the Navy expressed his opinions regarding the diversity of Government agencies' patent policies:

> The private sector is entitled to be able to deal with the many different representative agencies of the Federal Government under uniform conditions. The agencies who seek capable research assistance from the private sector to carry out programs, should not be competing with one another in terms of patent policy. Executive direction and congressional overseeing of the functioning of Government should not be subjected to a hodgepodge of agency patent policies. (Quesenberry, p. 739)

And Dr. Forman, in his prepared statement before the subcommittee, expressed his opinion:

> As long as the paramount criterion is to be the utilization of the invention, and if it is decided that such utilization is best done through such Government-chaperoned private activity, then all inventions in which the Government has an interest should be made subject to the identical treatment. (Forman, p. 16)

Notwithstanding the claims that some diversity in Government agencies' patent policies and practices is justified, the witnesses who discussed this issue generally agreed that uniformity is a desirable element of a sound Government patent policy.

The Allocation of Rights to Inventions Made by Government Contractors

A major part of the testimony focused on issues surrounding the allocation of rights to inventions made by Government contractors: title vs. license-taking policies, nonexclusive vs. exclusive licensing of inventions, waiver policies, rights to background patents, etc. In the discussion that follows, opinions on these issues will be examined relevant to existing Government patent policies and policy options or alternatives.

Rights in Inventions Made Under Government Contracts. Mr. Ohlson included as part of the hearing record an AIA document entitled "A Proposed Government Procurement Invention Incentive Act" (pp. 92-113). The document contains a synopsis of existing Federal policies with an explanation of title and license policies:

> Existing Federal policies fall within two general categories: a "title policy" under which the Government acquires title to Subject Inventions and Subject Patents and the contractor normally retains a royalty-free nonexclusive license therein, and a "license policy" under which the contractor retains title and the Government acquires a royalty-free, non-exclusive license.
>
> Actions by the Congress to formulate patent policy have resulted either in the enactment of a "title policy" or a statutory requirement that "patents . . . be fully and freely available to the general public." This latter statutory requirement has been implemented as a "title policy."
>
> In 1963, President Kennedy issued a Memorandum and Statement of Government Patent Policy to guide executive agencies, not otherwise governed by statute, in allocating rights to inventions made under Government grants and contracts. The Presidential Policy, developed after extensive interagency deliberations, seeks to accommodate the various Government policies and in essence embodies both "title" and "license" policies. The Presidential policy also includes "march in rights" under which, where the contractor

retains title, the Government may under certain situations require the granting of licenses, either royalty-free or on other reasonable terms.

Significantly, the Presidential Patent Policy was revised in 1971 to enlarge the authority of agency heads to waive title to contractors and to authorize the grant of an exclusive license under a Government-owned patent. (p. 96)

Dr. Forman pointed out in his prepared statement that "There are a variety of rights to patents and patentable inventions which the Government may obtain, and several ways in which it may administer those rights." (Forman, p. 14) Several of these ways were discussed at the hearings and are summarized as the following:

-- The Government may obtain title and offer nonexclusive licenses to all who apply;

-- The Government may obtain title and grant exclusive licenses that may be revoked or tranaferred to another party in the event that commercialization has not taken place in a fixed amount of time;

-- The Government may take title and conceivably engage in manufacturing or commercializing the invention itself.

or . . .

-- The Government may normally take title with provisions for the waiver of the title to the contractor, the waiver being subject to march-in rights (either requiring the licensing of others or termination of the waiver) in the event that commercialization haa not taken place in a fixed amount of time;

-- The Government may leave a "defeasible title" to the inventor -- in the event that steps are not taken by the inventor to commercialize the invention, the Government can take back the title and grant it to another interested party.

There are many arguments against both Government acquisition of title to inventions made under Government contracts and nonexcluaive licensing. As pointed out earlier, the policy of granting nonexclusive licenses to Government-owned inventions to any interested parties is based on the concept that inventions generated with tax dollars should be made freely available to the taxpaying public. The argument againat nonexclusive licensing maintains that in reality, there are few or no takers of licenses offered on a nonexclusive basis and

what results is the non-utilization of Government-owned inventions [see section II of this report for testimony opposing the Government practice of nonexclusive licensing].

The position generally taken by most of the witnesses at the hearings was that if the Government takes title to inventions resulting from federally-funded research and development, it should permit the exclusive licensing of these patents in order to better insure the utilization of inventions. As Dr. Forman pointed out:

> It is only when a party has the right to exclude all others from practicing an invention, at least for some limited time, that it may be economically feasible for that party to make the necessary investment. The lead time furnished by the exclusive right which the patent makes possible will give the developer an opportunity to recoup his investment and possibly to make a deserved profit before the invention is opened up (by expiration of the patent's exclusive right) to its practice by competitors. Thus, if patents are to be capable of performing their intended function, they can best be utilized if they convey an exclusive right to practice the patented invention for some minimum period of time. (Forman, p. 15)

Dr. Forman, however, noted that the mere granting of exclusive licenses does not guarantee the utilization of inventions. Accordingly, he suggested that the Government oversee the utilization of inventions through the following provisions:

> To discourage disuse or non-use of inventions, there should be some requirement that the holders of rights thereto must prove that they have made reasonably satisfactory efforts to utilize them commercially within a stipulated period of time, or else yield the exclusive rights thereto. The Government's right and duty should be to see to it that if such utilization is not accomplished as described, the exclusive rights are transferred to some other party that seems likely to bring about the desired utilization. (Forman, p. 13)

In support of the exclusive licensing of Government-owned inventions, Mr. Quesenberry believed that the contractor should have automatic first option for exclusive rights to commercially develop and market inventions under the contract for a fixed period of time. He maintained that insurances may be

provided for the utilization of inventions through the revocability of the exclusive right, should the contractor not carry out its plan for commercialization. (Quesenberry, p. 739) Yet Mr. Denny suggested that in negotisting patent provisions for ERDA R&D contracts, the revocable license has presented substantial problems. He concluded, however:

> In view of the fact that experience has shown that very few exclusive licenses have been granted by the government, and in view of the several safeguards provided to the contractor prior to the revocation of such licenses, the contractor is virtually assured that his license will not be revoked in any field of use in which the contractor intends to commercialize the invention. (Denny, p. 435)

It was suggested that the Government could conceivably retain title to an invention and engage in commercializing the invention itself as has been done in Britain and Canada. (Forman, p. 20) In view of the fact that such a practice would substantially alter the ". . . entire political-economic free enterprise philosophy of the country" (Forman, p. 16), this was regarded as an interesting but not an acceptable alternative.

Another method by which the Government can administer rights to patentable inventions arising out of Government-sponsored R&D is to waive title of these inventions to the contractor. Both NASA and ERDA patent policies allow the granting of waivers. To encourage the utilization of inventions whose title is waived to the contractor, waiver rights normally carry with them Government march-in rights either requiring the licensing of others or the termination of the waiver in the event that steps toward utilization have not taken place in a fixed amount of time.

Those in favor of patent policies allowing the granting of waivers maintain that the flexibility allowed by this policy provides ". . . incentives to contract . . . and to commercialize resulting technology", and that the march-in rights are available to ". . . give others the opportunity to commercialize

inventions where the waiver recipient does not succeed." (Denny, p. 436) Speaking for ERDA, Mr. Denny observed that although ERDA is still in a policy developing mode ". . . the basic policy concepts of patent waivers has not been a problem." (Denny, p. 432) Mr. Wilderotter, also of ERDA, cited industry opinion regarding ERDA's waiver policy. He noted that although industry expressed an overwhelming preference for a policy of allowing Government contractors to retain title to inventions, industry believed that:

> . . . the flexibility in granting waivers contained in ERDA's patent policy, if properly managed and liberally applied, could be sufficient to encourage private sector participation and provide sufficient incentives to secure commercialization of the results of ERDA's research and development efforts. (Wilderotter, p. 428)

It was recognized, however, that waivers also carry with them administrative burdens associated with negotiating time and cost, which discourage competent and qualified contractor participation in federally-funded research and development. A representative of the industry sector, Mr. Haughey, noted:

> The procedures in petitioning for and obtaining the grant of waivers under agencies such as NASA and ERDA are a substantial burden on a contractor who wishes to acquire patent rights. The effort required to petition for such waivers is usually a close approximation to the effort required by technical and attorney personnel to obtain a patent, thus substantially increasing normal patent costs. The patent, when granted, is subject to revocation and is also subject to the customary nonexclusive license for use by or for the Government and often subject to more Government rights. It follows that companies are reluctant to request and acquire rights under Government contracts where waiver procedures are required because of the complexity of the procedure and the cost attendant thereto. (Haughey, p. 174)

However, in defense of ERDA's waiver policy and the associated administrative burdens, Mr. Denny explained:

> The great majority of our negotiating time is spent, not on the basic concept of a waiver, but on the detailed language of the waiver grant and on other language set forth in the patent clause. For example, it has

not been unusual for a waiver situation to be recognized and agreed upon as a result of a one-half-hour conversation, and yet the detailed language may involve 8 days of negotiation.

There are many reasons for this situation. ERDA was the first major research and development agency to actually implement the new patent language set forth in the FPR and ASPR which will be adopted Government-wide. We have, therefore, taken the brunt of industry's first contact with these policies and contract language. ERDA is also dealing with a group of contractors which in large measure have never before contracted with the Government. And finally, with almost each waiver request or waiver situation, ERDA is establishing new policy or filling out a total waiver policy with new situations for which appropriate contract language has not been established. With the finalization of ERDA's regulations, the development of more express waiver language for contract clauses, and the general familiarity with the FPR/ASPR patent language, substantial progress should be made in reducing our contract negotiation time. (Denny, p. 432)

In addition to the arguments presented against waiver policies, Mr. Ohlson, a witness from industry, presented another opposing view. He maintained that while waivers do provide some degree of incentive to the contractor community, ". . . the acquisition of rights to inventions should be based upon a firmer or more permanent base than the decision of an incumbent agency or department head or his designee." (Ohlson, p. 90) And Mr. Woodrow, a witness from academia, presented the university sector's opinions regarding waivers:

Sometimes the waiver is granted in advance for a particular grant or contract for all inventions that may be made. Sometimes the waiver is granted after an invention is identified -- after the research is well under way and the invention is made on which a waiver is desired. And my experience and that of my colleagues are not favorable in either situation. Waiver applications are complicated and costly. I believe that it costs more than $1,000 just to get all the machinery underway to get the waiver. The agency's criteria for granting waivers are difficult to satisfy and their administration demonstrates the typical bureaucratic tendency of being more stringent than necessary in order to avoid criticism. Waivers also often carry with them march-in requirements and other strings. Waivers on individual inventions after identification generally make it impossible to enter into drug testing agreements or other cooperative undertakings, such as a program we have underway right now with an industry supporting it and the Federal Government supporting it. The industrial organization will not be satisfied with a waiver system after the invention is made. Waivers put the shoe on the wrong foot. If what I have said earlier is true, there should be a very strong presumption that the country's interests are best

served by vesting title to inventions in university contractors and grantees unless there is good and sufficient reason to do otherwise.

(Woodrow, pp. 73-74)

Some witnesses felt that a Government patent policy that leaves title with the inventor is the most desirable alternative. Such a policy would be subject to march-in rights in which the Government could take back the title or require licensing in the event that steps are not taken by the inventor to commercialize the invention. Dr. Forman commented on this alternative:

> A more acceptable alternative is to leave the rights to inventions in the hands of Government contractors who conceived them in the performance of their contract. This would be much more in the public interest if it can be shown that to leave the rights with the contractors will practically guarantee maximum utilization of the inventions.
>
> A proposal has been advanced whereby such a guarantee would be provided. Either the inventions, which contractors would be able to control as their own (subject to the nonexclusive, royalty-free right for use by the Government) are acceptably worked on a commercial basis, or they might forfeit that control. This gives the contractor a chance to get a return on its own investment in the making of the invention, which it made either before or after receiving the Government contract, and assures that if the invention is not put into the commercial millstream, in a specified period of time, the Government may step in and transfer the exclusive right to practice the invention to someone else. In this way, the Government can pursue its responsibility of seeing to the development and use of the invention, without departing from the private ownership and management principles under which the country has prospered for over 200 years.
>
> (Forman, p. 16)

Mr. Ohlson, one of the witnesses from industry, expressed a preference for a policy which allows the contractor to retain title to inventions:

> Stated concisely, a policy to achieve these goals should provide for the contractor to retain title to inventions made in the performance of Government contracts with rights in the Government to practice such inventions for governmental purposes and in the public to obtain licenses thereunder in certain circumstances, for example, where the contractor is not meeting public requirements. (Ohlson, p. 91)

The witness from academia, Mr. Woodrow, also expressed a preference for such a policy:

> To summarize, I urge that the title to inventions arising from federally funded research at colleges and universities be left with the

> institutions, that this be done with the Government receiving a royalty-free nonexclusive license for Federal Government purposes, and that the Institutional Patent Agreement with reasonable and minimum requirements, as the best method so far encountered, be the method for implementation. If these objectives can be accomplished, the public interest will be advanced and the equities of university inventors and of universities themselves will be satisfied. (Woodrow, p. 75)

Mr. Woodrow briefly defined the "institutional patent agreement" and urged that it be applied to all Federal agencies in funding research and development at colleges and universities:

> Briefly, the IPA is an agreement between an agency and a college or university covering the management of all inventions arising from agency grants or contracts to the institution, unless specifically excepted. As an advance condition the institution's patent policy and program must meet certain criteria. There are limitations on how patentable inventions can be handled, and the Government may require licenses or additional licenses if adequate progress is not made toward practical application, or for purposes such as fulfillment of public health or safety needs. (Woodrow, p. 74)

Dr. Betsy Ancker-Johnson supported the concept of a policy which allows contractor retention of title. Speaking as chairwoman of the Committee on Government Patent Policy of the Federal Council for Science and Technology, she explained a draft policy proposed by the committee. She noted that this proposed policy adopted the basic concepts of the Commission on Government Procurement's "alternate approach." She explained:

> The policy concepts incorporated in the alternative approach by the Commission on Government Procurement and endoraed by the Committee on Government Patent Policy, would permit the contractor to retain title to all patents resulting from Federal contracts and grants, and require the contractor to license others in certain specified situations so as to safeguard the public interest. In particular, the contractor would be required to license others if he fails to commercialize an invention covered by the patent. Even where he commercializes his invention, the contractor would be required to license others to meet specific public interest needs auch as health, safety, and welfare, or to correct a situation inconsistent with the antitrust laws. It is expected that, in these licensing situations, the contractor would generally be willing to license third parties without a Federal agency determination requiring him to do so. Should a contractor refuse to license a third party, the Federal agency itself has the right, in appropriate circumstances, to license the third party, subject to the contractor's right to a hearing and an appeal.

> The proposed policy would reduce drastically -- I can't emphasize that enough -- the administrative burden of deciding the type of patent rights clause to be used in the some 30,000 R&D contracts executed annually, and would obviate the need for processing waiver petitions. (Ancker-Johnson, p. 888)

Mr. Quesenberry, however, presented arguments against a policy that provides for contractor ownership of inventions arising out of Government-sponsored R&D. It was his opinion that the Government should own inventions, and that the contractor be allowed to obtain first option for exclusive licensing instead of retaining title. Mr. Quesenberry cited reasons why he felt the Government rather than the contractor should hold title to inventions resulting from Federal sponsorship of R&D. He suggested that if the Government does not protect its technology it may find itself in the position of having to pay royalties to patent holders who have protected their technology and ". . . we'll end up with the taxpayer paying for this new technology twice." (Quesenberry, p. 800) He believed the Government should own patents for a second reason:

> The second reason why we should own patents, I think, is exactly what I say is the bottom line, the utilization of this technology. I think you've had many witnesses, and I'm sure you knew even before these hearings, that if we take this tremendous reservoir of technology and dedicate it to the public no one wants it because of the risk capital involved. . . .
>
> So I think that the present interest in the Congress and in the executive branch of doing something with this technology reservoir, moving it back to the taxpayer on the marketplace, must have the patent system behind it or it isn't going to move to the marketplace. So who else is to protect this if it isn't the Government, who paid for it in the first place? Then use the patent system to let the originator, be it a contractor, or what, to bring it to the marketplace. If he won't, then offer it to someone else with the protection of the patent system over his risk capital. (Quesenberry, p. 800)

Mr. Quesenberry maintained that even though the record shows that the use of Government-owned inventions has been poor, the experience under contractor retention of title has not proved to be any better. He cited a study that showed ". . . less than 10 percent of the inventions retained by contractors

ever reached the commercial marketplace . . ." (Quesenberry, p. 803) It was Mr. Quesenberry's opinion that if there can be exclusivity under the patent system and that if the Government will take steps to publicize its technology and make the incentives of the patent system available to bring forth the risk capital, the ". . . 3 percent usage of the old days will rapidly disappear."

Government Policy Regarding Background Patents. Background patents are defined as those patents covering inventions made by the contractor before or outside of the contract effort which are necessary to practice the subject matter of the contract work. The subcommittee heard testimony that the Government policy of acquiring rights to contractors' background patents is a controversial policy -- one that possibly affects the participation of contractors in federally financed research and development. The controversy arises in the Government's right under certain circumstances to require licensing of a contractor's privately-developed background patents. It is the usual situation that:

> . . . a contractor qualified to perform the contract work will have a background expertise that is likely to be covered by patented technology. If the contractor is to use his best efforts under the contract, then it is also likely that this background patented technology will be included in the contract results. (Denny, p. 433)

Mr. Ohlson noted that a contractor who is competing for a Government contract demonstrates his competency and is hired accordingly because of his background. He pointed out:

> Obviously, a company brings into that competition years and years of private investment in establishing a company's technical expertise, that will permit the company to be responsive to the Government's needs. Even though there are those that say there is a use of public funds in bringing an invention into being under a Government contract, it must be remembered in many cases the invention is derived from the background and skills of the engineers and the technicians who have not in any way engaged in Government activities. Thus, it may be difficult to distinguish between an

> invention made under the Government contract and an invention that has been made patented with inclusive private funds.
>
> If they decide to participate in the program they jeopardize their competitive position and may hsve to grant a license under their patents to their toughest competitor. (Ohlson, p. 114)

Along the same lines Mr. Haughey noted, "The potential loss of a market position by a contractor as a result of the required licensing of its background patents is a severe handicap in pursuing and acquiring Government contract business." (Haughey, p. 174)

Mr. Denny explsined ERDA'a policy and practice with reapect to background patents:

> I think one of the problems is that when background rights are discussed, unfortunately, the phrase is used that ERDA, or the government, "takes" the background rights, or that the contractor has to "give up" his background rights. I think this really is not the case.
>
> We have a very delicate problem here. ERDA's responsibility is to create alternative energy sources. We must do this in cooperation with industry. Industry is going to have a background position, and that background position is going to find its way into ERDA's research results. If the contractor is the only corporation in the United States that can utilize the results of this contract effort, I think we have a potential conflict between our missions: to encourage competition, and to encourage widespread utilization.
>
> What ERDA has tried to do is to define a very narrow background clause, which I might add, is not required by our legislation.
>
> We have tried to define a very narrow clause that attempts to draw a compromise between needs of the Government and the contractor, to make sure the program results are accessible to the public, and to give the contractor appropriate equity in his background. What the clause basically does is define as a background patent, what I would call a blocking patent, only those patents, the utilization of which are absolutely necessary in order to practice the subject matter of the contract.
>
> The right we take in a background patent for the Government is the free right in the Government for research, development, and demonstration purposes only. I like to paraphrase this right like this: We have asked industry to allow us to commercialize their technology on their behalf. Once the invention gets into our program, we can complete our research and development, and that is all. The Government does not obtain production rights or commercial rights.

> Second, in background patents, we ask the contractor to license others at reasonable royalties upon our request, but only in the field of use of the contract, not in other fields of use.
>
> In addition, we throw in several safeguards. The contractor can ask to be relieved of this responsibility, or, alternatively, if he can show that there is alternative technology commercially available or that he is supplying the market at reasonable prices, he does not have to license. (Denny, p. 438)

Concluding his discussion of the topic of background patents Mr. Denny pointed out:

> Although industry does not like the concept of a background patent rights clause, and views it with a great deal of suspicion, once the clause has been studied and understood, it has generally been accepted with little change. (Denny, p. 435)

However, it was Dr. Ancker-Johnson's opinion that ERDA's policy concerning background patents is ". . . probably hampering ERDA very markedly." (Ancker-Johnson, p. 905)

Chairman Thornton asked Mr. Hosenball for NASA's policy regarding background patents and Mr. Hosenball explained:

> Our policy is not to take background patents. It's done very rarely. I can remember only one or two cases in my 15 years in NASA where that's been done.
>
> The nature of our mission is to acquire products primarily for government use, and, therefore, we really don't generally require background patents to carry out our mission, so we as a matter of policy do not require background rights of any sort, and generally where it is required, or somebody thinks it's required. That decision is made in NASA headquarters. We're very, very careful in exercising the taking of any sort of background rights. (Hosenball, p. 509)

Rights to Inventions Made by Government Employees

Another area of controversy relating to Government patent policy is the Government's policy with respect to inventions made by its employees. Although this issue was not widely discussed at the hearings, some witnesses commented regarding it. Generally, rights to inventions made by Government employees are

determined by provisions of Executive Order 10096 issued by President Truman on January 23, 1950. Briefly, the policy set out in the Executive order states that the Government shall obtain the entire right, title and interest to all inventions made by Government employees (1) during working hours, (2) with a contribution by the Government of facilities, equipment, materials, funds, etc., and (3) which bear a direct relation to or are made in consequence of the official duties of the employee/inventor.

It was Dr. Forman's opinion that Executive Order 10096 may be declared unconstitutional and that on the basis of this doubt, ". . . it would be helpful to the country in the future, if we had a statute which defined these rights rather than to depend upon an administrative order, even an Executive Order." (Forman, p. 7)

As has been noted previously, it is Dr. Forman's belief that an acceptable alternative to the present Government patent policy is to ". . . leave rights to inventions in the hands of Government contractors who conceived them in the performance of their contract." (Forman, p. 16) Such a right would be subject to march-in rights allowing the Government to step in and transfer the exclusive right to practice the invention to someone else in the event that the contractor does not commercialize the invention in a specified period of time. Regarding Government employee inventions, Dr. Forman maintained that if the underlying philosophy of the above-mentioned alternative policy is accepted, ". . . there is every reason to believe that it should also be applied to inventions made by Government employees as well as by contractors." (Forman, p. 16) Dr. Forman bases this notion on his opinion that:

> As long as the paramount criterion is to be the utilization of the invention, and if it is decided that such utilization is best done through such Government-chaperoned private activity, then all inventions in which the Government has an interest should be made subject to the identical treatment. (Forman, p. 16)

Dr. Ancker-Johnson also discussed the Government employee invention issue at some length. In identifying the three salient points of the proposed policy she was introducing, she stated one of them to be "the aggressive licensing of inventions made by Federal employees." (Ancker-Johnson, p. 897) She briefly discussed the draft policy's position regarding this issue:

> Now, regarding Federal employee inventions; how should the rights to inventions made by Federal employees be allocated? The committee believes that the basic policy concepts of Executive Order 10096 issued by President Truman in 1950 should be codified.
>
> Briefly, under the proposed policy, the Federal Government would retain ownership to all inventions made by Federal employees where the invention bears a relation to the duties of the employee-inventor or is made in consequence of employment. That is entirely symmetrical with the industrial situation. The policy encourages employees to invent because an incentive awards program is incorporated and income sharing is provided.
>
> The committee believes the draft policy should contain specific provisions for Federal employee inventions, especially since not all Federal employees are covered by the Executive order. (Ancker-Johnson, p. 888)

And, Dr. Ancker-Johnson explained how the proposed policy would function as an incentive for Government employee invention disclosure:

> Inventions arrived at in the course of the employee's normal work belong to his employer, the Federal Government. Any inventions that an employee may make either on his own time or not as a result of the mission of the organization to which he belongs -- those under this policy would be retained by the employee.
>
> I think it is interesting to note that individual inventors are sometimes rather reluctant to pursue or prosecute applications themselves, first of all, because it does require a front-end investment, and second, because most individuals, particularly Federal employees, have no easy way to market their inventions.
>
> If there were a really aggressive full-blown method or process in the Federal Government today for marketing federally owned inventions, I suspect that quite often an inventor would prefer to have the Federal Government prosecute a patent application, at no expense to him, and proceed to market his invention. Under our policy, the inventor would enjoy a return on his effort, a royalty return and an incentive award. This method works in the private sector and we anticipate it would work in the public sector as well.

> If we reward Government employees by returning to them part of the royalty obtained on the licensed patents, I believe we will see a decided increase in the number of inventions disclosed and also in the quantity of these, in terms of their commercial potential.
>
> (Ancker-Johnson, p. 902)

Mr. Ellert, who accompanied Dr. Ancker-Johnson to the hearings, spoke on the coostitutionality of Executive Order 10096:

> The Executive order, Mr. Chairman, to which you refer takes the rights away from the employees and places them in the Government. It makes an analogy between a common law situation where the employer hires an employee and the employee's work is owned by the employer. This concept of the Executive order has been challenged as yon say in a lower court and we don't know just how this will end up.
>
> Going back, however, it more or less confirms the point that the Government doesn't have to take the employees work -- product. Even now, the Executive order could be changed to leave it with the employee under suitable circumstances -- possibly with the Government retaining march-in rights if the employee doesn't develop it. We do not know what the ultimate fate of the Executive order will be.
>
> (Ellert, p. 901)

IV. GOVERNMENT PATENT POLICY: A SUMMARY OF OBSERVATIONS AND OPINIONS

This section presents a synopsis of the ten witnesses' opinions on the topic of Government patent policy and the surrounding issues. These observations and opinions are arranged by witness, in the order in which they testified at the five days of hearings.

Dr. Howard I. Forman, Department of Commerce. Dr. Forman suggested that the Presidential statements on Government patent policy ". . . need to be replaced by a properly worded statute." (Forman, p. 18) He stated that the basic objectives of this policy should be the establishment of uniform policy for all Government agencies and the fostering of the maximum utilization of inventions resulting from Government-supported R&D. (Forman, p. 18) Dr. Forman noted:

> . . . the real goal, the real objective in deciding who should hold title to Government-subsidized inventions should be to do what Article 1, Section 8 says; namely to find a way to utilize those inventions in order to promote the Nation's progress of arts and sciences.
>
> Now, it seems to me that it should be of less importance, from the Government's point of view, as to whether you leave with the inventor or the contractor, as the case may be, or how you make such decisions, so long as you follow it up with some effort, some system, whereby you can oversee the invention to see that it is utilized, overseeing the utilization of such inventions should be the Government's primary responsibility. (Forman, p. 8)

In the event that a contractor is allowed to obtain title to inventions, Dr. Forman believed the contractor's rights should be subject to "march-in" procedures. He commented:

> If the Government has invested money, it has the right to do something to oversee the patents, to the extent that it should inquire whether the patents have been developed and the inventions developed for commercial utilization. If the patent holder hasn't done it at that point, the Government should step in with what is now appropriately called "march-in" rights. (Forman, p. 20)

Dr. Forman concluded his statement before the subcommittee with his endorsement of the Commission on Government Procurement's "alternate approach."

[The "alternate approach" referred to appears in Committee Print, Background Papers, Volume II, p. 195.] Basically, the "alternate approach" urges that contractors be allowed to obtain rights to inventions, subjecting these rights to "march-in" procedures; and that uniformity in Government patent policies and procedures is desirable and practical. In support of this approach Dr. Forman concluded, "I think this approach is close enough to the scheme that I have always favored, and still favor, that it should be seriously considered as the approach to take in any new legislation." (Forman, p. 11)

Mr. Raymond Woodrow, Princeton University. As the only witness representing academia at the hearings, Mr. Woodrow spoke on behalf of the Subcommittee on Patents and Copyrights (Committee on Government Relations, National Association of College and University Business Officers) of which he is a member, and as president of the Society of University Patent Administrators. Summarizing his opinions on the treatment of inventions in grants and contracts from the Federal Government to colleges and universities, Mr. Woodrow stated:

> To summarize, I urge that the title to inventions arising from federally funded research at colleges and universities be left with the institutions, that this be done with the Government receiving a royalty-free nonexclusive license for Federal Government purposes, and that the Institutional Patent Agreement with reasonable and minimum requirements, as the best method so far encountered, be the method for implementation. If these objectives can be accomplished, the public interest will be advanced and the equities of university inventors and of universities themselves will be satisfied. (Woodrow, p. 75)

[The Institutional Patent Agreement is discussed in more detail in section III of this analysis.]

On behalf of the American Council on Education, Mr. Sheldon Elliot Steinbach, Staff Counsel of the organization, wrote a letter to the subcommittee ensorsing Mr. Woodrow's testimony. Mr. Steinbach wrote:

> On behalf of the American Council on Education, an association of 1,311 colleges and universities and 172 national and regional education

associations, and the associations noted hereunder, we are writing to support the statement of the Society of University Patent Administrators presented to the Subcommittee on Domestic and International Scientific Planning and Analysis of the House Committee on Science and Technology by Raymond J. Woodrow on September 23, 1976. (p. 76)

We would like to associate ourselves with Mr. Woodrow's detailed statement on this issue, on behalf of the Association of American Universities, the National Association of College and University Business Officers, and the National Association of State Universities and Land-Grant Colleges. (p. 77)

Mr. Franz Ohlson, Aerospace Industries Association of America, Inc. (AIA).

Mr. Ohlson was one of the two witnesses from the industry sector. On behalf of of AIA (a national trade association representing the major manufacturers of aeronautical and astronautical vehicles) Mr. Ohlson submitted a proposal in the form of proposed legislation. The proposal is entitled "A Proposed Government Procurement Invention Incentive Act" and appears in the hearing record attached to Mr. Ohlson's statement (pp. 92-113). The basic concepts of the proposal were summarized by Mr. Ohlson:

> Having commented on the shortcomings of current Federal patent policies, it would appear appropriate to offer AIA's concept of a policy that would make optimum use of our patent incentives and, by appropriately recognizing and balancing the equities and needs of the Government and its contractors as well as the public, would encourage privately financed research and development efforts and greater competition for Government R&D contracts.
>
> Stated concisely, a policy to achieve these goals should provide for the contractor to retain title to inventions made in the performance of Government contracts with rights in the Government to practice such inventions for governmental purposes and in the public to obtain licenses thereunder in certain circumstances, for example, where the contractor is not meeting public requirements.
>
> Such licenses would be royalty free or royalty bearing depending upon the equities of the situation and would include to the extent necessary a right under any privately developed background patent of the contractor necessary to reproduce the end item called for by the contract.
>
> It should be observed that although the AIA's proposed policy includes mandatory licensing of background patents, such licensing is extremely limited in nature, that is, to reproduce the end item delivered to the Government, and in no way extends otherwise to a contractor's privately developed patents. (Ohlson, p. 91)

Mr. Ohlson also expressed the AIA opinion that the Government have a single patent policy ". . . and that it be uniformly administered." (Ohlson, p. 380)

Mr. Charles S. Haughey, Hughes Aircraft Corporation. As one of the witnesses from the industry sector, Mr. Haughey based his remarks on what he felt is a basic principle in analyzing Government patent policies. He stated this principle to be: "The balance of interest of the Government and the contractor or grantee in the rights in intellectual property should be based on their respective needs." (Haughey, p. 170) After a careful explanation of the parties involved in Government patent policy matters, their respective needs, and the effects of Government patent policies, Mr. Haughey concluded:

> It is my hope that you will analyze any proposed Government patent policy by determining whether the patent policy applicable to an agency establishes a balance that provides those rights in intellectual property that are needed to achieve its statutory function and leaves to the contractors such other rights as they need. By applying this basic policy of balance of needs, the true constitutional objectives of promotion of science and useful arts can and will be achieved while permitting the necessary functions of Government to be accomplished. (Haughey, p. 278)

Mr. James A. Wilderotter, ERDA. Mr. Wilderotter's testimony explained ERDA's patent policy regarding the ownership of inventions resulting from federally-funded R&D. He explained that ERDA's patent policy is controlled by two statutes: the Atomic Energy Act of 1954, as amended; and the Federal Nonnuclear Energy Research and Development Act of 1974. Regarding these acts, Mr. Wilderotter stated:

> To summarize, both the Atomic Energy Act and the Nonnuclear Energy R&D Act provide that normally the Administrator will take title to inventions, but both also give the Administrator the discretionary authority to waive many of these rights. As a result, ERDA has been able to harmonize its nuclear and nonnuclear patent policies into a single consistent policy. (Wilderotter, p. 428)

After briefly outlining ERDA's patent policy and discussing new patent regulations which harmonize ERDA's two statutory provisions, Mr. Wilderotter summarized public comment regarding this policy:

> During the public hearings regarding the legislative patent policies, industry representatives and trade organizations expressed an overwhelming preference for a policy of allowing government contractors to retain title to inventions, with the government getting a royalty-free, nonexclusive license for governmental purposes. Notwithstanding a preference for such a policy, the industry participants noted that the flexibility in granting waivers contained in ERDA's patent policy, if properly managed and liberally applied, could be sufficient to encourage private sector participation and provide sufficient incentives to secure commercialization of the results of ERDA's research and development efforts. The public hearings also surfaced some concern over the precontract "front end load" of ERDA's proposed regulations -- that is, the considerable administrative burdens, on the part of ERDA and the contractor, and time delays required to negotiate acceptable contract provisions.
>
> The comments by the university community on ERDA's legislative patent policies and regulations were overwhelmingly uniform in the view that ERDA's patent policies should permit universities with approved technology transfer capabilities to retain title to inventions developed under ERDA grants and contracts. (Wilderotter, p. 428)

Mr. Wilderotter also summarized ERDA's opinion regarding its policy:

> In response to the requirement for a report on ERDA's patent policies contained in section 9(n) of the Nonnuclear Act, we submitted a preliminary report "The Patent Policies Affecting ERDA Energy Programs," dated January 1976 (ERDA 76-16). This report contains our conclusions that:
>
> Our patent provisions may be satisfactorily harmonized into a single uniform patent policy and procedure;
>
> Our limited experience suggests that our patent policy is workable and will not become a major stumbling block in accomplishing our missions; and
>
> The flexibility provided by our policy permits an equitable and practical allocation of rights to accommodate most cases.
>
> (Wilderotter, p. 429)

Mr. Wilderotter concluded his prepared statement noting that ERDA is still monitoring its patent policy to assess the policy's applicability to ERDA programs.

Mr. James E. Denny, ERDA. Mr. Denny, who accompanied Mr. Wilderotter at the hearings, provided a detailed explanation of ERDA's waiver policy. He discussed the merits and limitations of the waiver policy and concluded that even with its limitations ERDA believed that it had been given ". . . what is probably

the most authoritative, detailed and useful patent policy provision that has been passed by Congress" and that such a policy enables ERDA to ". . . handle the various types of research and development situations and the various technologies that we encounter." (Denny, p. 436) He stated:

> With the above reservations, it can be said that Congress has provided to ERDA what should be the appropriate tools to create an atmosphere wherein the results of ERDA's technology can and should be commercialized. The waiver policy is flexible enough to provide incentives to contract with ERDA and to commercialize resulting technology. The "march-in" rights are available to give others the opportunity to commercialize inventions where the waiver recipient does not succeed. Where Government retains title and offers everyone the opportunity to commercialize, the authority is available to grant exclusive licenses and to revoke outstanding nonexclusive licenses where it is shown that exclusivity is necessary for commercialization. (Denny, p. 436)

However, Mr. Denny suggested that another policy might better serve the public's interest:

> In view of the experience obtained throughout the years on the Government patent policy issue, it would be difficult to justify a title with waiver policy, along with its administrative burdens, as best protecting the public interest. A policy of rights to inventions in the contractor, while placing reliance on appropriate "march in" rights to insure utilization, may equally serve the public interest while substantially reducing the contracting burden. (Denny, p. 436)

And when asked by Chairman Thornton for his preference, ERDA's present policy or one in which the contractor owns the patent with certain march-in rights, Mr. Denny responded:

> I also have a part-time job as chairman of the executive subcommittee of the Committee on Government Patent Policy, and, wearing that hat, I would say it absolutely ought to be considered. Wearing my ERDA hat, we now have that under investigation. We will be completing our report to Congress, hopefully, within the next 6 months, and from an ERDA point of view, we will come to a decision, I hope, on that point.
>
> Right now I would simply repeat that Congress has given us excellent authority. (Denny, p. 440)

Mr. S. Neil Hosenball, NASA. After an explanation of NASA's patent policy, Mr. Hosenball expressed NASA's view on the value of commercializing its inventions:

> I do not want to dwell on the mechanics of either the waiver or the licensing process, which are described in the prepared statement. I would like to emphasize, however, that these are the two basic ways in which NASA seeks early commercial use of its inventions. It is the view of NASA that commercial use of its technology through the incentives of the patent system, encourages development of new and better products and increased productivity, will create additional employment opportunities and enhance the competitive position of the United States to the overall benefit of the national economy. (Hosenball, pp. 433-444)

In discussion following his statement he continued:

> We think the patent system, if it's properly utilized, and commercial utilization takes place, does create new jobs; does create new products; and what we are searching for -- and I think what all of us in Government are searching for -- is a way to make sure that happens. We may have disagreements as to what is the best way to make it happen, but any system that will attain that objective, as well as any other objectives of the agencies, is a system that ought to be carefully considered. Whether one is slightly better than the other, I think, is immaterial as long as you do accomplish these objectives. (Hosenball, p. 529)

When asked by Chairman Thornton whether he felt there is justification for having some variation in patent policy from agency to agency, Mr. Hosenball answered that NASA generally ". . . supports the concept of some degree of uniformity, and I think that legislation could be drafted providing that uniformity." (Hosenball, p. 488) When asked for his views on an alternative non-title system, Mr. Hosenball responded:

> I also served for a short time on the Committee on Government Patent Policy of the Federal Council on Science and Technology. I'm not a patent lawyer by training, but, having lived with it in NASA as long as I have, I am fairly familiar with the practices and procedores of NASA, and when that matter was discussed I raised the question: Does it really make any difference whether the Government takes title or the Government grants title to a contractor and gets something back, gets a license back to use for government purposes?
>
> In either case, looking at it not as a patent attorney, there is a division of rights, and it makes very little difference, as I see it, whether it's a title policy in the Government or title policy in the Government contractor. The key thing is to make sure that the Government has the assurances it reqnires to protect the public interests and also to carry out the sgency's mission, and certainly any system that does that ought to be looked at very carefully and considered, not only by NASA but by other Federal agencies. You want to see that the objectives sought will be accomplished; what is, from the point of view of administrative

convenience, the best system; and does that policy protect and assure to the Government that it preserves the ability of a public agency to protect the public interests as well as carry out the agency mission. That is basically the way I see it as an individual who is not a patent practitioner. (Hosenball, p. 527)

Mr. Norman J. Latker, HEW. Mr. Norman J. Latker, Patent Counsel at the Department of Health, Education, and Welfare and also Chairman of the Interagency University Patent Policy Subcommittee, expressed his opinion that:

> The controversy over Government patent policy, at least in the research and development agencies, seems to me to be not as commonly stated, whether the Government should take title or license to inventive results it had funded, but when and to what extent the guarantee or patent protection should be made. (Latker, p. 555)

Following his statement, in discussion along the same lines, he elaborated:

> When do you provide that guarantee, at the time of contracting or after the invention has been made? And I think that that is probably the real issue to be determined by any kind of legislation.
>
> I point out the ERDA legislation is basically a full discretion in the agency to make s determination at any point in time as to when to make a waiver or grant a license.
>
> . . . if you do not provide certainty at the time of contracting you will have a participation problem, as I spelled out, that we noted at HEW.
>
> Secondly, you may have a utilizstion problem, and this, to a large extent, depends upon the kind of credibility that the particular agency has. (Latker, p. 817)

Mr. Latker devoted much of his statement to a discussion of Government agency patent dealings with universities. He summarized recommendations made by the Committee on Government Patent Policy regarding university inventions generated with Government support:

> On September 23, 1975, the Committee on Government Patent Policy recommended, on the basis of its University Subcommittee's study, that all agencies of the executive branch provide to universities a first option to substantially all future inventions generated with Federal support, subject to statute, and provided that such university is found to have a technology transfer function. This first option to ownership is subject to a number of conditions, the most important of which are the standard license to the Government, a limit on the term of any exclusive

> license granted, authority to withdraw specified projects from the option, a requirement that royalty income be utilized for educational or research purposes, with the exception of a reasonable share to the inventor, and the right of the agency to regain ownership due to public interest considerations or the universities' failure to take effective steps to commercialize the invention. (Latker, p. 556)

He noted that ". . . to a large extent the September 23 recommendations are a ratification of the practices implemented by DHEW since 1969 . . ." (Latker, p. 648) and that at DHEW:

> . . . we have an institutional patent agreement policy in which those who are deemed to have technology transfer capabilities have the first option to invention rights, so a group of inventions are in the hands of universities on the basis of their exercising that first option without coming into the Department. (Latker, p. 724)

Mr. Latker felt this was an acceptable arrangement and in expressing his opinion stated reasons why:

> . . . in the case of the university sector I think that it should be title-in the university rather than an exclusive license because, working off a sublicense from the Government doesn't give them the kind of flexibility that they need to have at the negotiating table with industry to arrive at appropriate licensing arrangements. They need the full ownership. You can put some restraints on the ownership, obviously. I mentioned in my presentation, the conditions that are attached to the ownership. But providing to them only a license with the right to sublicense someone else actually brings the Government back into the picture as a third party, and at the negotiating table I think the university is going to find that industry will not treat them as the principal because industry will look beyond the license that the university has, and want to speak to the actual owner, which would be the Government. So I don't favor the idea of merely giving license rights to universities. (Latker, pp. 724-725)

In support of the Commission on Government Procurement's "alternate approach" Mr. Latker expressed his opinion:

> I would say, speaking for myself and not the Department, I am a proponent of that approach. I hope that ultimately it becomes the means of allocating invention rights in the area of contracts. It is a disposition of rights to the contractor at the time of contract that is something less than he would get in the private sector developing the invention on his own since he will have certain responsibilities to the Government. Most of the responsibilities retained by the Government are surveillance-type responsibilities in that if the contractor doesn't move forward within certain periods of time then the Government has the right to regain the ownership of the invention.

But the important part of the alternate approach is that it creates certainty at the very earliest time that you can as to ownerhip.
(Latker, p. 811)

Mr. William O. Quesenberry, Department of the Navy. Mr. Quesenberry emphasized that his testimony should be taken as his personal views and not necessarily the position of the Department of Defense. (Quesenberry, p. 726) Mr. Quesenberry presented arguments in favor of a uniform Government patent policy. It was his opinion that such a policy should provide for Government ownership of inventions resulting from federally-funded R&D, and should be one that allows the contractor/inventor first option for exclusivity. He cited two reasons why he felt the Government should own patents:

First of all, let's take the military departments. We should own patents because we are spending $10 to $12 billion a year to generate this technology, and in our procuring activities we buy many, many more billions of dollars worth of hardware that results from this technology. Invention parallels itself in many places. If a Government agency does not protect its technology, the first thing we will have is paying royalties to a patent holder who has protected his, and we'll end up with the taxpayer paying for this new technology twice.

The second reason why we should own patents, I think, is exactly what I say is the bottom line, the utilization of this technology. I think you've had many witnesses, and I'm sure you knew even before these hearings, that if we take this tremendous reservoir of technology and dedicate it to the public no one wants it because of the risk capital involved. As the old saying goes, "Something free for all is of little use to anyone."

So I think that the present interest in the Congress and in the executive branch of doing something with this technology reservoir, moving it back to the taxpayer on the marketplace, must have the patent system behind it or it isn't going to move to the marketplace. So who else is to protect this if it isn't the Government, who paid for it in the first place? Then use the patent system to let the originator, be it a contractor, or what, to bring it to the marketplace. If he won't, then offer it to someone else with the protection of the patent system over his risk capital.
(Quesenberry, p. 800)

Mr. Quesenberry explained his position in more detail:

I would favor a Government-wide policy which would use a uniform contract clause for a single disposition of patent rights in all instances. Legal title to all inventions generated under Government-sponsored research

and development would vest in the Government. In furtherance of the public interest at the commercial marketplace, the contractor would have an automatic first option for exclusive authorization by the Government to commercially develop and market an invention made under the contract for a fixed period of time. Such commercial authorization would be revocable by action of the Government upon failure of the contractor to carry out its plan for commercialization and supply the market in the interests of the public. Should revocation occur, the Government would be in a position to offer others the right to commercialize the invention on a nonexclusive basis or exclusively, if that be necesaary to attract investment of risk capital in commercialization.

It seems to me that the Government-wide use of a single patent rights clause vesting legal title in the Government with a guarantee at the time of contracting to the contractor, who can profit by active pursuit of the commercial market, should present a policy which most nearly attains the goals of uniformity, predictability, participation, utilization, competition, administrative ease, and political viability. (Quesenberry, p. 739)

Dr. Betsy Ancker-Johnson, Department of Commerce. Speaking as Chairwoman of the Committee on Government Patent Policy of the then Federal Council for Science and Technology, Dr. Betsy Ancker-Johnson summarized the committee's suggested uniform patent policy in her testimony before the aubcommittee. She noted that this proposed policy adopted the baaic concepts of the Commission on Government Procurement's "alternate approach." In discusaion following her formal testimony she summarized the major points of the policy:

> This policy has three salient points: first, the contractor would retain righta to the invention; second, thoae inventions made by Federal employees would be aggressively licensed; and, third, strong march-in rights would protect the public interest. (Ancker-Johnson, p. 897)

It was Dr. Ancker-Johnson's opinion that the present Government patent policy is an unsuccessful one and she maintained that ". . . its track record is very poor." (Ancker-Johnson, p. 908) In the concluding paragraphs of her formal statement, Dr. Ancker-Johnson cited reasons why she and the Committee on Government Patent Policy felt the proposed policy should be implemented in place of the present one:

> We believe that a policy which leaves title in the contractor subject to strong "march in" rights in favor of the Government will protect the

public interest and reduce substantially the administrative burden of both the Federal agencies and their contractors. In addition, we believe this change will stimulate more qualified and competent contractors to participate in federally sponsored R&D contracts. We believe further that this policy will be especially beneficial to individuals and small business concerns since they will no longer be obliged to cope with the existing diversity in agency practices and the uncertainty respecting rights to inventions which may result from the contracts.

In addition, such a single patent rights clause will provide the contractor with a greater incentive to invest his own funds to commercialize an invention resulting from the contract. This incentive is especially important as most inventions require a potential manufacturer to invest substantial development funds before the invention can be marketed. By granting the contractor a limited period of exclusivity, the Government improves the contractor's ability to recover development costs, thus encouraging him to commercialize his invention. Such commercialization benefits the Government, the contractor, and the general public. (Ancker-Johnson, p. 889