59TH CONGRESS, *Special Session.* | SENATE. | DOCUMENT No. 6.

EXTENSION

OF

LETTERS PATENT.

SHOULD CONGRESS PROVIDE, BY GENERAL LEGISLATION, FOR THE EXTENSION OF LETTERS PATENT, IN PROPER CASES, BEYOND THE TERM OF ORIGINAL GRANT?

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This subject will be considered under the following heads:

1. Constitutional provision for patent laws.
2. Laws enacted between 1790 and 1836 and between 1836 and 1902.
3. Extension of letters patent: Origin and history of extension.
4. Extensions—To whom granted.
5. Law of 1836, providing for extension of patents, and law of 1861, repealing same.
6. How passage of repealing act was secured—Some general law similar to the law of 1836 should be reenacted—Inventors entitled to reward.
7. On the grounds of public policy, and to carry out in good faith the contract between the Government and the inventor, as well as to make some acknowledgment of the debt of the Government to its inventors, extension should be provided for when inventions have not been placed on the market, or inventors have not been suitably rewarded, and in other proper cases.
8. Industrial progress of government measured by the protection and encouragement government gives to its inventors—America's commercial supremacy and high wages founded on patents.
9. No limit to human invention—"It requires no prophet's vision to see the coming glory and the coming triumph of the inventive skill of man."
10. To inventors we must look for maintenance of high wages over cheap foreign labor.
11. Reasonable requests of inventors and manufacturers should be heeded.
12. Another consideration presents itself: Extensions should be granted when inventions have not been placed on the market or inventors have not been suitably rewarded.

OPINION OF STATESMEN, POETS, AND AUTHORS ON INFLUENCE OF INVENTION UPON CIVILIZATION.

Our future progress and prosperity depend upon our ability to equal, if not surpass, other nations in the enlargement and advance of science, industry, and commerce. To invention we must turn as one of the most powerful aids in the accomplishment of such a result. May not inventors look to the Fifty-sixth Congress for aid and effectual encouragement in improving the American patent system? (President McKinley in his annual message of December 5, 1899.)

I think that we have all of us reason to feel satisfied with the showing made in this exposition, as in the great expositions of the past, of the results of the enterprise, the shrewd daring, the business energy and capacity, and the artistic and, above all, the wonderful mechanical skill and inventiveness of our people. Modern industrial competition is very keen between nation and nation, and now that our country is striding forward with the pace of a giant to take the leading position of the international industrial world, we should beware how we fetter our limbs. * * *- We need the finest abilities of the statesman, the student, the patriot, and the far-seeing lover of mankind. They have shown the qualities of daring, endurance, and far-sightedness, of eager desire for victory and stubborn refusal to accept defeat. (President Roosevelt at Pan-American Exposition on "The two Americas," Buffalo, May 20, and at Minnesota State Fair on "National duties," September 2, 1901.)

The class of men who have given to their native land and to the world these grand inventions, whose beneficent influences tell with measureless power upon every pulsation of our domestic, social, and commercial life, are indeed public benefactors, and may well be pardoned for believing that their wants should not be treated with entire indifference by that body which represents alike the intellect and heart, as it does the material interests of the great country of which they are citizens—the Congress of the United States. (Commissioner of Patents Holt.)

From the earliest history of patent law the fact has been recognized that the inventor may, from circumstances not within his control, fail to obtain an adequate recompense for his inventive skill during the original term of his patent, and that justice to him and a due regard to the public interest, may thus sometimes require an extension of his monopoly in the invention. (Robinson on Patents.)

Th' invention all admired, and each how be to be the inventor missed;
so easy it seemed,
Once found, which, yet unfound, most would have thought impossible.
—(Milton.)

Is it reasonable to make a man feel as if, in inventing an ingenious improvement meant to do good, he has done something wrong? How else can a man feel after he is met with difficulties at every turn? * * * And look at the expense, how hard on me, and how hard on the country, if there is any merit in me (and my invention is took up now, I am thankful to say, and doing well), to put me to all that expense. (Dickens.)

EXPLANATORY.

This paper or statement has been prepared for general distribution among inventors and their assigns, manufacturers of patented inventions, legislators, and the legal profession who are interested in inventions and the administration of the patent laws.

Your careful consideration of the same is requested with a view to obtaining your cooperation in efforts to secure the passage of a general bill providing for the extension of patents, substantially in accordance with the practice as built up under the act of 1836, under the provisions of which patents were extended by the Patent Office until March 2, 1875.

The service which I rendered at the solicitation of an old and meritorious client in the preparation and prosecution of a private bill before Congress to secure the extension of a patent brought facts to my notice which convinced me that the position of Congress on the matter of the extension of patents is almost universally misunderstood.

In fact, during the past two years, during which period I have given this subject more or less consideration from time to time, I have not met one person, layman or lawyer, who could give a true explanation of the position of Congress on this subject or explain why more private bills have not been passed.

In my humble judgment no amendment to the patent laws could do as much for the honor and glory of our country as the passage of some general law for the extension of patents in proper cases.

Such a law would at once stimulate invention by the encouragement it would give to inventors, and who have failed to secure suitable remuneration for their inventions.

The maintenance of the commercial supremacy of the United States demands that this encouragement be given to inventors.

If you are in favor of the movement to secure the desired legislation, please give notice thereof to the undersigned; placing the word "Extension" on the outside of the envelope, so that you may be placed in communication with associations or committees that may appear before Congress to urge the passage of the proposed bill. If you desire an answer, or wish to have progress reported to you, you should inclose a stamp for return postage.

The intelligent and patriotic cooperation of those interested in patent property and in the continued material development of the industries of our country will certainly result in legislation which will undo the injury to the country and the injustice to inventors which have become more and more apparent since the seventeen-year patents began to expire in 1878, and especially since about 1886, five or six years after the first patents issued under the act of 1861 began to expire.

Inventions have brought the Pacific Ocean as near to New York, measured by time of communication, as Pittsburg or Harrisburg, and all countries of the world, commercially considered, near to the shores of the United States, and the time has now come when nations, as well as individuals and firms, vie with each other in the commendable effort to secure trade supremacy.

As Senator Platt, of Connecticut, has well said, "We must look to

the inventors of our country to maintain the supremacy which we have achieved."

In view of the nation's absolute dependence upon her inventors to do this, and in order to check the decline in invention which, as shown, appears to have set in about 1887, it behooves us to see to it that inventors are not treated unfairly, thoughtlessly, indifferently, or unjustly, but that they be shown appreciation according to their deserts.

It will be remembered that Professor Robinson says (Robinson on Patents):

> Thus, although at the outset our patent laws were in some important aspects more favorable to the inventor than those of England, the development of the theory that the inventor is necessarily a public benefactor, and that the means adopted for his protection and encouragement are in themselves promotive of the public good, has here as well as there produced its legitimate results in the constant increase of his exclusive privilege and the corresponding limitation of the public rights.

In conclusion I again quote from Commissioner Fisher, whose numerous reforms in the Patent Office and whose eminent ability as a patent lawyer make him a conspicuous figure among the many men who have honored the office of Commissioner of Patents:

> What is now needed is the perfection of the system, better and more complete means for carrying it on, and more effectual means for protecting the inventor.

A sense of patriotic duty impelled me to undertake this work. If my feeble efforts at the outset eventuate in the enactment of a law which will add to the honor and glory of my country and promote the comfort and happiness of some of a class of most worthy citizens in recognition of their efforts to promote the general welfare and to help themselves, I shall feel more than repaid for my services.

Respectfully submitted.

JOSEPH R. EDSON.

WASHINGTON, D. C., *March —, 1905.*

CONSTITUTIONAL PROVISION FOR PATENT LAWS.

On the 17th day of September, 1787, the American people, through their chosen representatives in the Constitutional Convention, gave their consent to that clause of the Constitution which confers upon Congress the power "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."

Later on in this paper I will consider in what manner and to what extent the laws passed by Congress were designed to secure to inventors the exclusive right to their discoveries; also what further legislation, if any, is needed to give the security and the exclusive enjoyment contemplated by the fathers, as expressed in the Constitution, and by Congress in the enactment of patent laws.

Following the adoption of the Constitution and the recommendation of President Washington, in his first annual message to Congress, to give "effectual encouragement to the introduction of new and useful invention," and "to the exertions of skill and genius in producing them," Congress passed "An act to promote the progress of useful arts," which became a law, by approval of President Washington, on April 10, 1790. This first patent law was followed by other acts of

1793, 1794, 1800, 1819, 1832—two acts—1836, 1837, 1839, 1842, 1848, 1849, 1852, 1861—two acts—1863, 1864, 1865, 1866, 1867, 1870, 1871, 1887, 1897, 1898, 1899, and 1902.

It will thus be seen that under the authority conferred upon Congress by section 8 of Article I of the Constitution, no less than 28 laws have been passed by Congress 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.

Judging Congress by its past legislation are we not forced to believe that its failure to act favorably on private bills for the relief of particular inventors affords no evidence whatever that it would oppose the enactment of a general law governing the extension of patents?

LAWS ENACTED BETWEEN 1790 AND 1836 AND BETWEEN 1836 AND 1902.

To enable inventors and their assignees, manufacturers of patented improvements, and others interested in patents to appreciate how willing Congress has always been to do all that it could to give effect to the constitutional provision to promote the progress of the useful arts by passing laws from time to time to encourage inventors and to give them security, I have prepared the following digest of the patent laws that have been passed by Congress from the date of the adoption of the Constitution down to 1902. An examination of this digest shows the frequency of legislation by Congress to add improvements to our patent system and thereby encourage inventors to give their time, labor, skill, and means in order to "promote the progress of science and useful arts," and to advance the comfort and happiness of mankind.

The act of 1793 provided for arbitration in interference cases, for the repeal of patents surreptitiously obtained.

The act of 1794 restored all suits brought under the act of 1790.

The act of 1800 extended the rights under our patent law to certain aliens; provided that the right to a patent by a deceased inventor shall devolve on his legal representatives; that in a suit for infringement for any patent the patentee or assignee might recover damages "equal to three times the damages actually sustained."

The act of 1819 conferred jurisdiction upon the circuit courts of the United States, as well in equity as at law, in all suits, etc., arising under any patent law, and also provided for a writ of error or appeal to the Supreme Court of the United States.

The first act of 1832, section 2, related to applications to Congress for the extension of letters patent; section 3 provided for the issuance of a new patent (reissue) in case a patent is "invalid" or "inoperative" through "inadvertence," accident, or mistake, and "without any fraudulent or deceptive intention * * * of the inventor."

The second act of 1832 extended certain privileges under our patent laws to certain aliens who had declared their intention to become citizens of the United States.

The act of 1837 provided in sections 1 to 5 for the filing in the Patent Office of copies of patents, etc., the Patent Office having been destroyed by fire on December 15, 1836; section 6 enacted that upon authority of the inventor the Commissioner may in any case issue a patent to the assignee; section 7 enacted that whenever a patentee shall have, through inadvertence, accident, or mistake, made his

specification too broad he may make disclaimer of such parts of the thing patented, and such disclaimer shall thereafter be taken and considered as part of the original specification; section 8 enacted that an improvement may be added to a reissue application, and that such applications shall be subject to revision and restriction; section 9 enacted that a patent shall be good and valid in part, provided the patentee was the inventor of a "material and substantial part of the thing," but in case of suit he shall not recover costs if he unreasonably neglected to enter a disclaimer; section 14 enacted that the Commissioner shall make an annual report to Congress in January of each year of the number of patents issued, etc., "together with such other information of the condition of the Patent Office as may be useful to Congress or the public." It will be noted that the Commissioner of Patents is the only bureau officer under the Government that has received the distinction of being called upon to make a direct report to Congress.

The act of 1839, in addition to increasing the force of the Patent Office, provided for the publication of a list of patents granted; that (see sec. 8) no charge should be made for recording an assignment, thereby repealing section 2 of the act of 1836, which imposed a recording fee of $3.

The act of 1842, section 3, enacted that patents for designs should be issued; section 4, that the oath may be taken in any foreign country; section 5, that falsely marking an article with word "patent" or "patentee" or any word or words with intent to counterfeit the stamp or mark of a patentee and of deceiving the public shall be liable to a fine of not less than $100. Section 6 required the patentee to properly mark the patented improvements, etc.

The act of 1848 enacted that the power to extend patents "shall hereafter be invested solely in the Commissioner of Patents," thereby relieving the Secretary of State and the Solicitor of the Treasury of hearing, etc., the applications for extensions; section 4 authorized the Commissioner of Patents to send the annual reports of the Patent Office by mail free of charge.

The act of 1849 enacted "that the Secretary of the Interior shall exercise and perform all the acts of supervision and appeal in regard to the Office of the Commissioner of Patents now exercised by the Secretary of State."

The act of 1852 enacted that appeals from the Commissioner of Patents may be made to either of the assistant judges, as well as the chief judge of the circuit court of the District of Columbia.

The act of 1863, 12 Statutes at Large, 796, section 1, repealed so much of section 7, act of 1836, as required an applicant to file a new oath; section 3 gave the applicant six months within which to pay the final fee, and provided that as to cases that had been allowed, the six months should be reckoned from the date of this act.

The act of 1864 provided that the final fees might be paid within six months after the date of forfeiture of an allowed application for nonpayment of final fee.

The act of 1865, 12 Statutes at Large, 553, provided that a new application might be filed within two years after the date of allowance of a forfeited application.

The act of 1870, 16 Statutes at Large, 198, section 10, provided that the examiners in chief should "hear, when required by the Commissioner, and report upon claims for extension;" section 25, that prior patents in a foreign country shall not debar issuance of patent here, provided the invention has not been in public use in this country for more than two years; section 53 provided that, upon the reissue of a patent, the Commissioner might issue "several patents for distinct and separate parts of the thing patented;" section 55 provided "that all actions shall be brought during the term for which the letters patent shall be granted or extended, or within six years after the expiration thereof;" sections 63, 64, 65, 66, and 67 are substantially the same as section 18 of the act of 1836, with this addition:

That upon publication of notice of an application for extension, the Commissioner shall refer the case to the principal examiner having charge of the class of inventions to which it belongs, who shall make to said Commissioner a full report of the case, and particularly whether the invention or discovery was new or patentable when the original patent was granted.

The act of 1871, 16 Statutes at Large, 585, provided that the acts of 1870 should not apply to applications for reissue that were filed before the date of said act, July 8, 1870.

There was practically no legislation relating to mechanical patents from 1871 to 1897. The act of 1874 related to copyrights, the act of 1887 to designs, and the act of 1891 to copyrights.

THE ACT OF MARCH 3, 1897.

Section 25 of the act of July 8, 1870, declared that an American patent should "not be declared invalid by reason of the invention having been first patented in a foreign country, unless the same had been introduced into public use in the United States for more than two years prior to the application."

The act of March 3, 1897, amended sections 4886, 4887, 4894, 4898, 4920, and 4921 of the Revised Statutes.

There were two amendments to section 4886, one of which enlarged the rights of the inventor by enabling him to go back to the date of his invention or discovery in support of his patent, while the other amendment rendered a patent invalid if the invention had been patented or described in any printed publication in this or any foreign country before his invention or discovery thereof "for more than two years prior to his application." Before the addition of the second amendment to section 4886, evidence that the invention had been patented or described in a printed publication in a foreign country for "more than two years prior to his application" would not defeat the patent unless the invention had been "in public use or sale in this country for more than two years prior to his application."

Section 4887: This section, as amended, amended section 4921 by adding thereto the following sentence:

But in any suit or action brought for the infringement of any patent, there shall be no recovery of profits or damages for any infringement committed more than six years before the filing of the bill of complaint or the issuing of the writ in such suit or action, and this provision shall apply to existing causes of action.

An act entitled "An act defining the jurisdiction of the United States circuit courts in cases brought for the infringement of letters patent," approved March 3, 1897, provides that in case—

> suit is brought in a district of which the defendant is not an inhabitant, but in which said defendant has a regular and established place of business, service of process, summons, or subpœna upon the defendant may be made by issuance upon the agent or agents engaged in conducting such business in the district in which suit is brought.

An act of February 28, 1899, amended section 4896 by providing that—

> when any person having made any new invention or discovery for which a patent might have been granted becomes insane before a patent is granted, the right of applying for and obtaining the patent shall devolve upon his legally appointed guardian, conservator, or representative in trust for his estate.

Another act, approved March 3, 1898, entitled "An act to authorize the Supreme Court of the United States to issue writs of certiorari to the court of appeals in the District of Columbia in the same cases and manner that it may do in respect to the circuit court of appeals."

And the act entitled "An act to amend section 4929 of the Revised Statutes, relating to design patents," constitutes, with the acts previously mentioned, all the acts of Congress relating to patents for inventions, except two or three acts of minor importance, e. g., an act approved April 11, 1902, amending section 4883, Revised Statutes, by providing that patents shall be signed by the Commissioner of Patents instead of by that officer and the Secretary of the Interior.

I will now take up the origin and history of Extension of Letters Patent, and the act of 1836 in detail, with the manner of its repeal and reasons why some similar law should be enacted.

EXTENSION OF LETTERS PATENT: ORIGIN AND HISTORY OF EXTENSION.

From the earliest history of patent law the fact has been recognized that through various causes an inventor may fail to obtain an adequate recompense for his inventive skill during the original term of his patent, and that justice to him and a due regard to the public interest may thus sometimes require an extension of his monopoly in the invention. The ancient Crown grants were on this account frequently renewed after the expiration of their original terms, and though for a long period after the statute of James I no such increase of the patent privilege was permitted by the laws of England, yet with the development of industrial enterprise in the first quarter of this century the importance of additional protection to the inventor became so apparent that Parliament in 1835 expressly provided means for extending letters patent, at first for seven and then fourteen years. In this country the propriety of such extensions in special cases has always been conceded, the principal variations in our law relating to the tribunal in which the authority to grant extensions should reside. Prior to the act of 1836 this power was lodged in Congress, by whom alone the original term of the monopoly could be prolonged. In 1836 jurisdiction over the renewal as well as the first issue of letters patent was conferred upon the Patent Office, subject to numerous restrictions as to the ground of renewal and duration of the extended term. In 1861 this jurisdiction over extensions was withdrawn as to all patents granted after the passage

of that act, and Congress thus became the only source from which an increase of the monopoly created by future patents could be obtained. This is the present state of the law, the Patent Office having authority to renew a patent issued before March 2, 1861, and acting as an examining and advisory tribunal concerning the extension of later patents when the existence of the conditions precedent to such extensions is submitted to its judgment by a special act of Congress. Occasions for the exercise of its former power can not now arise, and an exposition of the current law upon this subject might therefore leave unnoticed those peculiar doctrines which apply only to extensions granted by the office when having general jurisdiction under provisions similar to those of 1836. Inasmuch, however, as Congress may at any time restore this jurisdiction, and when restoring it will probably preserve unchanged the leading characteristics which it previously possessed, this aspect of the law will also be considered in connection with the rules now practically in force. (Robinson on Patents, sec. 835, vol. 2.)

EXTENSIONS—TO WHOM GRANTED.

As the sole object of an extension is to furnish to an inventor additional opportunity to secure recompense which he has hitherto failed to obtain, so no extension will be granted unless the inventor is to enjoy at least a substantial portion of its benefits. (U. S., sec. 836, vol. 2.)

Nor did the liberality of Parliament stop here. The statute of James I had limited the period of the inventor's privilege to fourteen years. This period had always been considered long enough to enable any patentee, who used due diligence in bringing his invention to the knowledge of the public, to gain ample recompense for the cost and labor of inventing it. But such was the appreciation in which these modern lawgivers held the services of the inventor that power was now conferred upon the Crown to continue his monopoly for an additional period of seven years, and this was increased in A. D. 1884 to fourteen years. (P. 29, sec. 18, vol. 1; 5 and 6 Will. IV, chap. 83, sec. 4; 7 and 8 Vict., chap. 69.)

Thus, although at the outset our patent laws were in some important aspects more favorable to the inventor than those of England, the development of the theory that the inventor is necessarily a public benefactor, and that the means adopted for his protection and encouragement are in themselves promotive of the public good, has here as well as there produced its legitimate results in the constant increase of his exclusive privilege and the corresponding limitation of the public rights. (Robinson on Patents, p. 36, sec. 22, vol. 1.)

On the subject of procedure in extension cases referred to the Patent Office by Congress, Professor Robinson says:

Applications for extensions of patents issued since March 2, 1861, must be made to Congress. Such applications may be directly granted or denied without further action, or may be granted subject to the decision of the Commissioner of Patents upon the merits of the application. In the latter cases the proceedings of the Patent Office, except as to the time of their inception, closely resemble those arising under the former law. An application must be filed in the Office, based upon the special act of Congress, a certified copy of which must accompany the application, and the applicant must at the same time furnish a statement under oath of the ascertained value of the invention, and of his receipts

and expenditures on its account, giving such facts and data in reference thereto as will enable the Commissioner to form an exact judgment concerning his real profits. Any ambiguity or concealment in this satement is suspicious, and if it is unavoidably defective the reasons for the defect must appear. Upon this application four questions arise: The original patentability of the invention; its value to the public; the sufficiency of the remuneration already received by the inventor; and the effect of an extension upon public interest. On the first point, in uncontested cases, no evidence is necessary. On the second the testimony of disinterested persons must, if possible, be presented, and with such definiteness as to enable the Commissioner to estimate the industrial importance of the device or process covered by the patent. On the third point it must be shown by sufficient proof that the inventor has employed all reasonable means to make his monopoly productive, and that without his fault he has failed to obtain a fair recompense for the time, ingenuity, and expense bestowed on the invention and on its introduction into use. The conclusions of the Commissioner on the fourth point are drawn from the facts disclosed by the preceding inquiries and from his general knowledge of the condition of the art. The rules of evidence governing this investigation are those established by the Office for other cases in which exterior proof may be required. Any person may oppose an extension by serving notice of his opposition and his reason therefor upon the applicant or his attorney at least ten days before the day fixed for the closing of the evidence, and after such notice will be treated as an adverse party, and entitled to participate in all future proceedings. to offer testimony against the matters asserted by the applicant, and to be heard in argument. After the evidence has closed, the application is referred to the proper examiner for his report and on the proof and arguments of the parties the Commissioner bases his decision, by which the extension is awarded or the application is dismissed. (U. S., sec. 841, vol. 2.)

Senator Platt of Connecticut has said that "the passage of the act of 1836 creating the Patent Office marks the most important epoch in the history of our development. I think the most important event in the history of our Government from the Constitution until the war of the rebellion."

For "this masterful stroke of statesmanship" (the act of 1836) the country is indebted to Mr. Ruggles, of Maine. This act contained five new, special, and salient features, namely: Section 7, providing for preliminary examinations; section 10, giving the executor of a deceased inventor the right to apply for a patent; section 12, giving the right to file a caveat for an incomplete invention; section 13, providing for the reissue of a defective or invalid patent, and section 18, providing for the extension of patents.

It will be seen that each one of these salient features was in the line of benefiting, and thereby encouraging, the inventor. Section 7 served to establish his prima facie right to the invention, in the event of his securing a patent; section 10, to give him the assurance that in case he made an invention, but should die before securing a patent, his legal representatives would be entitled to apply for and receive the patent; section 12 provided that if the nature of the invention was such that much time would be required to complete an invention, or if for any other cause the inventor desired more time within which to file his formal application for letters patent, he might secure himself against the issue of a patent to another, without notice to him, by placing a caveat in the secret archives of the Patent Office; section 13 provided that if through the incompetency of any attorney, or other cause, his patent were defective or invalid, he could reissue the same; and section 18—see copy of same in full in digest of laws herein—gave a patentee, upon conditions therein set forth, the right to an extension of his letters patent.

Notwithstanding the fact that section 18 was regarded as equal in importance to any other section, it is the only section of those above named in that "masterful stroke of statesmanship" which has been repealed. I have fully set forth herein how the repeal was secured, namely, by the mere action of a conference committee, without the same having ever been suggested to anyone and without any consideration in either the House or Senate previous to the report of the conference committee, though, as I have explained, the "masterful stroke of statesmanship" would have carried it through, in view of the many reforms and improvements embraced therein, however objectionable the repealing of section 18 might have been to even a majority of Congress. The marvel of it all is that this "step in the wrong direction" has been allowed to stand in view of the fact that the mistake began to appear clearly in 1878, when the first seventeen-year patents began to expire. We have been in the presence of the constant admonition of its mischievous effects upon the useful arts ever since 1886, about six years after the seventeen-year patents began to expire. How long will the country have to wait to have this legislative mistake corrected?

LAW OF 1836, PROVIDING FOR EXTENSION OF PATENTS, AND LAW OF 1861, REPEALING SAME.

The act of 1836, section 1, established the Patent Office.

Section 2 provided for the appointment of officers and employees of the Patent Office; also that every employee of said office, including the Commissioner of said office, "shall be disqualified * * * from acquiring * * * except by inheritance * * * any right or interest, directly or indirectly, in any patent for an invention or discovery which has been or may hereafter be granted."

Section 3. That certain officers should give bonds, and certain employees should make oath, for faithful performance of their duties.

Section 4. That certified copies might be used in evidence.

Section 5 gave the inventor, his assigns, etc., the full and exclusive right and liberty of making, using, and vending to others to be used * * * what the patentee claims as his invention or discovery.

Section 6 described who might apply for a patent and what the application should contain.

Section 7 provided that upon filing of an application the Commissioner should—

make or cause to be made an examination of the alleged new invention or discovery; and if, on any such examination, it shall not appear to the Commissioner that the same had been invented or discovered by any other person in this country prior to the alleged invention or discovery thereof by the applicant thereof, or that it had been patented or described in any printed publication in this or any foreign country, or had been in public use or on sale, with applicant's consent or allowance, prior to his application, if the Commissioner shall deem it sufficiently useful and important it shall be his duty to issue a patent therefor;

that in case of rejection of his application the applicant might withdraw his application, receiving back part of the fee therefor, or appeal to a board of examiners, and that, on such an appeal, a majority of the board, consisting of three persons, might reverse the decision of the Commissioners.

Section 8 provided for an appeal in interference cases.

Sections 9 and 10 established certain Government fees and provided that the legal representative of a deceased inventor might apply for a patent; and provided that every patent should be assignable, either as to the whole interest or any undivided part thereof.

Section 12 provided for the filing of caveats in case the inventor desired "further time to mature" his invention, and gave the inventor "protection of his right till he shall have matured his invention."

Section 13 provided for the reissue of patents and for the addition to the reissue—

> of any new improvement of the original invention or discovery which shall have been invented or discovered by him subsequent to the date of his patent, * * * and have the same annexed to the original description and specification.

Section 14 gave the court power, in a suit for infringement, to give judgment for the plaintiff for an amount "not exceeding three times the amount" named in a "verdict as the actual damages sustained by the plaintiff."

Section 15 provided that foreign use should not invalidate a patent, and that—

> If it shall appear that the defendant had used or violated any part of the invention justly and truly specified and claimed as new, it shall be in the power of the court to adjudge and award as to costs, as may appear to be just and equitable.

Section 16 provided for the determination by a bill in equity "of the fact of priority of right of invention" between interfering patents, or between a patent and an application for a patent.

Section 18 provided:

> *And be it further enacted*, That whenever any patentee of an invention or discovery shall desire an extension of a patent beyond the term of its limitation he may make application therefor in writing to the Commissioner of Patents, setting forth the grounds thereof; and the Commissioner shall, on the applicant's paying the sum of $40 to the credit of the Treasury as in the case of an original application for a patent, cause to be published in one or more principal newspapers in the city of Washington and in such other paper or papers as he may deem proper, published in the section of the country most interested adversely to the extension of the patent, a notice of such application, and of the time and place when and where the same will be considered, that any person may appear and show cause why the extension should not be granted. And the Secretary of State, the Commissioner of the Patent Office, and the Solicitor of the Treasury shall constitute a board to hear and decide upon the evidence produced before them, both for and against the extension, and shall sit for that purpose at the time and place designated in the published notice thereof. The patentee shall furnish the said board a statement in writing, under oath, of the ascertained value of the invention and of his receipts and expenditures sufficiently in detail to exhibit a true and faithful account of loss and profit in any manner accruing to him from and by reason of the said invention. And if, upon hearing of the matter, it shall appear to the full and entire satisfaction of the said board, having due regard to the public interests therein, that it is just and proper that the term of the patent should be extended, by reason of the patentee, without neglect or fault on his part, having failed to obtain from the use and sale of his invention a reasonable remuneration for the time, ingenuity, and expense bestowed upon the same and the introduction thereof into use, it shall be the duty of the Commissioner to renew and extend the patent by making a certificate thereon of such extension for the term of seven years from and after the expiration of the first term; which certificate, with a certificate of said board of their judgment as aforesaid, shall be entered on record in the Patent Office; and thereupon the said patent shall have the same effect in law as though it had been originally granted for the term of twenty-one years; and the benefit of such renewal shall extend to assignees and grantees of the right to use

the thing patented to the extent of their respective interests therein: *Provided, however*, That no extension of a patent shall be granted after the expiration of the term for which it was originally issued.

Section 19 enacted that the "Committee of the Library of Congress should provide the Patent Office with a library of scientific works and periodical publications, both foreign and American, calculated to facilitate the discharge of the duties hereby required of the chief officers" of said office; section 20 enacted that the models, etc., deposited in the office, patented or unpatented, shall be classified and arranged in rooms or galleries in such manner as will be conducive to a favorable display thereof, and that said rooms or galleries shall be kept open for public inspection.

The act of 1861, approved February 18, provided that a writ of error or appeal shall lie, as the case may be, to the Supreme Court of the United States.

The act of 1861, approved March 2, 1861, 12 Statutes at Large, 246, section 1, provided for the making of rules for taking depositions in interference cases and required the United States courts to issue subpœnas for witnesses in such cases; section 2 provided for the appointment by the President, by and with the advice and consent of the Senate, of three examiners in chief to hear appeals from principal examiners, etc., and, when required by the Commissioner of Patents, to hear and report upon applications for extensions of patents; section 3 gave an applicant the right to two rejections of his application before he should be put to the expense of an appeal; section 4 increased the salaries of certain officials of the Patent Office; section 5 authorized the Commissioner to restore to applicants the models in a certain class of cases; section 7 authorized the Commissioner to appoint "such an additional number of principal examiners, first assistant examiners, and second assistant examiners as may be required, that * * * the total annual expense of the Patent Office shall not exceed the annual receipts;" section 10 fixed the fees to be paid to the Patent Office, including $50 on every application for an extension and $50 on the granting of every extension; section 11 provided that designs might be extended for seven years; section 13 provided that patented improvements should be marked; and section 16 enacted "that all patents hereafter granted shall remain in force for the term of seventeen years from the date of issue, and all extension of such patents is hereby prohibited."

HOW PASSAGE OF REPEALING ACT WAS SECURED—SOME GENERAL LAW SIMILAR TO THE LAW OF 1836 SHOULD BE REENACTED—INVENTORS ENTITLED TO REWARD.

The consideration of Congressional legislation since the adoption of the Constitution is an unanswerable argument to the objection that Congress is opposed to the inventor and to all that his encouragement means to the nation, and is hostile to such further legislation as would give him additional opportunity to secure reward for his invention, by providing the machinery for hearing applications for the extension of letters patent, in cases wherein the inventor, through no fault of his own, has not been rewarded for his invention. Probably nine-tenths of the inventors and others interested in patents, such as assignees,

manufacturers, etc., as well as the great body of the legal profession, including those who are known as specialists in patent law and practice, have, without just cause, formed the opinion that Congress is hostile to any general legislation having in view the passage of a law similar to section 18 of the law of 1836, providing for the granting, in proper cases, of extensions of letters patent. This opinion may be founded, although unjustly, upon the fact that since March 2, 1875, only four patents have been extended. As I shall hereinafter show, the fact that only a small number of patents has been extended since 1875 is not due to Congressional hostility to inventors, who were never in greater favor with Congress, with the American people, and with the entire civilized world than they are now, but is due to the way—the means—namely, private bills for relief, which has been adopted to secure an extended term.

Until the writer prepared and had caused to be introduced at the first session of the Fifty-seventh Congress two bills (S. 6313 and 6314 and H. R. 15332 and 15333) to provide by general legislation for the reenactment of a law for the granting, in proper cases, of applications for extensions, instead of depending upon the passage of private relief bills, no bill, in the form of a general law for the extension of patents, had been introduced in Congress, much less refused favorable consideration, since the passage of the act of 1861.

I shall hereinafter show how and in what manner the law for the extension of patents was repealed; that the repeal was advanced as a mere experiment; that as an experiment it has proved to be unjust to inventors and others, against public policy, a breach of public faith on the part of the Government, and, lastly, an admitted failure.

I shall also endeavor to show that in view of the many technical questions of law and fact which arise in the considerations of applications for extensions, and the frequent changes that take place in the membership of the Senate and House Committees on Patents, especially of the House committee, and of the time that necessarily would be required to hear the applications, examine the proofs, consider authorities, and prepare decisions, it would be a physical impossibility for the committees of Congress to render the service required of them to properly hear the applications which would be filed if they "let down the bars" by making a few favorable reports on private bills to grant extensions outright by Congress, or even refer the applications to the Commissioner of Patents for hearing and determination.

To indicate the changes which take place on the House committee, I will state that eight of the present members thereof have not been reelected, hence, even if the remaining five members were all reappointed, there would necessarily be a large majority of new members on the next committee.

The unreasonableness of expecting a committee, whose membership is subject to such large and frequent changes from one Congress to another, to take up and consider several hundred applications for extensions each year, the proper disposition of which, in justice to the public, as well as to the applicants, would require special knowledge of a difficult branch of the law and a technical knowledge in nearly every art, is so apparent that it has only to be stated to secure a prompt admission. Remember, also, that the committees, especially of the House, can only meet, at best, once or twice a week for an hour

or so, during a period of less than three months every other year, namely, the second session of each Congress. Think of such a committee, so limited in time, undertaking to hear several hundred applications for extension, an enterprise impossible, even if they had no public duties to perform and never so much as attended a single session of the House. Against the babel of voices and the flood of papers, so vastly beyond their physical powers to hear or examine, they can only protect themselves as you or I, if we were in their places, would protect ourselves, either by rejecting applications or by neglecting to make favorable reports thereon to the House. Therefore, the only relief must necessarily come through some general law similar in effect to section 18 of the act of 1836, providing proper machinery for the consideration of applications for extension.

At a recent hearing of a private bill before the Senate committee for the extension of a patent which was about to expire, leaving the inventor without any reward for his invention, in the development of which he had spent nearly thirty of the best years of his life and had expended all he was worth when he began, all he had made during the said thirty years, and all that he had been able to borrow from friends and business acquaintances who had confidence in him personally and in his genius as an inventor, and had nevertheless not been able to place his improvement upon the market, although he now had the promise of capital to do so in view of the recent demonstrations of the practical utility of his improvement, a member of the committee said to the writer: "Do you know of any objection to favorable action on your client's case other than that it would make a precedent upon which to claim favorable action on other applications?"

On another occasion while pressing for favorable action of the House Committee on Patents on a private bill for the relief of a client, Samuel H. Jenkins, who had impoverished himself in efforts to induce capitalists to promote his patent (a bill which like all such bills filed within the last fifteen years failed to receive favorable consideration), and having frequently expressed my surprise at not receiving notice of favorable action, a member of the committee finally said to me: "Mr. Edson, you have a good case and your client is justly entitled to have his bill favorably considered, but the fact of the matter is there are plenty of other cases just as meritorious as yours, and if we should act favorably upon your case it would be a precedent for others to follow, and we would soon have more applications than we could possibly consider." I mention these incidents merely to show that the adverse action of the committees of Congress on applications for extensions is not due to their hostility either toward inventors or to a revival of one of the salient features of the American patent system, namely, extensions of patents in proper cases, but is due to the well-grounded belief that if they encourage applications for extensions by making favorable reports on private bills it would in a very short time be a physical impossibility to hear the number of applications that would be made. I became fully satisfied by my experience that the obstacle to obtaining extension of patents was in the mode of procedure—private bills—and not in the relief sought, and that therefore some general law should be passed which would give some court, board, or commission jurisdiction of the hearing and determination of applications for extensions, and I

accordingly prepared and secured the introduction of the two bills, as heretofore stated.

The act of March 2, 1861, known as "Senate bill No. 10," repealed section 5 of the act of 1836, which fixed the term of a patent as fourteen years, and section 18 of the same act, which provided for an extension of the original term for a period of seven years. As this bill finally passed the Senate it contained no provision for either extending the term of a patent or for repealing or modifying section 18 of the act of 1836 relating to the extension of patents. The House amended the bill as it came from the Senate by adding a section which read as follows:

Par. 16. *And be it further enacted*, That there shall be no further extension of any patent when it shall appear to the Commissioner that the profits of said patent, including sales made by the assignee or assignees of said invention, shall amount to one hundred thousand dollars.

The Senate disagreed to the House amendment, as to assignees, on the ground, inter alia, that the assignees might be unable or unwilling to give an accounting, and that the inventor could not compel them to do so. The Senate having disagreed to the amendment of the House, and the House and Senate having "insisted," the bill went to a conference committee, up to which time it had not contained any provision either to change the duration of patents or to repeal the law providing for their extension. The conference committee struck out the entire section, and substituted the short one, which stands as section 16 of the act, namely:

That all patents hereafter granted shall remain in force for the term of seventeen years from the date of issue; and all extension of such patents is hereby prohibited.

This bill also provided for the taking of depositions in interference cases, which had been repeatedly urged upon Congress by the Commissioner of Patents; for the appointment of three examiners in chief, at an annual salary of $3,000 each; for an increase in the salary of the Commissioner of Patents and other employees of the Patent Office; for the appointment by the Commissioner of "such an additional number of principal examiners, first assistant examiners, and second assistant examiners as may be required to transact the current business of the office with dispatch, provided that the total expenses of the Patent Office shall not exceed the annual receipts," etc., the bill containing seventeen sections in all.

The failure of either the Senate or the House to adopt the report of the conference committee meant, of course, the failure of the entire bill, as will be understood by those who are familiar with legislative procedure. There was no discussion in either House upon the substitute section 16, prepared by the conference committee, repealing the law providing for the extension of patents, and I have been unable to find anything in the archives of Congress or of the Patent Office which shows that the Commissioner of Patents, or anyone else, had ever so much as suggested such an amendment to the law.

This repeal of one of the salient feature of the American patent system (section 18 of the act of 1836) was accomplished without, so far as I can learn, a single objection to the old law by any American citizen, official or unofficial, lay or professional, natural or artificial, or the presentation of a single recommendation or petition therefor.

Here was a bill which entirely reorganized the Patent Office (see digest herein, act of 1836, sections 2 to 19) that had been twice considered by each House of Congress and then came for consideration before the two Houses upon the report of a conference committee, at a time when the President-elect, Abraham Lincoln, was nearing Washington to be inaugurated, when the nation was stirred to its very center and in the throes of a great civil war. At such a moment the report of this conference committee came before the two Houses of Congress for action. In view of the many very meritorious provisions of the bill it would be unreasonable to expect the friends of the bill to allow it to fail through adverse action by either House of Congress upon the report of the conference committee. But the mistake, "the step in the wrong direction," that was made in practically cutting off extensions, has become more and more apparent since the seventeen-year patents began to expire in 1878.

The Commissioner of Patents, Hon. M. D. Leggett, in his report to Congress for the year 1872 (see O. G., vol. 3, p. 62), said:

> Until March 2, 1861, patents were granted for the term of fourteen years, with the right of extension when proper cause was shown. Said act provided that the term shall be for seventeen years, with no right of extension. I have always doubted the wisdom of the law, and the more thoroughly I have become acquainted with inventors and their peculiarities the more thoroughly I am convinced that the change was an unwise one. It is a fact familiar to all who have given the subject-matter any considerable attention that a very large proportion of the more valuable inventions are assigned in their infancy for trifling considerations, because of the indigent circumstances of the patentee. Assignees have in general made all the money that has been made from the original term of patents.
>
> There is justice in giving a considerable proportion of the profits arising from patents to assignees; for generally the talent required to create the demand for and to manufacture and to successfully introduce into public use the thing invented is as valuable and meritorious as that exercised by the inventor. That assignees of patents have made large profits is not therefore of itself an objection to the law; but the design of the patent laws, under the provisions of the Constitution, was to encourage and develop invention by giving to inventors a monopoly that might compensate them. Experience has developed the fact that a very large proportion of our most worthy and deserving inventors have been obliged to look to the extended terms of their patents for their remuneration. When the invention is made it is often in advance of the demand for it. The public must be educated up to its wants, requiring considerable time and expense before the inventor can be remunerated. It is in this stage of the life of a patent that inventors are often compelled by poverty to sell their inventions for a very small sum. When the patent is extended, the extended term belonging to the inventor, and the public now understanding its value, the inventor is enabled to obtain a reasonable compensation for his patent. In this way the extended term becomes far more remunerative than the original.
>
> As mere mechanics and copyists our people are greatly excelled by the older nations, but in useful and labor-saving inventions the people of the United States excel all others. It is difficult to overestimate the extent to which our country is indebted to the genius and industry of our inventors. No other nation has done so much to secure to its inventors the results of their brains and labor. In no other country have the legislators and the courts been so liberal and just in affording protection to the peculiar class of property covered by patents for invention. The rich development of valuable inventions which have so distinguished our country is largely due to our recognition of the just rights of inventors.
>
> The act of March 2, 1861, I am fully convinced, was legislation in the wrong direction, and that the encouragement of useful inventions, as well as justice to the inventors, requires a right in the inventor to secure extension in meritorious cases.

The official records of the Patent Office show that only four patents have been extended since March 2, 1875, the date of expiration of the last issue of fourteen-year patents.

The supposition so generally though erroneously and unjustly entertained that Congress is opposed to the extension of patents, affords an explanation of the reduction of the number of private bills that have been filed to secure the extension of patents, either by the direct act of Congress or through the Patent Office.

I am satisfied that the commonly expressed opinion as to the attitude of Congress on the question of extensions of patents is founded upon suppositions and not upon facts; and so well satisfied have I become that a large majority of Congress is not opposed to the granting of extensions, in proper cases, and that it has accepted the act of March 2, 1861, as conclusive and final as to the extension of patents only because it would be impossible for the committees of Congress to hear, examine, and pass upon the large number of applications that would be filed every year if they should make favorable reports upon a very limited number of applications, that I am convinced that success would crown an effort made to secure general legislation which would provide for hearing and determining of applications for extension by some board, commission, or court. I have, accordingly, prepared four bills, two of which have already been introduced in the Senate and House, read twice, and referred to the proper committees. One bill (S. 6314, H. R. 15333), to state its contents breifly, practically restores the old law of 1836, except that it provides for an extension for a term not to exceed seventeen years. If an inventor who, for example, after having made and patented an important invention, has never enjoyed the "exclusive" right to make and use his invention, but has been forced to spend all of his income from his patent, and, perhaps, drawn upon his other resources, to pay expenses of litigations which have continued almost to the date of expiration of his patent, justice, fairness, and good faith on the part of the Government demand that the patent shall be extended for a term which will give the patentee the period of "exclusive" right which the Government, under its contract (see Supreme Court in Grant *v.* Raymond, 6 Peters, 218), agreed to secure to him in consideration of his making a full disclosure of his invention.

The second bill (S. 6313, H. R. 15332) provides that the Commissioner of Patents shall have the usual examinations made as to the prior state of the art to see whether all the claims of the patent were properly allowed; shall select the publications in which notice of the application for extension shall be inserted in order to give notice to adverse interests. After the proceedings above indicated the case is to be sent to the Court of Claims for examination and decision upon all the proofs and argument of counsel.

The third bill provides for the establishment of a commission to be attached to the Patent Office and paid out of the "patent fund," which shall separately, or in connection with the Commissioner, perform all duties and have exclusive jurisdiction over all applications for extension.

The fourth bill contemplates the filing of a private bill in each case, as at present, and the establishment of a commission to hear each case and report it findings of fact to Congress with a recommendation that

the bill be favorably or unfavorably considered; also that no patent extended under the provisions of this act shall be construed to give any right to sue the Government of the United States for the infringement of the patent under its extended term.

The writer has received many assurances from members of the Senate and of the House of Representatives that a move to "secure general legislation," as proposed in these bills, is in the "right direction."

The following is a copy of one of the said four bills, two of which were introduced in the Senate by Senator Bate June 30, 1902 (S. 6313 and 6314), and which were also introduced in the House of Representatives by Judge Moon on July 1, 1902.

A bill to amend sections 4924 and 4927 of the Revised Statutes, relating to patents.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section 4924 be amended to read as follows:

"SEC. 4924. That where the patentee of any invention or discovery, the patent for which was granted within seventeen years and nine months preceding the date of the passage of this act, shall desire an extension of his patent beyond the original term of its limitation, he shall make application therefor, in writing, to the Commissioner of Patents, setting forth the reasons why such extension should be granted; and he shall also furnish a written statement, under oath, of the ascertained value of the invention or discovery, and of his receipts and expenditures on account thereof, sufficiently in detail to exhibit a true and faithful account of the loss and profit in any manner accruing to him by reason of the invention or discovery. Such application shall be filed not more than nine months nor less than ninety days before the expiration of the original term of the patent, and no extension shall be granted after the expiration of the original term."

SEC. 2. That section 4927 be amended to read as follows:

"SEC. 4927. That the Commissioner shall, immediately after the receipt of said application and of the report of the principal examiner, as provided for in section forty-nine hundred and twenty-six of the Revised Statutes, immediately refer said application to the Court of Claims to hear and decide upon the evidence produced both for and against the extension; and if it shall appear to the satisfaction of the Court of Claims that the patentee, without neglect or fault on his part, has failed to obtain from the use and sale of his invention or discovery a reasonable remuneration for the time, ingenuity, and expense bestowed upon it and the introduction of it into use, and that it is just and proper, having due regard to the public interest, that the term of the patent should be extended, the Court of Claims shall make a certificate thereon, renewing and extending the patent for a term not to exceed seventeen years from the expiration of the first term. Such certificate shall be forwarded to the Commissioner of Patents, to be recorded in the Patent Office; and thereupon such patent shall have the same effect in law as though it had been originally granted for and including the extended term."

It may be interesting to here state, from the official records of the Patent Office, the number of applications for extensions filed and of extensions granted during the years 1872, 1873, and 1874, the last three years of the fourteen-year patents; these can be compared with the number of fourteen-year patents which were granted in 1858, 1859, and 1860 under the act of 1836, to wit:

	1872.	1873.	1874.
Applications for extensions	285	273	216
Extensions granted	240	233	199

The number of patents issued in the years 1858, 1859, and 1860, which would expire in 1872, 1873, 1874, under the original term, was,

respectively, as follows: 1858, 3,467; 1859, 4,165; 1860, 4,363; total, 11,995.

It will thus be seen that of the 774 applications for extensions out of 11,995 patents, the Commissioner of Patents, in view of the reports of his expert examiners, the proof as to receipts, and the disbursements of the patentees, the importance of the invention to the public as well as to the patentees themselves, the causes which had prevented the patentees, although diligent according to their abilities, from either placing their improvements on the market or reaping their merited reward, the nature of the invention, and the prior state of the art, found that 672 out of 774 applicants for extensions were justly entitled to have their patents extended for seven years, the only term under the statute of 1836 for which the Commissioner of Patents could grant an extension.

It will be seen that the enactment of any one of the four bills, or of a bill combining features of two or more of them, would not require one dollar of Government money; even should a board, to be attached to the Patent Office, or a commission, as proposed, be appointed, the entire expense thereof could be paid out of the five millions of surplus to the credit of the patent fund, every dollar of which came from the pockets of inventors and others interested in patents, or out of the current receipts of the Patent Office, without absorbing more than from one-sixth to one-tenth of the large annual surplus, and without taking one dollar from the previous surplus.

It is eminently proper that a portion of the large surplus which has accumulated from the fees paid by the fraternity of inventors should be devoted to securing a modicum of justice to the unlucky brother who has seen his bright hopes, founded on valuable discoveries, end in bitterness and disappointment.

Litigation, protracted through years, fruitless quest for capital, fruitless expenditures of his own resources, heartbreaking disappointments, and grinding poverty too often fill up the short term of a patent.

What better use could be made of the really small amount of money that would be required to pay the expenses of such a court, board, or commission than is herein proposed? Its proceedings would be analogous to the proceedings before the privy council of England, which, after hearing the petitioner and any opponents and "inquiring of the whole matter," advises the Crown whether an extension not exceeding fourteen years, making twenty-eight years in all, shall or shall not be granted.

The surplus fund of the Patent Office has been mentioned above as a source from which the expenses of the court, board, or commission for hearing and considering extension cases might be derived. It could, however, be arranged to avoid any draft on said fund. A fee might be charged in extension cases, $50, as formerly, when application is made, and $50 when it is granted; these fees would probably render the board, etc., self-supporting. It seems to me that only a nominal fee should be required when the application is filed.

In a speech delivered in the House of Representatives on June 13, 1882, by Hon. Thomas D. Young, of Ohio, he said:

> Speaking of the receipts of the Office and the reason why this amendment should be adopted, let me state that the surplus receipts of the Patent Office over expenditures for the last year were $248,000. This money is covered into

the United States Treasury. Where does it come from? From the pockets of inventors and the people who sustain inventors by buying their patents for use in different manufactories.

* * * * * * *

And more than that, Mr. Chairman, the $248,000 which goes into the Treasury is a surplus which was never intended to go there. The Patent Office was established in the first place for the purpose of encouraging the useful arts. If any gentleman on this floor assumes or pretends it was intended as a revenue office I should like to know it. If it were intended as a portion of the internal-revenue system, to gather money into the Treasury taken from the people for specific reasons and purposes, then the Patent Office ought to belong to the Internal Revenue Bureau and be legislated for accordingly. But there never was any such intention on the part of the men who originated the Patent Office, as the law establishing it declared it was established for the encouragement of the useful arts. It was intended to be self-sustaining and to pay its own way, and it does pay its own way and has this surplus. Men come here and, on the ground of retrenchment and economy, say it is a great extravagance, and that it ought not to exist.

* * * * * * *

Surely this Congress can be equally liberal in permitting the Patent Office to expend a few thousand dollars of its own earnings for the benefit of the Government, for the benefit of all classes of our people, and thereby "promote the useful arts." * * *

As this fund accumulates propositions are annually made in Congress to divert it from its legitimate uses to educational or other enterprises entirely foreign to our patent system. Does it not seem the part of duty as well as of wisdom and sound policy that it should be taken from the idleness which is suggested by these threatening propositions and employed in a channel where it would be fruitful of so much good to inventors and the public?

In that great speech, delivered in the United States Senate on March 31, 1884, by Hon. Orville H. Platt, of Connecticut, who is still in the Senate and is one of its most useful members, a speech that has become a classic in literature relating to inventions and patents, a speech which ought to be read by every patriotic American citizen, and especially by lawyers who make a specialty of patent practice and by inventors, on the "Reorganization of the Patent Office," Senator Platt said:

That is a fine showing for an office in this Government which is not only paying its way, but paying at the rate of from $200,000 to $500,000 a year into the National Treasury.

While I have been speaking I have received from a prominent manufacturing firm in my own State a dispatch asking me if I can not say something in favor of reducing patent fees. Mr. President, the patent fees ought to be reduced. A tax upon inventors which produces more than enough to pay the current expenses of the office is simply shameful. It is a tax upon knowledge, a tax on invention, a tax which in itself is as iniquitous and abominable as a tax upon authors or scientists would be. Still I am compelled to say that I do not want the fees paid by inventors reduced until the Patent Office becomes a separate department. I want this glaring inconsistency of the inventors of the country paying the expenses of that branch of the Government and furnishing the Government from $300,000 to $500,000 annually in addition to continue until its voice shall be heard through the land in favor of the establishment of the Patent Office as an independent department.

Agriculturists have been slow to acknowledge their dependence on patents, but they have been loud in their demands for the enlargement of the Agricultural Department. What was the origin of the Agricultural Department? It is the child of the Patent Office. The Patent Commissioner had charge of the agricultural work from 1836 to 1862, and if I am not mistaken the inventors of the country paid the entire expense of that service in connection with the Patent Office for twenty-five years. Until 1849 there was no separate report. The Commissioner of Patents reported his work in the agricultural line, and from 1849 up to 1862, when there was a separate report, it was called the Patent Office Report, and to-day men write me for the Agricultural Report and call it

the Patent Office Report. Many of the farmers in this country still believe that the Agricultural Department is in some way connected with the Patent Office.

The Agricultural Department is the daughter of the Patent Office, but we have taken the daughter away from her mother, we have built her a fine house and furnished elegant surroundings, we have given her costly and fashionable clothing; we pet—I will not say pamper—her; we pay her every possible attention, while the old lady, her foster mother, still scrubs along in the kitchen of the Interior Department, and is never noticed except when she deposits the surplus of her daily earnings in the Treasury for the benefit of the rest of the family. It is a shame, and the inventors are beginning to regard it as a shame, and they are going to be heard in their demand that the Patent Office shall receive better treatment than it has received. I make no complaint that the Agricultural Department has been made independent; I only protest against the studied neglect of its parent.

To show that it has never been the intention of Congress to make the Patent Office more than self-sustaining, and that we may therefore reasonably expect that Congress will, in response to a general demand therefor, enact a law which will provide for the hearing and determination of applications for extensions, and for the payment thereof by making a small draft upon the annual surplus of the Patent Office which goes to the credit of the patent fund, I give below eight extracts from the patent laws, beginning with the first act of 1790, to wit:

Section 7 of the act of 1790 provided that a patentee must pay the following fees before the issuance of letters patent, to wit:

For receiving and filing the petition, fifty cents; for filing specifications, per copy sheet containing one hundred words, ten cents; for making out patent, two dollars; for affixing great seal, one dollar; for indorsing the date of delivering the same to the patentee, including all intermediate services, twenty cents.

The total cost of a patent, estimating the specification to contain one thousand words, was $4.70.

Section 11 of the act of 1793 required the applicant to deposit $30 with his petition, said amount to be passed to the credit of the applicant—

in full for the sundry services to be performed in the office of the Secretary of State consequent on such petition, and shall pass to the account of clerk hire in that office.

Section 9 of the act of 1836 required the applicant to deposit $30—

And the moneys received into the Treasury under this act shall constitute a fund for the payment of the salaries of the officers and clerks herein provided for, and all other expenses of the Patent Office, and to be called the patent fund.

Section 7 of the act of 1861 authorized the Commissioner to appoint—

such additional number of principal examiners, first assistant examiners, and second assistant examiners as may be required to transact the current business of the office with dispatch, * * * and that the total annual expenses of the Patent Office shall not exceed the annual receipts.

An act approved March 29, 1867, entitled "An act to increase the force of the Patent Office," authorized the Commissioner to appoint, from time to time, "such additional number of principal examiners, first assistant examiners, and second assistant examiners as may be required to transact the current business of the office with dispatch," provided that "the total annual expenses of the Patent Office shall not exceed its annual receipts."

An act entitled "An act making appropriations for sundry civil

expenses of the Government for the year ending June 30, 1869, and for other purposes," approved July 20, 1868, contained the following:

Provided, That all the moneys standing to the credit of the patent fund in the hands of the Commissioner of Patents and all moneys hereafter received at the Patent Office for any purpose, or from any source whatever, shall be paid into the Treasury as received, without any deduction whatever.

Section 69 of the act of 1870 provided that—

All money received at the Patent Office for any purpose, or from any source whatever, shall be paid into the Treasury as received without any deduction whatever, and all disbursements for said office shall be made by the disbursing clerk of the Interior Department.

Section 496, Revised Statutes, provides that—

All disbursements for the Patent Office shall be made by the disbursing clerk of the Interior Department.

These extracts from the patent laws show that Mr. Young was correct in stating that the Patent Office was not designed to be a revenue office, but that the fees established by law were merely to make the Patent Office self-supporting. While the charges for an United States patent are less, in proportion to the territory and numerous interests covered, than those of any other government in the world, still these charges have produced a revenue of over $5,000,000, which amount is now increasing at the rate of from $150,000 to $200,000 (more or less) per year. As hereinbefore suggested, a very small part of this annual surplus would be required to pay the expenses of a court, board, or commission to hear and determine upon applications for extensions, and in view of the large annual surplus and the fact that applications for extensions are largely from inventors who have failed to secure any proper reward for their inventions, and who, as a rule, have lost money rather than made it out of their patents, it seems to me that the hearing of an application for extension should involve only a nominal charge against the applicant instead of costing him $50 or $100.

The surplus for the year 1901 was $152,012.52, which made the total surplus of the patent fund on January 1, 1901, $5,329,471.07. Certainly Congress will not allow the surplus fund or any portion of it to be diverted "from its legitimate uses to educational or other enterprises entirely foreign to our patent system" as long as inventors, from whom the money was received, are demanding that a small portion thereof shall be set apart to pay for investigations which will serve to carry out the great objects of the patent laws, will enable the Government to carry out its contracts with inventors, and will secure to inventors, who have acted in good faith in efforts to carry out their contracts, a further opportunity to accomplish the results contemplated by the original contract, namely, to practically promote the useful arts and to reasonably reward the inventors of such improvements.

Notwithstanding the large surplus to the credit of the patent fund, the Commissioner of Patents is engaged in a constant strife to secure appropriations to provide for contingent expenses. The writer has been fully informed of the fact that it required the cooperation of the Commissioner of Patents, the chief clerk of the Patent Office, and the chief clerk of the Department of the Interior for a period of several months in "cutting and shaving here and there" in order to

provide rubber tips on legs of chairs and strips of carpet for use under the tables used by inventors and their attorneys in the attorneys' room of the Patent Office. These "improvements" were solicited by a committee, representing a law association, to prevent the noise caused by moving chairs and the feet of their occupants on the marble floors.

In speaking of the Patent Office, Senator Platt has said: "Notwithstanding the office is self-supporting, all disbursements must be made by the disbursing clerk of the Secretary (of the Interior). The Commissioner can not order the purchase of a board to be used in reproducing a model called for in the trial of a cause without the approbation of this clerk."

While I am fully in sympathy with Congress in safeguarding the patent fund by imposing all reasonable restrictions upon the appropriations therefrom, such as the requirements that the Commissioner of Patents shall pay "all money received at the Patent Office, for any purpose, or from any source whatever, into the Treasury *as received, without any deduction whatever;* and that all disbursements for said office shall be made by the disbursing clerk of the Interior Department," I do not share in the objection of some, that in order to secure favorable action upon a bill to undo the wrong which has resulted from the repeal of the law of 1836, which provided for the extension of patents in proper cases, it will be necessary to so frame the bill as to avoid any reduction of the surplus which would otherwise go into the Treasury of the United States. It is my conviction that Congress can be made to see that a small draft upon the surplus of the Patent Office receipts to pay for the hearing of extension applications "would be fruitful of so much good to inventors and the public" that such use of a small part of said surplus would not be "diverting it from its legitimate uses" nor be "foreign to our patent system," but would "benefit all classes of our people and promote the useful arts," and that then it will promptly consent not only to enact an extension law of some kind, but will reduce the cost of hearing an application for an extension to an amount which, though it may cause a small reduction of the annual surplus, will not be worth considering.

I wish here to state that a patent is not a monopoly as that word is usually understood. I recall that in a recent speech a distinguished United States Senator said that "patents constitute the only monopolies in this country." In Blackstone's Commentaries "monopoly" is defined as "a license of privilege allowed by the King for the sole buying and selling, making, working, or using of anything whatsoever; whereby the subject in general is restrained from the liberty of manufacture or trading which he had before." Under the word "monopoly," the Century Distionary says: "The exclusive privileges conferred on inventors and authors by the patent and copyright laws, for the sake of the encouragement of the arts and literature, and extending only to articles originally devised under that encouragement, are not deemed monopolies." In Robinson on Patents we are told that a patent "lays no burden upon the people except that of remaining for a while without that which they never yet enjoyed."

To give a general idea of the practical working of the law of 1836 as applied to the extension of patents by the Patent Office, I think it would serve a very useful purpose to present to the reader copies

of the papers in two actual applications for extension. The cases which I have selected are very fair samples taken from the 672 extensions that were granted in the years 1872, 1873, and 1874. Each case comprises the petition of the applicant, under oath, giving a history of the case, including receipts and disbursements, the report of the expert examiner, and the action of the Commissioner. The first case is that of Joseph W. Fowle; the second that of Philander Shaw.

Mr. Fowle was a pioneer inventor of a "steam drilling apparatus." As Mr. Fowle's "invention was in advance of public demand," and he was "cramped" in money matters, he sold one-half of his patent to a party by the name of Jenks, who failed to promote the patent in accordance with his agreement, although the invention was worth millions of dollars to the American people alone; but as that value was unknown to Fowle, he placed it at the very modest sum of $25,000. Notwithstanding the great commercial value of the invention and the extended term of seven years given by Commissioner Holloway, Fowle was an applicant before Congress for a second extension to enable him to secure the necessaries of life. The private bill for his relief failed and poor Fowle went down to his grave unrewarded for his great invention. Fowle's working model would drill a hole 3 inches in diameter in a block of hard Quincy granite at the rate of 17 feet per hour. The Senate and House Committees on Patents, who heard and considered Fowle's application for a second extension, were informed, by perfectly responsible parties, that they would give Mr. Fowle $10,000 a year and a bond to secure the payment thereof for each year of extension that Congress would grant.

Mr. Philander Shaw, whose case was argued by the writer before the Commissioner of Patents, received about $20,000, although more than that amount had been spent in his efforts to perfect and improve his machine.

And so, if we were to examine the papers in the 672 patents that were extended during a period of three years, we should find, as a rule, that the applicants had either not been fairly rewarded, or were seeking extensions to enable them to promote their patents for the mutual benefit of the country and themselves.

The papers of Messrs. Fowle and Shaw follow in the order named:

BOSTON, MASS., *January 3, 1865.*

HON. COMMISSIONER OF PATENTS.

SIR: In the matter of my application for extension of the patent granted me March 11, 1851, for improvements in steam drilling apparatus, for which my petition was filed December 9, 1864, and in conformity with the law and rule of your office requiring a written statement under oath of the ascertained value of the invention and of the receipts and expenditures in connection therewith, I respectfully submit the following: It is impossible for me to make any exact statement of the value of my invention for the reason that it has never yet been used in regular daily work. The reason for this is that my invention was made at a time when I was seized with rheumatism, which has, since 1856, become chronic and has crippled me to such an extent as to distort my body, especially my hands and feet, so that for a long time I have not been able to dress and undress myself, nor am I able to perform work, but gain my living by having two apprentices who do the work in my machine shop under my direction and assisted by me to the extent of my limited physical ability.

My invention was in advance of public demand during the first years of its existence, and during the latter years I have been physically incapacitated from

getting it adopted by the public, and during the whole time of its existence I have been cramped in my money matters, having only what I earn at my trade as a machinist. In consequence of my physical infirmities and lack of capital, I sold to Lemuel P. Jenks, of Boston, one-half of my patent on condition that he should use his time, influence, and abilities in introducing the invention into public use, and should make the expenditures needed for that purpose; and for the further consideration of the payment of $250 to me and the payments of the expenses of procuring the United States patent. Mr. Jenks spent some time upon the matter, but as no results followed, I concluded that I had overestimated his abilities and his financial condition, for he failed to pay Messrs. Hinckley & Drury, of this city, machinists, for the construction and material for a drill for which I made the drawings, and also to pay for taking out the patent, money for which I furnished myself.

I was offered in 1854 $8,000 for my patent, which offer I accepted, and should have got the money, which I very much needed, but for the fact that I had also to deal with Mr. Jenks, who, in endeavoring to get more, failed to get anything either for himself or for me.

At the present time, in consequence of the large amount of tunneling done and to be done in California and elsewhere, much of it through solid rock, I consider the value of my invention to be quite large, and as I suppose some value must be fixed upon it, I should say that its value is not less than $25,000. To enable you to form an idea of the value of the invention from its practical working, I would state that in the year of 1860 I exhibited to some members of the Massachusetts legislature the practical working of my drill. The machine exhibited had a 2¾-inch cylinder with a stroke of 10 inches. The operation was performed on a block of hard Quincy granite 8 by 4 by 2 feet, and a hole of three inches in diameter was drilled into the block at the rate of 17 feet per hour and under the advantages that the block moved or was driven from the drilling machine by its blows. If my patent is extended, both myself and the public will be benefited, because I shall be free from control or connection with Mr. Jenks, and my friends will supply for my benefit the funds needed, as the results will not be claimed by Mr. Jenks to the amount of one-half.

RECEIPTS.

From L. P. Jenks	$250.00

The above is the only receipt I have ever had for on account of the matter of my invention.

EXPENDITURES.

Cost of material, workman's wages, rent, and estimated value of my time at daily wages expended in making an experimental working machine as nearly as I can estimate, not having kept accounts or books	$1,500
Value of my time expended in making drawings and in directing the construction of the drill before mentioned, as constructed by Hinckley & Drury, of Boston, under contract or agreement with L. P. Jenks, and for which they were not paid, about	250
Cost of making model filed in the Patent Office, about	50
Cost of a finished portable working model designed to exhibit and introduce the invention	200
Paid for procuring the patent	75
	2,075

The above are not all of my expenditures either of time or money, but are all I can now state with certainty under oath.

Expenditures	$2,075
Receipts	250
Excess of expenditures over receipts	1,825

JOSEPH W. FOWLE.

(Jurat.)

In the matter of J. W. Fowle.

EXTENSION.

In the matter of the application of Joseph W. Fowle for extension of letters patent (No. 7972) for steam drilling machine.

Upon examination of the testimony and exhibits filed in this case it is found:

1. That the invention is novel.

2. That its utility has never been practically tested. The testimony of three chief engineers and mechanics make their statements showing its utility and practicability, and its construction gives evidence of great mechanical skill on the part of the inventor.

3. Its value and importance to the public is also produced upon the statements of the witnesses referred to, no other evidence having been submitted except that of the oath of the applicant.

4. The statement of account shows that the only amount received by the applicant was the sum of $250, and the expenditures $2,075. The want of success in the sale or manufacture of this machine is alleged to be that the invention was in advance of public sentiment, and physical disability on the part of the applicant prevented him from taking an active interest in the invention. The $250 above referred to as being used was for the sale of one-half interest in the patent. No internal-revenue certificate is attached to the sworn statement of the applicant, which is received and submitted.

B. F. HARRIS, *Chief Clerk.*

UNITED STATES PATENT OFFICE,

March 2, 1865.

Application of Joseph W. Fowle for an extension of the letters patent for a steam drill granted him the 11th of March, 1857.

Upon reference from the Commissioner to the examiners-in-chief.

The examiners-in-chief respectfully report in pursuance of said reference as follows:

There seems little or no room for hesitation in granting this petition; the novelty and usefulness of the invention have been considered by the primary examiners and have been found sufficient. Its value and importance are abundantly established by affidavits. It is true that the affidavits place no exact estimate upon it, as it is obvious they could not add to their testimony, but their testimony is none the less satisfactory upon that account. The patentee has never received but $250 from it, and it hardly needs any statement of profits to produce the conviction that he has "not been adequately remunerated for his time and expenses in originating and perfecting his invention."

The only question that remains is as to his having "used due diligence in introducing his invention into general use." It is shown that soon after he obtained his patent he became an invalid through chronic rheumatism, and has ever since been rendered incapable of labor or of active exertion. In order to bring his machine into use he sold one-half of the invention for the above sum of $250. The purchaser was to furnish in addition necessary funds to defray the expenses of procuring the patent and build experimental machines, and was also to make the efforts requisite to bring the machine into public use. In all this he utterly failed, and the negotiations turned out to be a fatal obstacle in the way of all endeavors to bring the invention into the market, instead of facilitating them. No one was willing to embark in an undertaking while another was to share equally in the profits. As this right expires with the original term of the patent, the applicant's friends are now ready to furnish the assistance requisite to introduce the invention into general use. That this has not been done before, and that the inventor has received no adequate reward for his ingenuity, is owing to no neglect on his part, as is manifest from the slight sketch which has been given of the history of the device.

We respectfully recommend that the prayer of the petitioner be granted.

All of which is submitted.

J. H. HODGES,
T. C. HEATON,
J. T. COOSLEY,
Examiners-in-Chief.

PATENT OFFICE, WASHINGTON, *March 6, 1865.*

The foregoing report is approved, and the term of the said patent is hereby extended for a term of seven years from and after the 11th day of March, 1865.

D. P. HOLLOWAY, *Commissioner.*

The COMMISSIONER OF PATENTS:

Respectfully representing Philander Shaw, of Boston, in the county of Suffolk and State of Massachusetts, that he is the inventor of a certain novel and useful improved air engine, which is of great value and importance to the public; that on the 2d day of May, A. D. 1854, your petitioner obtained letters patent of the United States for said invention, to which your petitioner craves leave to refer for a more full description thereof; and that afterwards, to wit, in or about July, A. D. 1860, said letters patent were surrendered by your petitioner, and were afterwards, to wit, on the 17th day of July, A. D. 1860, reissued to your petitioner with an amended and more perfect specification, to which your petitioner craves leave for greater certainty to refer.

That your petitioner has been at great expense and charge in introducing his said invention to the public, has expended nearly all of his time and great sums of money in perfecting his said invention and in experimenting for its improvement, and that he has not yet received any return for his time and expense in originating and perfecting his said invention—any adequate remuneration—nor in fact has been repaid the expenses he has incurred in originating, developing, and perfecting his said invention.

And that from and after the date of said letters patent, to wit, from said 2d day of May, A. D. 1854, your petitioner has used all due diligence in introducing his said invention into general use.

Wherefore, your petitioner prays that the letters patent issued to him for his said invention may be extended for the further term of seven years from the 2d day of May, A. D. 1868.

Signed at Boston this 13th day of January, A. D. 1868.

PHILANDER SHAW.

In the matter of the application of Philander Shaw for an extension of his letters patent for his air engine, granted May 2, 1854, and reissued July 17, 1860, and April 23, 1861.

The applicant in this case seeks to extend his patent, and gives as a reason that he has not been adequately remunerated for his time, ingenuity, and expenses in perfecting and introducing his invention.

As to the novelty of the device, it may be said that including the present examination, the case has been four times passed upon by this office, and each time, at least by inference, declared as it is now believed to be, novel.

In reference to its utility no doubt exists.

Is it valuable and important to the public? In answer to the above question it may be said that its value and importance have not been very thoroughly tested, as it appears from the statement of the applicant that only four of the engines are in successful operation. It is proper to say, however, in this connection, that Mr. C. C. Parker, a person apparently well qualified to judge, regards the invention as very valuable and important. What its value to the public is no attempt is made to show.

Has the inventor been adequately remunerated for his time and expense in originating and perfecting it?

Here the examiner is left entirely in the dark, as by the admission of the applicant he has not kept any account of his receipts or expenditures on account of the patent, and the only approximation which he can make to such amounts, as he says, "to the best of his knowledge and belief, he has received $20,000 from his invention and has expended the same amount."

In this connection, Mr. Nathaniel Harris states that he has been well acquainted with Mr. Shaw's efforts to perfect and introduce his invention. That during all of those years he has devoted himself entirely to the work, but he (Harris) believes that it has been a source of loss to the inventor.

In reference to the diligence of the applicant in introducing the invention into public use there does not seem to be any reason to doubt that a due amount has

been used. The statements of Mr. Harris, Mr. Parker, and Mr. Edson confirm and, it is believed, prove this fact.

From what has been said it will be seen that the only question which remains in doubt is the amount of compensation received and which should be passed to the credit of this patent. The applicant states that all he has received has been exepended or is pledged for indebtedness, but he is reminded that all he has received may or may not be on account of this patent, while what he has expended and what he owes may not be in any sense chargeable to such patent.

It is to be regretted that persons intending to apply for extensions of their patents will not keep such accounts of the receipts and expenditures as will enable those whose duty it is to decide upon the merits of their case the means of doing so intelligently and of carefully comparing their rights with the rights of the public, so that neither be insensed (?), as is quite likely to be the case in the absence of a statement showing clearly how much the applicant has secured and the public have paid.

In the present case it appears that $20,000 is the gross amount received, and the only process for arriving at a conclusion seems to be by determining whether that amount, if at all, be placed to the credit of the patent, is an "adequate remuneration" to the inventor for his time and expenses in originating and perfecting his invention, in view of what that invetion is worth to the public.

In the matter of the petition of Philander Shaw for extension of his patent for an improvement in air engines.

COMMONWEALTH OF MASSACHUSETTS, *County of Suffolk, ss:*

On this 15th day of April, A. D. 1868, before the subscriber, a justice of the peace for the said county and Commonwealth, personally appeared the above-named Philander Shaw and made solemn oath as follows:

The patent for which I now ask an extension covers an invention which forms an important feature in the machine I am now making. My subsequent patents cover inventions for improvements arising from my attempts to perfect the original invention.

As my expenditures on this patent began about fifteen years ago and my receipts about seven years ago, it is absolutely impossible to give exact accounts, my time and mind having been entirely engrossed with producing a perfect air engine and not with financial matters.

To the best of my knowledge and belief I have laid out on this invention $20,000, which amount has been received; none of the amount of $20,000 has been expended upon any matter not directly connected with this invention, for the purpose of rendering it of utility to the public.

PHILANDER SHAW.

Commonwealth of Massachusetts, county of Suffolk, April 15, 1868.
Subscribed and sworn to before me.

GEORGE PUTNAM, *Justice of the Peace.*

In the matter of Philander Shaw for an extension of his patent for an improvement in air engines.

COMMONWEALTH OF MASSACHUSETTS, *Suffolk County, ss:*

On this 10th day March, A. D. 1868, before the subscriber, a justice of the peace for the said county and Commonwealth, personally appeared the above-named Philander Shaw and made solemn oath as follows:

1. That since the original patent for my said invention was obtained I have been constantly engaged in perfecting and improving it. I believe it to be entirely novel.

2. That my experience and the experience of others engaged in the practical use of my machine demonstrates that they will do twice as much work with a given amount of fuel as any other engine. It is the only air engine that has been successfully used of large sizes.

3. That I believe it to be valuable and important to the public, for the reason that it will accomplish a great saving in expense over other engines capable of doing the same amount of work, and that it can be used where steam engines

would be unable to work for want of water. As there is no danger of explosions, it is also safer than the steam engines.

4. That I have not been adequately remunerated for my time and expense in originating and perfecting my said invention. I have devoted nearly the whole of my time and attention for fifteen years to the development and perfecting of my said invention, and I have invented several improvements which have been patented, and it is impossible to separate them from the original invention in such a way as to ascertain accurately the value of the latter, or the precise amount which I have received and expended on account of it. But all the money which I have received from the invention has been expended on it or pledged for indebtedness incurred in developing, improving, and perfecting it. In the course of my experiments with this invention numerous changes and improvements have been made, all requiring time and expense to make the necessary changes and experiments upon them and a sufficient length of time to test them. These numerous improvements, some of them of great value, depend upon the original invention and need the patent of that invention to secure them to me. Want of capital has, at times, greatly interfered with my progress in perfecting and introducing my machine. The experiments are expensive and it takes much time to test all the qualities of an engine, as well as to overcome the prejudices against the use of a new machine. The numerous failures in air engines have reduced the public desire for them, and this distrust can only be removed by long-continued, successful working; but at present there are four in actual operation; some of them have been a long time at work and they are giving satisfaction. There is also a greater interest in them and an increasing disposition to try them, and if the patent be renewed there is every reason to believe that it will be remunerative.

PHILANDER SHAW.

Subscribed and sworn to on the day first herein mentioned by said Philander Shaw before me.

GEO. PUTNAM,
Justice of the Peace, Suffolk County.

Should the conclusion be reached that the inventor has not been thus remunerated, then it is suggested that the patent ought to be extended, as all the other points seem to the examiner's mind to be clear and in favor of such a result.

Respectfully submitted.

J. M. BLANCHARD, *Examiner in Charge.*

Hon. A. M. STOUT,
Acting Commissioner, United States Patent Office.

APRIL 17, 1868.

APRIL 20, 1868.

It is ordered that this patent be extended for seven years from the date of expiration.

A. M. STOUT, *Acting Commissioner.*

TABLE I.—*Showing the ratio of patents issued to the population in each of the following States, there being one patent to every—*

GROUP 1.

State.	1881.	1886.	1891.	1896.	1901.
Alabama	26,861	21,308	18,451	13,880	22,300
Florida	12,833	6,573	7,527	7,116	9,972
Georgia	16,582	11,015	14,817	14,354	14,874
Kentucky	9,527	6,568	9,531	9,387	9,849
Louisiana	12,701	9,894	9,168	8,410	11,418
Mississippi	27,599	21,761	20,469	27,438	18,038
North Carolina	21,871	18,063	21,288	23,703	18,886
South Carolina	22,123	21,040	23,402	31,976	23,517
Tennessee	17,413	11,340	10,978	12,625	10,415
Texas	8,991	5,984	6,744	7,527	8,993
Virginia	14,005	12,308	10,088	10,753	9,057
West Virginia	14,055	7,451	10,308	8,860	8,125
Total	204,461	154,085	162,809	176,119	168,544
Average	17,038	12,800	13,567	14,677	14,045

PLATE 1.—*The heavy line shows graphically the facts shown by the averages obtained in Table I, group 1. The dotted line represents similar averages obtained for each year from 1881 to 1901.*

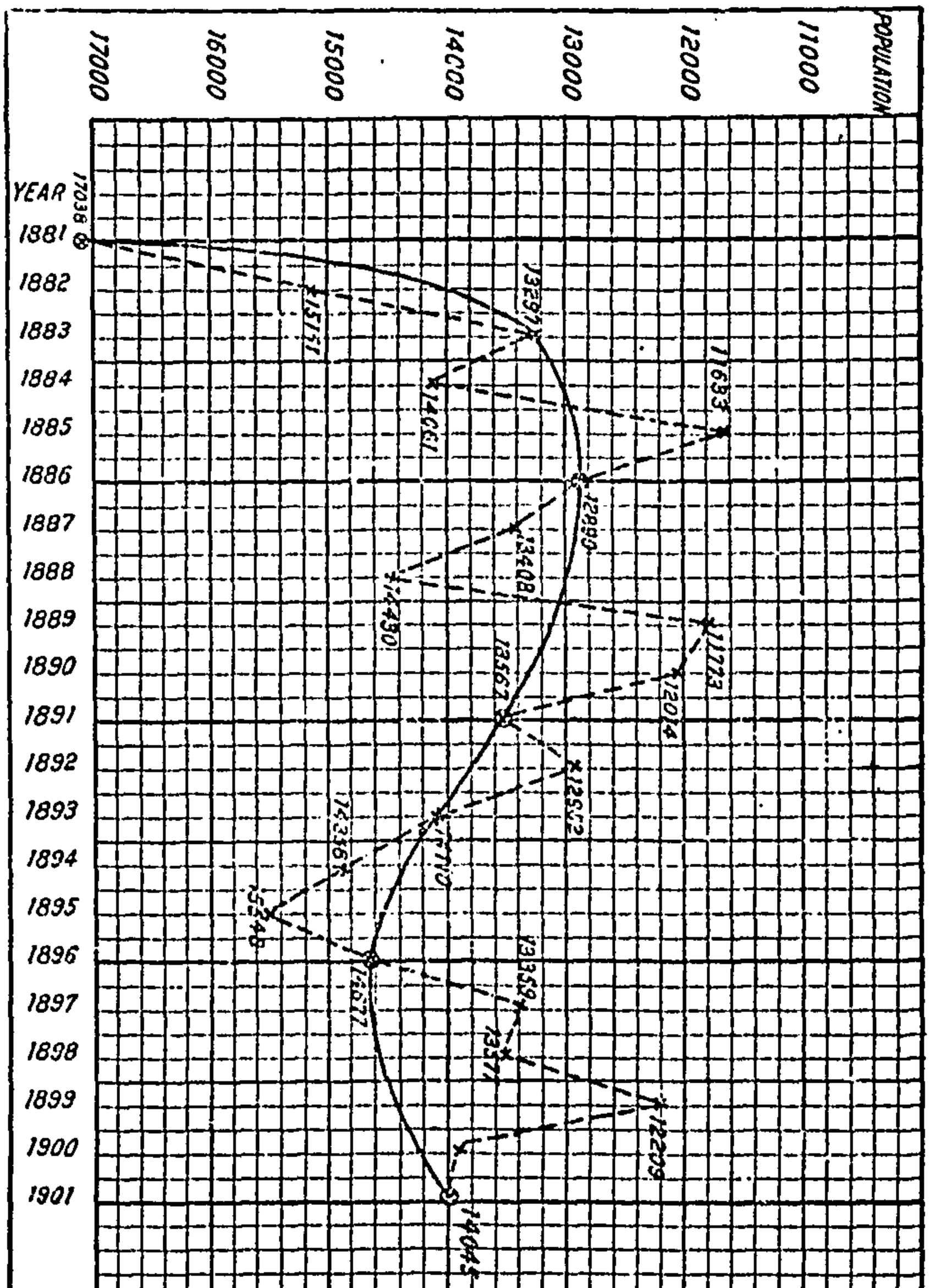

TABLE I.—*Showing the ratio of patents issued to the population in each of the following States, etc.*—Continued.

GROUP 2.

State.	1881.	1886.	1891.	1896.	1901.
Connecticut	893	729	1,018	1,759	1,198
Illinois	2,743	1,711	1,994	1,874	1,984
Indiana	4,415	2,830	3,846	3,564	3,812
Massachusetts	1,043	842	1,055	1,177	1,472
Michigan	3,058	2,131	2,874	2,987	3,198
Minnesota	5,387	2,711	3,698	3,719	4,199
Missouri	5,288	3,165	3,408	4,059	3,840
New Jersey	1,307	1,225	1,505	1,453	1,572
New York	1,584	1,283	1,535	1,545	1,773
Ohio	2,909	2,000	2,427	2,276	2,417
Pennsylvania	2,119	1,871	2,393	2,267	2,221
Rhode Island	994	1,101	1,191	1,383	1,581
Total	31,805	21,549	26,944	28,063	29,267
Average	2,650	1,796	2,245	2,339	2,439

PLATE 2.—*The heavy line represents graphically the facts shown by the averages obtained in Table I, group 2. The dotted line represents similar averages obtained for each year from 1881 to 1901.*

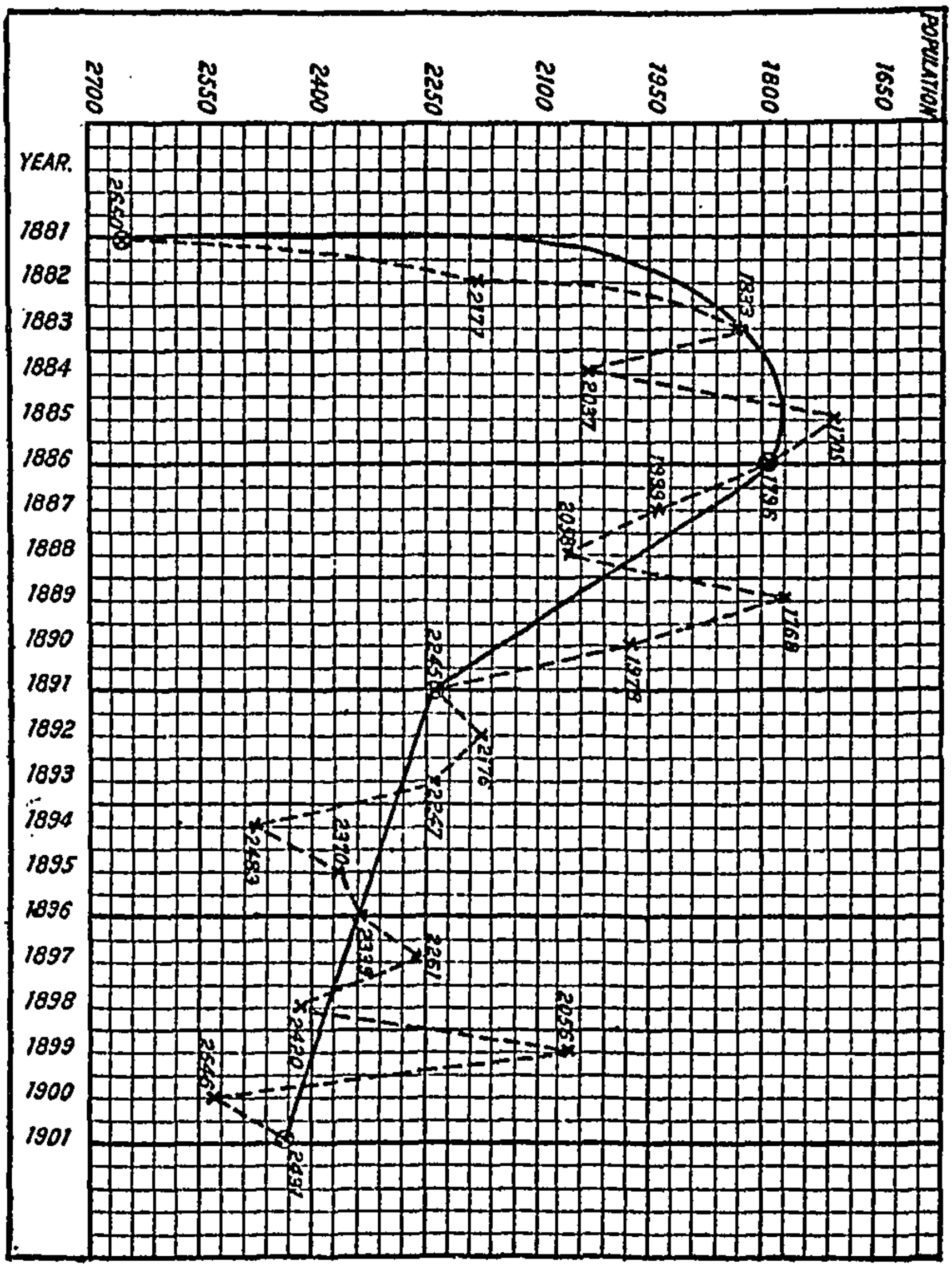

TABLE II.—*Showing the number of patents issued in each State named in each of the following years.*

GROUP 1.

State.	1881.	1886.	1891.	1896.	1901.
Alabama	47	59	82	100	82
Florida	21	41	52	55	55
Georgia	93	140	124	128	149
Kentucky	170	251	195	198	218
Louisiana	74	95	122	132	121
Mississippi	41	52	63	47	86
North Carolina	64	75	76	68	103
South Carolina	45	46	49	33	47
Tennessee	88	136	161	140	194
Texas	177	266	330	297	339
Virginia	108	122	165	154	192
West Virginia	44	83	74	86	118
Total	972	1,366	1,493	1,442	1,709
Average	81	114	124	120	142

TABLE II.—*Showing the number of patents issued in each State named in each of the following years*—Continued.

GROUP 2.

State.	1881.	1886.	1891.	1896.	1901.
Connecticut	693	854	783	983	768
Illinois	1,122	1,798	1,968	2,041	2,430
Indiana	488	699	570	615	660
Massachusetts	1,708	2,116	2,122	1,901	1 905
Michigan	537	768	752	701	757
Minnesota	146	288	352	350	417
Missouri	410	685	786	660	809
New Jersey	827	923	960	994	1,198
New York	3,207	4,121	3,907	3,882	4,008
Ohio	1,020	1,599	1,513	1,613	1,720
Pennsylvania	1,502	2,289	2,197	2,319	2,837
Rhode Island	278	251	200	240	271
Total	12,017	16,391	19,150	16,308	17,861
Average	1,001	1,366	1,263	1,359	1,488

TABLE III.

Showing that in the section represented by the States in group 1 there was 1 patent per annum to every 17,038 in 1881; to every 12,890 in 1886; to every 13,567 in 1891; to every 14,677 in 1896; to every 14,045 in 1901.

And that in the section represented by the States in group 2 there was 1 patent per annum to every 2,650 in 1881; to every 1,796 in 1886; to every 2,245 in 1891; to every 2,339 in 1896; to every 2,439 in 1901.

TABLE IV.—*Showing the dates of issue and dates of expiration of the seventeen-year patents issued from 1861 to 1878.*

Patents issued in	1861	1862	1863	1864	1865	1866	1867	1868	1869
Expired	1878	1879	1880	1881	1882	1883	1884	1885	1886
Patents issued in	1870	1871	1872	1873	1874	1875	1876	1877	1878
Expired in	1887	1888	1889	1890	1891	1892	1893	1894	1895

In 1878, and not before, were the patentees of 1861 in possession of the full results of the first year's issue of seventeen-year patents. In 1879 the patentees of 1862 were in possession of the results of the second year's issue of seventeen-year patents, and so on up to the year 1895, at which date, and not until then, were inventors in possession of the results of the first seventeen years of patents issued for seventeen years, and in a position to make comparisons of patents issued for a single term of seventeen years, without extension, with patents issued for fourteen years with extension. Referring to Tables I, II, III, and IV, and to plate 1, group 1, of Table 1, shows the population in twelve Southern States, divided by the number of patents issued to citizens of said States for the years given at the head of the columns of figures, e. g. in Alabama, the number of patents issued to citizens for the year 1881 was one patent for every 26,861 of her population, and so on for each succeeding fifth year, 1886, 1891, 1896,

and 1901. By means of this table the increase and decrease of the number of patents per annum, in proportion to population, in each of the States named is said group, for the five years above given, can be seen.

The same explanation applies to group 2 of the same table. Comparison may be made between the States of the same group and between States of different groups, and between the averages of one group for the five periods named, with similar averages in the other group for the same periods.

Comparing Mississippi and Texas, of the first group, we find that in 1881 these States received one patent per annum for each 26,861 and 8,991, respectively, of their population. Comparing Mississippi and Texas, representing the highest and lowest averages in the first group, with Connecticut and Minnesota, representing the highest and lowest averages for the second group, we find that in 1891 Mississippi and Texas obtained one patent per annum for each 27,599 and 8,991 of population, respectively, whereas Minnesota and Connecticut obtained one patent per annum for every 5,387 and 898, respectively, of population. Texas in one group and Connecticut in another group obtained more patents in the year 1881, in proportion to their population, than any of the other States of the groups in which said States are classed.

Table No. II shows the number of patents issued to citizens of the 12 States named in each of the two groups of States in Table I, for the years 1881, 1886, 1891, 1896, and 1901.

Table III shows the population of each group of States given in Tables I and II, divided by the total population of each group of States, for the years 1881, 1886, 1891, 1896, and 1901.

Comparing the States in group 1 with the States in group 2, we find, by reference to Table III, that for the year 1881 the number of patents issued to the citizens of the 12 States named in group 1 was one patent for every 17,038 of the total population, and that the number of patents issued to citizens of the 12 States named in group 2 was one patent for every 2,650 of the total population. If desired, similar comparisons may be made for the years 1886, 1891, 1896, and 1901.

The irregular unbroken line in plate No. 1 shows graphically the increase and decrease of invention, in proportion to population, at intervals of five years in the States named, as given in figures in group 1 of Table I and Table II. The dotted line shows the variation from year to year instead of every five years. The unbroken line and the broken dotted line in plate 2 present a similar illustration of the increase and decrease of invention, etc., in the States named in group 2 of Table I and Table II.

It will be seen that in each group of States the increase and decrease of patents from 1881 to 1896 was about the same in each group of States, but that from 1896 to 1901 the number of patents increased in the Southern States, group 1, while there was a material further decrease in the Northern States, group 2. With the exception of the increase of patents in the 12 Southern States from 1896 to 1901, there has been a gradual decrease in the number of patents issued to citizens of the 24 States, in proportion to the population, ever since 1886.

Manufacturing and the commercial upbuilding of the "New South" have not only arrested the gradual decline in invention in the twelve Southern States, but have materially increased the number of patents issued to their citizens from 1896 to 1901.

This awakening and emergence of the new South from the old were prophesied by Commissioner Holloway in 1863 (Patent Office Report):

> The imagination fails to conceive of the happy future in store for this country when its fairest portion shall be regenerated by a just system of labor, and conquered by free industry; when its land by this change shall, according to the remarkable estimates of Mr. Walker, have an increased value of over six billions of dollars; and when a whole race shall be taught to think, contrive, and create. The richest field of invention, with its fruits of wealth and visions of prosperity, will then be opened that ever occupied the faculties of man. The visions of Virgil and Milton will be realized, and
>
> Time will run back and fetch the age of gold.

The tables and plates herein shown were prepared from data obtained from the official reports of the Commissioner of Patents.

Taking the ratio of the patents issued to the population in the South as a base, an examination of Tables I, II, and III, and plates 1 and 2, shows that the North received six and five-tenths, seven and three-tenths, six and five-tenths, and five and seven-tenths as many patents as the South in the years 1881, 1886, 1891, 1896, and 1901, respectively. These figures show that there has been a gradual increase in the number of patents issued in the South in proportion to its population, whereas in the North the number of patents issued in proportion to the population has gradually decreased.

This is certainly a remarkable exhibition and shows that inventive genius in the South has been increasing since 1896, while it has gradually decreased in the North.

Table IV shows that patents issued for seventeen years from 1861 to 1878 expired from 1878 to 1895.

In a pamphlet prepared by W. C. Dodge and published as Senate Document No. 438 Mr. Dodge states:

> The capital invested in manufactures in the South has grown from $257,000,000 in 1880 to $1,000,000,000 in 1899, and in the decade of 1880 to 1890 her real and personal property increased from $7,600,000,000 to $11,400,000,000, and this is largely due to her engaging in manufactures.

We should therefore understand that although the act of 1836, allowing extension of patents, was repealed in 1861, the first year's issue of seventeen-year patents did not expire until 1878. The patents that were issued for fourteen years previous to 1861 came up for extension in greater or less numbers until March 2, 1875, at which date the last fourteen-year patents expired. It will be seen, therefore, that no patents expired between March 2, 1875, and March 2, 1878.

Now, what cause, or causes, led to the gradual decrease in invention from 1886 to 1901, counting back fifteen years from the last annual report of the Commissioner of Patents that was available when these tables and plates were prepared, in the two groups of States named, with the exception noted in the Southern States, from 1896 to 1901?

The necessity for a general law providing for extension of patents is strongly supported by an able and learned argument of Mr. Lysan-

der Hill, in a paper which I heard him read before the American Bar Association on August 29, 1892, and which was subsequently published in pamphlet form by special order of the association, entitled "Preliminary injunctions in Patent Cases." Judge Hill takes the position that if section 4921 of the Revised Statutes were amended by adding thereto the following words:

"Injunctions to restrain infringements pendente lite shall not be denied on the mere ground that the patent is of recent date or has not been adjudicated," it would cut off scores of applications to Congress for extensions, "imperatively demanding justice from Congress by reason of the broken promises and bad faith of the Government," not the legislative or executive, but the judicial branch thereof, in not securing to patentees the exclusive right to make, use, and sell their improvements during the entire life of their patents. Such cases as Judge Hill describes show the necessity for some general law which will enable a patentee to secure an extension of his grant for a period equal to that which he has lost through unforseen litigation or other causes beyond his control.

Of course a patentee is not obliged to sue an infringer, and thus bring upon himself the cost of a suit and the delay, etc., which the refusal of a motion for a preliminary injunction may involve, but having concluded to commence a suit, if the expense of the trial, the competition arising from such infringement, and his inability to make his patent productive while litigation is in progress, leaves him without remuneration, does not good faith and justice on the part of the Government, under the contract with the inventor to "secure" to him the "exclusive" right to the patented invention, entitle the inventor to have his patent extended for a term that will give him the statutory seventeen years of "exclusive" right, especially if the inventor has lost, rather than made money, while the public has been greatly benefited?

Judge Hill says:

> Under such a constitutional provision, as held by the Supreme Court in Grant *vs.* Raymond (6 Pet., 218) and other cases, patents issued for new inventions are contracts between the Government and the patentee, by which the Government agrees "to secure" to him, for the term of his patent, "the exclusive right to his discovery." * * * The public began to realize that the law had created a new industry—that of making inventions—and that it opened to every man, even the poorest, the opportunity for sudden wealth. With the amendments of 1819 and 1836, which practically perfected the law, valuable inventions and discoveries multiplied with amazing rapidity, and the country entered upon an era of industrial progress unexampled in all history. Congress, in close touch with the people, participated in the general appreciation of the patent system, witnessed with satisfaction and pride its effect upon the development of our manufactures, agriculture, and commerce, and has never since failed to maintain it and to adopt any measures agreed upon by its friends for the purpose of improving and perfecting it. * * * This neglect of the Federal courts to give due weight, on motion for preliminary injunction, to the almost conclusive presumption of validity which inheres in American patents from the moment of their issue, has inflicted and is inflicting an injury to our patent system and to the owners of patent property, which it is difficult to overestimate.
>
> * * * If infringements begin early enough there can then be no period of "exclusive possession" or "acquiescence," and the patentee is obliged to wait until the final decree on the merits of the case, and then await the result of an appeal before he can receive any relief. Experience has shown that if the defendant be rich, and disposed to make a stubborn fight, he can delay the final hearing, and the hearing on appeal, from five to ten years, and in some cases

almost or quite to the end of the term of the patent. Meanwhile, he is using the invention, and, perhaps, making a fortune out of it; and his success in pirating the patentee's property and avoiding punishment induces other infringers to enter the field, deters capitalists from coming to the aid of the patentee, and destroys the market value of the patent. I have encountered a case, in my own practice, where my client, who had made and patented one of the most valuable inventions of modern times, was obliged to spend the entire term of his patent in wearisome and expensive litigation. Just as the patent was expiring the courts decided that it was broadly valid, but it was then too late to be of any substantial benefit to the patentee. He had exhausted his financial resources in the long struggle; had been obliged to witness infringers making millions out of his invention, while capitalists declined to embark in his enterprise by reason of the infringements and of the want of protection; had seen even the Government itself profiting from it to the extent of about ten millions of dollars, through its infringing contractors, while its courts were refusing protection, and had been all the while unable to put his invention into use for his own benefit, because, under the conditions existing, capitalists declined to furnish the means necessary for that purpose. To him the Constitution and the patent statutes passed in pursuance thereof were more than "hollow mockery"—they had actually enticed him to his ruin, by holding out the promise of protection, which the courts, for seventeen years, refused to perform. Under the practice by which that was done, every inventor who makes a valuable invention or discovery that requires a large capital to operate it, is liable to the fate of my unfortunate client; and the greater the money-making capacity of the invention, the greater the temptation to infringe, and the more stubbornly will the infringer contest, while his large profits enable him to protract the litigation almost indefinitely at the sole expense and risk of the patentee, for it is out of his property that all the expenses on both sides are paid. The rigid technical rules governing accountings in patent cases practically prohibit the recovery of profits or damages, and the infringer is left to enjoy his ill-gotten gains.

The time thus lost to the patentee is the most valuable portion of his term, when usually he is poor and needs protection to enable him to establish his business and secure a market, or to enable him to dispose of his patent for an adequate consideration. It is then that infringement is most disastrous to him, for it impairs public confidence in his rights, prevents capital from investing under them, encourages others to infringe, and by unscrupulous and ruinous competition destroys the possibility of deriving profits from his patents. In fact I have known many cases where through the inaction of the courts the patent has been of vastly greater protection to the infringer than to the patentee.

* * * * * * *

To appreciate the gross injustice and illegality of the present practice, look at a few simple and indisputable facts: The Constitution gives Congress only one authority in the premises, namely, the authority to "secure" to the inventor "the exclusive right" to his invention or discovery "for limited times," leaving it to that body to fix the limit. Congress (Rev. Stat., sec. 4884) has fixed the limit at seventeen years, and has declared the right "exclusive" for that period, and (sec. 4921) it has given the Federal courts power to grant injunctions "to prevent the violation of any right secured by patent." By the plain language both of the statutes and the Constitution the right is to be secured to the inventor, is to be exclusive, and is to run, not for a portion of the period limited, but for the whole of it, and the purpose of the entire provision is "to promote the progress of" the "useful arts." By the practice of the courts, however, the right is not secured to the inventor, is not exclusive, does not run for the period limited, and the effect is not to promote, but to retard the progress of the useful arts. The courts, conceding themselves to be destitute of authority to lengthen the term of the patent, assume the authority to shorten it to any extent they may please by simply refusing to enforce the right until years have elapsed after the beginning of the term. * * *

There is another strong reason why the present practice should be abolished, and that is that such a change will materially conduce to the relief of Congress from extension cases in the future, whereas under the practice now prevailing such cases are liable to be multiplied almost indefinitely, and to demand much time and labor which could be profitably employed on matters of general legislation. Patentees who are robbed of protection by the courts for a consider-

able portion * * * of the term of their respective patents have a strong equitable claim upon the Government to make good its promise of protection for a period of seventeen years. They plead with irresistible force that the Government has practically repudiated its solemn contract, and by false pretenses of future protection has cheated them out of their inventions. * * * No Congressman possessed of a fine moral sense, trained in the study of law and equity, can turn a deaf ear to petitions asking for such manifest justice, and the result is that much valuable time is employed in hearing and in considering them.

The amendment to 4921 Revised Statutes, proposed by Judge Hill, would, if made, undoubtedly reduce the number of applications for extension, either to Congress under the law as it now exists or under any new law that may be passed conferring jurisdiction of extension of patents upon some court or commission. But whatever the law may be there will always be a certain percentage of cases in which the inventor may be justly entitled to an extension; hence the necessity for a general law, irrespective of the future action of the courts, to enable an inventor to secure an extension, since no amount of care and diligence on the part of judges in administering the patent laws can overcome the necessity of providing some general law for the extension of patents which shall do away with the necessity of the passage of private bills by Congress. Remember the facts brought out in the Fowle extension case, hereinbefore repeated.

Fowle had a great and valuable invention, but having brought on great physical disabilities, partly through exposure while experimenting with his invention, being anxious to promote it, he sold a half interest to a man whom Fowle supposed to have means, and who agreed to build machines, etc., but Jenks, the assignee, failed to keep his contract, even to the extent of paying the attorney for his services in preparing and prosecuting the application for a patent, and held on to his half interest to the end of the term of the patent, thus disabling Fowle from getting another partner in Jenks's place. Fowle, having impoverished himself and being in poor health, was in no position financially to bring a suit against Jenks to enforce specific performance of his contract or to have the assignment canceled. The case of Fowle bears out the statement of ex-Commissioner Leggett, which statement is also confirmed by the experience of every attorney who was in practice under the old law, that frequently the extended term of a patent is the only portion of the entire term that is remunerative to the inventor, he having under press of financial depression been obliged to sell a portion or even the entire interest in his patent for practically a nominal amount.

To prevent the general decline in invention—which is partly due to the failure of the courts, under the present practice, to grant preliminary injunctions, which would be granted if the prevailing practice did not prohibit it, and partly to the hopelessness of present efforts before Congress to secure the extension of a patent by a private bill—further legislative action is necessary.

For the benefit of my legal brethren who are so persistently urging, in view of the provisions of section 7 of the act of 1836, that preliminary injunctions should be issued more frequently under the legal presumption which the official examination provided for in said section 7 was intended to establish in favor of the holder of a patent, I quote, in support of such contention, from the report to Congress of Hon. D. P. Holloway, who invited the writer to become a student in

his office soon after he resigned his position as Commissioner of Patents, as follows:

But I feel confident that, as the general result of our system, its benefits have accrued no less to the unsuccessful than to the successful applicants; that while the latter have secured patents to which an intrinsic value has been imparted by the scrutiny to which inventions have been subjected, and by the sanction of the office are comparatively protected from infringement and litigation, the former have been saved from waste of time, labor upon well-known machines, and from the cost and misery of defending in courts of law rights to which they can maintain no title. (Patent Office Report, Vol. I, 1863, p. 17.)

I think my old preceptor, long since gone to his final reward, would turn over in his grave if his spirit could visit the world and witness the present disposition of motions for preliminary injunctions.

At a special meeting of the Patent Law Association of Washington, called to consider this very subject of the extension of patents, one of the honored guests, Professor Robinson, when requested to speak on the subject of extension of patents, said in substance that it was within the experience of each one of us (the meeting was one of the largest ever held by the association) that in some cases, from one cause or another, over which the inventor has no control and for which he is not responsible, and therefore, through no fault of his own, the inventor fails to receive a due reward for his invention during the original term of his patent; that in such cases he had never been able to understand why an inventor, whose genius is of as high an order as that of an author, should be limited to seventeen years when an author can get twenty-eight years under a copyright.

ON THE GROUNDS OF PUBLIC POLICY, AND TO CARRY OUT IN GOOD FAITH THE CONTRACT BETWEEN THE GOVERNMENT AND THE INVENTOR, AS WELL AS TO MAKE SOME ACKNOWLEDGMENT OF THE DEBT OF THE GOVERNMENT TO ITS INVENTORS, EXTENSION SHOULD BE PROVIDED FOR WHEN INVENTIONS HAVE NOT BEEN PLACED ON THE MARKET, OR INVENTORS HAVE NOT BEEN SUITABLY REWARDED, AND IN OTHER PROPER CASES.

We must not think because we are in possession of a picture and specification of an invention that no benefit will come from an extension. If no one but the inventor thinks his device useful, or believes that it possesses commercial value, no one but the inventor will develop it; hence the public will suffer no harm by granting him an extension. If during the extended term it is satisfactorily demonstrated that the invention possesses merit, then both the people and the inventor will be benefited by the extension. In such a case the extension will accomplish three things: It will encourage other inventors; it will encourage and reward the particular inventor, and it will give the public the benefit of the further efforts of the inventor to develop a new industry.

If unsuccessful inventors should be given additional time in which to perfect or promote their inventions, how much stronger are the claims of those who have actually succeeded in demonstrating the practicability of their inventions, but require more time to manufacture their improvements and place them on the market. Shall not they who have fathered an idea, reduced it to a form in which it will be beneficial to mankind, studied and corrected its faults and imper-

fections, receive their rewards so justly earned, or shall they be cut off from that which is their own just as it is ready to take its place in the world's economy? Public policy demands that extensions be granted to both classes alike—to the unsuccessful, for they may become successful, and to this class who have only demonstrated the practicability of their inventions, but have not yet obtained their reward.

Dickens's poor inventor said:

> Is it reasonable to make a man feel as if, in inventing an ingenious Improvement meant to do good, he has done something wrong? How else can a man feel after he is met with difficulties at every turn? * * * And look at the expense, how hard on me, and how hard on the country, if there is any merit in me (and my invention is took up now, I am thankful to say, and doing well), to put me to all that expense.

Is it not plain that invention will decline, or be at least retarded to some extent, if the country has an inventor here and there who has attracted public notice by his efforts and expenditure, even to the point of personal sacrifice of himself and family, to add something to the sum of human knowledge and who, perhaps in advanced life, finds that the labor of a lifetime is to remain unrewarded and unproductive either to himself or his family because, through some matter beyond his control, his patent expired before his work was accomplished? Will not other inventors, or would-be inventors, look at him in his sorrow and disappointment and say: "No; I do not care to repeat his experience even to benefit my country and the world in general. I can not afford it. The Government will not protect me beyond the term of my original grant, no matter what misfortunes and disappointment I may encounter through ill health, litigation, the execution of unwise contracts, or inexperience, my invention being ahead of the times, or finding unlooked-for obstacles in the way of creating a market for my improvement"?

I know that such cases are merely exceptions to the rule, that about 95 per cent or more of patentees would not ask for extensions if they could, having either received a just remuneration or something better having taken the market. Of course death of patentees would cut off many applications that otherwise would be made.

But assuming that applications for extensions under a general extension law would amount to 5 per cent, or even less, may that 5 per cent not contain a Whitney, a Fulton, a Park, a McCormick, a Bessemer, a Wood, a Henry, a Goodyear, a Morse, a Bell, an Edison, a Thomson, a Marconi, and thousands of others who have added to the progress of the world and promoted the comfort and happiness of mankind, to say nothing of the hundreds of thousands of lesser lights who have not only benefited themselves but have added more or less to the glory of their country.

Why should a nation voluntarily cut itself off from the benefit that it would secure, be it more or less, from the passage of a general extension law? By making it possible, through such a law, to reduce the per cent of failures, a corresponding increase would result in favor of those who succeed. As far as the public is concerned, a patented improvement that is not on the market is a failure.

It will be seen that the decline in invention began about seventeen years ago, and about seven years after the seventeen-year patents began to expire.

In other words, not until inventors began to learn that the Government's contract to protect patentees in the "exclusive" enjoyment of their rights for a period of seventeen years was in some cases insufficient did the decline in inventions set in. In 1886, when the decline set in, seventeen-year patents, for a period of seven years, had expired, and thus the country began to learn of the insufficiency of that term in some cases. Some men object that an extended term may not find the patented device on the market. To which I answer that if one extension has merely resulted in the reduction of the 5 per cent of the failures, the public interests, and justice to the inventor, demand that a further extension should be granted. The writer's view is that the extension of patents is at the risk of the patentee, with the public as a possible beneficiary without any risk or expense.

Some may object that the extension of a patent with a dominating claim serves to limit invention in the line of improvements. My experience is that in making a contract with the owner of a dominating patent, the holder of a later subordinate patent for improvement is, as a rule, on an equal footing with, if not better footing than, the owner of the dominating patent, and that the former is as firm in his position as to terms as the latter. The dominating patent, being older, will expire first, and the improvements may be necessary to his machine to enable him to compete with others, etc.

Applications for extensions of patents may be divided into two general classes: First, those in which the inventions have been actually reduced to practice and which may have been placed on the market and have secured a distinct status in trade, although the inventors have not received just remuneration for their inventions; and, second, those in which the inventors, although they have exercised due diligence, etc., have not been able to place their inventions upon the market, but are confident that they would be able to do so provided their patents were extended.

Walker on Patents, section 152, says:

> The right of property which an inventor has in his invention is excelled in point of dignity by no other property right whatever. It is equaled in point of dignity only by the rights which authors have in their copyrighted books. The inventor is not the pampered favorite or beneficiary of the Government or of the nation. The benefits which he confers are greater than those which he receives. He does not cringe at the feet of power nor secure from authority an unbought privilege. He walks everywhere erect and scatters abroad the knowledge which he created. He confers upon mankind a new means of lessening toil or of increasing comfort, and what he gives can not be destroyed by use nor lost by misfortune. It is henceforth an indestructible heritage of posterity. On the other hand, he receives from the Government nothing which costs the Government or the people a dollar or a sacrifice. He receives nothing but a contract which provides that for a limited time he may exclusively enjoy his own. Compared with those who acquire property by devise or inheritance, compared with those who acquire property by gift or marriage, compared with those who acquire property by profits on sales or by interest on money, the man who acquires property in inventions by creating things unknown before occupies a position of superior dignity. Even the man who creates value by manual labor, though he rises in dignity above the heir, the donee, the merchant, and the money-lender, falls in dignity below the author and the inventor. The inventor of the reaper is entitled to greater honor than his father who used the grain cradle, and the inventor of the grain cradle is entitled to greater honor than his ancestor who for a hundred generations had used the sickle. Side by side stand the inventor and the author. Their labor is the most dignified and the most honorable of all labor, and the resulting property is most perfectly theirs.

Lord Bacon gave the weight of his opinion to views somewhat similar to the foregoing. The following is a translation of one of his Latin paragraphs:

The introduction of great inventions appears one of the most distinguished of human actions, and the ancients so considered it; for they assigned divine honors to the authors of inventions, but only heroic honors to those who displayed civil merit (such as the founders of cities and empires, legislators, the deliverers of their country from lasting misfortune, the quellers of tyrants, and the like). And if anyone rightly compare them he will find the judgment of antiquity to be correct, for the benefits derived from inventions may extend to mankind in general, but civil benefits to particular lands alone; the latter, moreover, last but for a time, the former forever. (Walker on Patents, 102, 103.)

It is well understood that the manufacture of a patented improvement is quite as important to the public in carrying out the objects of the patent laws as the inventive act which laid the foundation for the patent. Public policy justifies the extension of a patent if the invention therein disclosed, notwithstanding the diligence of the inventor, has not been placed upon the market and the inventor has failed to secure remuneration for his invention suitable to its value and importance to the public, his failure to secure remuneration being due to circumstances beyond his control. If during the entire term of the patent the invention has not been placed upon the market, either with or without diligence on the part of the inventor, or of an assignee, if no opposition is made to his application for an extension, if no existing trade or business will be injured by giving to the still confident inventor an extension of his patent to enable him to make his invention a part of the actual number of available practical machines in the line of his profession, business, or trade, upon what ground of private or public concern can an extension be refused? Certainly the public will gain nothing by withholding from the inventor the means—an extension of his patent—which would enable him to place his invention on the market instead of allowing it to rest until some one can be found who will have the courage to take it up without the help and protection which a patent affords. In other words, if an inventor with a patent and the natural pride he takes in his invention can not, with due diligence, secure the capital to promote his invention, when may the public reasonably expect that some other person (the inventor no longer having any financial interest in the invention) will undertake to do without the patent that which the inventor was unable to do with a patent, namely, provide the necessary capital to manufacture the improvements and place the same on the markets?

As to whether patents should be extended covering devices which have been manufactured and extensively placed upon the market and large amounts realized therefrom, should depend upon the actual profits realized therefrom, including costs of any litigation that may have been necessary, in view of the ascertained novelty of the invention and its commercial value to the trade and the country.

If American manufacturers are to keep up the pace of progress which has enabled them to achieve supremacy in trade, Congress should do what it can to maintain our progress and supremacy, notwithstanding the higher wages which our inventions enable us to pay, by general legislation to assist inventors and patentees to at least

keep ahead of the trade of other countries by giving American inventors every possible encouragement to improve and perfect their inventions and place them on the market in actual competition with less meritorious inventions, etc. The importance to this country of this liberal action of Congress toward inventors can not be overestimated. How many millions of dollars would reach this country if a new and improved article were actually placed upon the market? If a single invention may add millions of dollars to the trade of a country under an extended term of patent, how much may result from like extensions in a hundred or two hundred different lines of trade? If only good can result from the extension of a patent in proper cases, why are not extensions granted?

A patent has its foundation upon a contract between the Government and the inventor, in which the inventor undertakes to make such a full, clear, and exact disclosure of his invention as will enable the public to practice his invention with the same facility as the inventor after the expiration of the patent, and the Government undertakes to protect the inventor in the exclusive enjoyment of his rights under the patent in order that he may be enabled to remunerate himself for his time, expense, etc., in perfecting his invention and obtaining his patent. Now, although full and honest disclosure of an invention constitutes the lawful consideration which will support the inventor's right to a patent, it is well known that such disclosure on the part of the inventor is not, in many cases, a consummation of the great object of the patent laws, namely, to actually place the patented improvements upon the market and thereby actually demonstrate the merits of the improvements and develop any possible latent defects.

If the inventor has failed to place the invention upon the market and thus demonstrate its usefulness and establish a demand for the same, is it not the duty of statesmen to give him an extension of his patent to enable the diligent inventor to fully carry out the great objects of the patent laws, namely, the making of inventions and their practical use in commerce?

In a recent paper on "Opportunity and success," Newell Dwight Hillis said:

Every new tool that is invented, every new business that is developed, carries with it a hundred new positions and openings for young men.

Robinson on Patents says:

From an early period the law has taken notice of the fact that during the original term for which the monopoly was granted the inventor may, from circumstances not within his own control, fail to obtain the entire recompense which he deserves; and it has therefore provided, sometimes in one method, sometimes in another, for an extension of the letters patent after the first term has expired. (Sec. 421.)

The progress of the industrial arts is the ground upon which patent laws are framed. A patent may upon its face bear the evidence that it covers an invention that possesses commercial value and does not therefore require practical demonstration of its utility, but there are many inventions that require such demonstration, even to experts, after patents have been issued therefor. This class of cases especially appeals to Congress for more time—for an extension of the patent—to enable the inventors to actually place their patented improvements upon the market. The extended time should be given, public policy says it should be given, if the inventor

has been diligent in his efforts to promote his patent, but has failed either to secure proper remuneration for his invention or to place it on a commercial footing.

A late prime minister of England recently said of the United States, "In no other country, I suppose, is there so careful a cultivation of the inventive faculty." And yet in England the extension of a patent for a period of fourteen years may be obtained without the action of Parliament, whereas in the United States no extension can be secured without the action of Congress, which is practically prohibitory, and has been actually so since 1888. Congress has cut off extensions because there were more cases than they could possibly examine in order to select the meritorious ones.

In the memorial to Congress of Eli Whitney, praying for an extension of his patent, he presented a history of the struggles he had been forced to encounter in defense of his right; that he had been unable to obtain any decision on the merits of his claim until after eleven years of litigation and thirteen years of his fourteen years of patent had expired; that his invention had been the source of opulence to thousands of citizens of the United States; that as a labor-saving machine it would enable one man to perform the work of one thousand men, and that it furnishes to the whole family of mankind, at a very cheap rate, the most essential article of their clothing; that he humbly conceived himself entitled to further remuneration from his country, and that he ought to be admitted to a more liberal participation with his fellow-citizens in the benefits of his invention; that the very men whose wealth had been acquired by the use of his machines and who had grown rich beyond all former example, had combined their exertions to prevent the patentee from deriving any emolument from his invention; that the State in which he had first made and where he first introduced his machines, and which had derived most signal benefits from it, had paid nothing for the use of the invention; that from no other State had he received an amount equal to one-half a cent per pound on the cotton cleaned with his machines in one year; that estimating the value of the labor of one man at 20 cents per day, the whole amount which had been received by him for his invention was not equal to the value of the labor saved in one hour by his machines then in use in the United States.

"This invention," he proceeds to say, "now gives to the southern section of the Union, over and above the profits which would be derived from the cultivation of any other crop, an annual emolument of at least $3,000,000," and "then, as to the effect on society, the machine, it is true, operates in the first instance on mere physical elements to produce an accumulation and distribution of property. But do not all the arts of civilization follow in the train, and has not he who has trebled the value of land, created capital, rescued the population from the necessity of emigration, and covered a waste with plenty—has not he done a service to the country of the highest moral and intellectual character? Prosperity is the parent of civilization and all its refinements, and every family of prosperous citizens added to a community is an addition of so many thinking, inventing, moral, and immortal natures."

In view of the fact that Eli Whitney, the New England schoolmaster, gave to the South the cotton gin, which has added billions of

dollars to the value of her cotton products, while Cyrus McCormick, of Virginia, gave to the North the reaping machine, which added a similar value to her cereal products, it would not require any stretching of the imagination to believe that in the years to come these two sections will again produce something in the line of invention which will make them common debtors, one to the other, for some great advance in their material progress.

INDUSTRIAL PROGRESS OF GOVERNMENT MEASURED BY THE PROTECTION AND ENCOURAGEMENT GOVERNMENT GIVES TO ITS INVENTORS—AMERICA'S COMMERCIAL SUPREMACY AND HIGH WAGES FOUNDED ON PATENTS.

The following further extracts from the speech of Senator O. H. Platt, of Connecticut (ubi supra), who has repeatedly served as chairman of the Senate Committee on Patents, should be read as presenting some of the views of a distinguished Senator who has been a close student of the patent laws and of their effects upon our industrial development.

The Senate having under consideration the bill (S. 1924) providing for the organization of the Patent Office into an independent Department, and for giving it the exclusive control of the building known as the Patent Office and of the fund pertaining to that Office, Mr. Platt said:

* * * When the fathers wrote that clause into the Constitution of the United States they builded better than they knew. Thew knew, indeed, that the prosperity of every nation must depend largely upon the progress of the useful arts. They knew that if this country was to attain the glory and the power which they hoped for it, it must be along the road of invention; but they could not—the wildest dreamer, the statesman with the most vivid imagination, could never have dreamed, could never have imagined, the blessings, the beneficial results which should flow and have flowed from the exercise of the power thus granted to Congress. The foundations which they then laid of our progress, our welfare, our strength, and our glory were granite, and we have builded wisely upon them; but I think that we may do much to improve the temple which has been reared.

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Mr. President, to my mind the passage of the act of 1836 creating the Patent Office marks the most important epoch in the history of our development—I think the most important event in the history of our Government from the Constitution until the war of the rebellion. The establishment of the Patent Office marked the commencement of the marvelous development of the resources of the country which is the admiration and wonder of the world, a development which challenges all history for a parallel; and it is not too much to say that this unexampled progress has been not only dependent upon but has been coincident with the growth and development of the patent system of this country. Words fail in attempting to portray the advancement of this country for the last fifty years. We have had fifty years of progress, fifty years of inventions applied to the everyday wants of life, fifty years of patent encouragement, and fifty years of a development in wealth, resources, grandeur, culture, power, which is little short of miraculous. Population, production, business, wealth, comfort, culture, power, grandeur—these have all kept step with the expansion of the inventive genius of this country; and this progress has been made possible only by the inventions of its citizens. All history confirms us in the conclusion that it is the development by the mechanic arts of the industries of a country which brings to it greatness and power and glory. No purely agricultural, pastoral people ever achieved any high standing among the nations of the earth. It is only when the brain evolves and the cunning hand fashions labor-saving machines that a nation begins to throb with new energy and life and expands with a new growth. It is only when thought wrings from nature her

untold secret treasures that solid wealth and strength are accumulated by a people. Especially is this true in a republic. Under arbitrary forms of government kings may oppress the laborer, kings may conquer other nations, may oppress and degrade the men who till the soil, and they may thus acquire wealth; but in a republic it is only when the citizen conquers nature, appropriates her resources, and extorts her riches that you find real wealth and power.

We witness our development; we are proud of our success; we congratulate ourselves; we felicitate ourselves on all that we enjoy; but we scarcely ever stop to think of the cause of all this prosperity and enjoyment. Indeed, this prosperity has become so common that we expect it. Many men forget to what they owe it; many men, I am sorry to say, in these recent years deny the cause of it all. The truth is, we live in this atmosphere of invention; it surrounds us as does the light and the aid; like light and air, it is one of our greatest blessings; and yet we pass it by without thought. Some say that the cause of all this wealth, of all this influence in the world, springs from other sources; some say it is the result of our free institutions, of our Christian civilization, of our habits of industry, of our respect for law, of the vastness of our natural resources, but I say inventive skill is the primal cause of all this progress and growth. I say the policy which found expression in the Constitution of the United States when this clause was enacted giving Congress power "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" has been the policy that has built up this fair fabric.

Concede all you claim—free institutions, Christian civilization, industrious habits; grant respect for law; acknowledge all our vast natural resources, and then deduct patents and patented inventions from the causes which have led to this development, and you have subtracted from material, yes, from moral prosperity nearly all that is worth enjoying. Subtract invention from the causes which have led to our growth and our grandeur and you remit us, you remit our people, to the condition of the people of Italy, of Switzerland, of Russia. If "knowledge is power," invention is prosperity.

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Is it not apparent that every department of business, every pursuit of organized life, has been fed, nourished, and enabled to keep step in this wonderful march of progress by the patented inventions of the age?

Now, I want to say that three classes of men have made this possible—first, the inventors; second, the manufacturers: third, the skilled laborers; and by skilled laborers I mean not only the operatives, the mechanics who make the labor-saving machines, but the men who are educated to comprehend the operation of machines and processes.

I know that it is often acknowledged that the wonderful growth of the country to which I have adverted is the result of invention. I give inventors all the credit that belongs to them, but I want to say that the manufacturers of the country, that the artisans of the country, have taken part in this wonderful development of its resources, its industries, its wealth, and its population equally with the inventors. It is the manufacturer who has furnished the capital, the enterprise to reduce these inventions to practical application; it is the cunning workmen in the factories that have applied these inventions. The invention of the telegraph was a vast conception, but it has required the manufacturer and the artisan to make that profitable to the country. If it were not for the shop hands and the shops of this country there are Senators on this floor who could not go home at the close of this session and return here at the commencement of the next session. Senators who have no very great love for this patent system are here only as the result of it.

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The truth is, and there is no avoiding it, that you can not disconnect in this country invention, manufactures, and agriculture. The triumph and the success of the one is the triumph and the success of all. They are interdependent coequal factors, as it were, in producing our prosperity and our happiness; and so with regard to the other industries of the country patents are directly connected with them all and absolutely necessary to their successful pursuit. I will not stop to enlarge. * * * That nation which gets most of the world's trade is to be the first power of the globe. Both patriotism and the interests of humanity impel us to say that the United States must have it. How is it to obtain it? It is to be obtained only by encouraging the inventive genius of our citizens by protecting the patent system of the country and all that is

involved and comprehended in that system; and as we stimulate the inventive faculty and protect the patent system, we shall steadily reduce the cost of production in this country until we are able to compete with the world, no matter what may be its system of labor. * * * Remember that eight-tenths of the manufacturing of the country is dependent on patented processes.

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I know the argument is often used that inventions are opposed to the labor interests of the country. It is not true. There is a redistribution of labor whenever a new labor-saving machine is invented, but there is no destruction of labor. There is no degradation of labor in invention. The man released from a particular kind of labor by the introduction of a labor-saving machine does not go down in the grade and scale of labor, but he ascends. He engages in some higher employment, in some more productive avocation, for patents elevate the laborer. New inventions open new fields of labor. Take printing, take photography, take telegraphy, take gas making, take steam transportation—take all these fields of labor which have been positively created out of nothing by invention, and you will find that the man released from labor in some old occupation by the introduction of machinery which performs his work enters some of these or other new avocations with increased compensation for his labor.

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The factory in this country has become the school of the useful arts. Every valuable patent builds a factory, and every factory produces scores of patents; and so the invention and the practical education of our people goes on.

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Few men, I believe, have thought of the actual money value of patents. The mind can not measure it. There are few data from which it can be estimated. We may perhaps gather some idea of the money value of patents by seeing what they have cost inventors. The unexpired patents to-day are 235,400, a somewhat larger number than I had supposed when I made the calculation which I am about to submit. I had taken 230,000 as the number of outstanding patents, and they have cost in Government fees $8,000,000; that is to say, the inventors have paid into the Treasury of the United States to obtain those patents $8,000,000. If you allow attorney's fees at $50 each, there is $11,500,000 more. If you put the time in experimenting and the expense of making models at $100 more, and that is vastly too small, it will be $23,000,000 more. So that you will have $42,000,000 as the cost of the title deeds which have been given to the inventors of this country that are now in force. But that is no measure of value. That is the first cost; that is the cost of obtaining. I know that it is difficult to put any average value upon patents; I know that some of them are worth millions and some of them are worth nothing, but I think it would be safe to say that they are worth $500 on an average, and if so, we have as the value of the patented inventions upon that basis, not reckoning cost, $115,000,000, the actual salable value. Others would put the average value of patents very much higher.

But this, after all, is no way to measure the value of patents. If we measure them by what they create, by what they save in cost, by what they add to production, by their multiplication of values, then the sum total is simply incalculable.

Let me give you an illustration or two of the saving of patents. I take perhaps as the most marked instance of the saving made by the use of patented inventions the Bessemer steel patent, and I want to say right here that I do not like to have it said that this is the invention of a foreigner alone. I want Americans and American inventors to have their rightful share of credit for this invention. The article known as Bessemer steel was an American invention. It was made by William Kelly, an ironmaster of Eddyville, Ky., and in 1856 and 1857 the Patent Office in an interference between him and Bessemer decided that Kelly was the prior inventor. R. F. Mushet, of England, finally added a further improvement, which rendered it practicable. The first rail of it was laid on the Midland Railroad, in England, in 1857, merely as an experiment. The first works were established here in 1864–65 at Wyandotte, under the Kelly patent, and in 1865 by Winslow, Griswold & Holley, at Troy. The Kelly, Bessemer, and Mushet patents were consolidated in 1866, and work begun in 1868. Good quality was not produced until 1870, when the company producing it failed.

So much for the history of the Bessemer invention. In 1868 the average price

of steel rails was $165 per ton. The price since the commencement of 1884 is $34 per ton. The production of steel rails in 1883 was 1,295,740 tons. The same quantity made in 1868 would have cost more than they cost in 1884 by $168,446,200. That is the saving of a single year as the result of this invention.

But when we have thus considered the saving in the cost of production we have just begun to consider the saving which is effected by this patent. The entire transportation question of the country has been affected by it. The life of a Bessemer steel rail is double the life of an iron rail; it is more than double, and it is capable of very much harder usage. Now, take a single fact as suggesting the saving, aside from that of cost of the production of the steel rail, which has been effected by this patent. In 1868 the freight charge per bushel from Chicago to New York was by lake and canal 25.3 cents, by all rail 42.6 cents. In 1884 by lake and canal it is 9 cents only, and by all rail 17 cents only. Now, take the 119,000 miles of railroads in the United States which are used in the transportation of merchandise. Apply that fact to the reduction of the cost of transportation, a large portion of which has resulted directly from the use of the Bessemer steel rail, and tell me if you can estimate, see if you can find the figures which will represent the saving to this nation by reason of the use of this one patented invention.

Let me take another illustration; and I do this because I hear that the barbed-wire patent has oppressed people; I hear that people who use it are unwilling to pay any royalty for the use of it, and so I cite this illustration to show the saving effected by patents. There have been made and sold from 1874 to 1882, inclusive, of barbed wire for fencing 459,805,000 pounds, which make equal to 1,379,806 miles of post-and-rail fence or 110,384,480 rods. An old board-and-post fence costs $1 per rod, and the barbed-wire fence costs 50 cents per rod. Hence the actual saving to farmers already by this one invention is $55,192,240.

The total amount of fencing in the United States is estimated at 1,619,195,428 rods. At $1 per rod this would amount to as many dollars; whereas if we had had this invention and could have built all these fences of barbed wire at 50 cents a rod it would have saved the farmers of this country the enormous value of $809,597,714. I take as my authority for the cost of fencing an agricultural paper published in Iowa, the Iowa Homestead, and in this estimate nothing is included of the saving in the repairs of fences. * * * For my part, I believe that two-thirds of the aggregate wealth of the United States is due to patented inventions. Two-thirds of the $43,000,000,000 which represents the aggregate wealth of the United States, in my judgment, rests solely upon the inventions, past and present, of this country. The only way to test the opinion is by imagining the effect upon values which would follow a prohibition of the use of patented inventions.

Take the expired and unexpired patents; prohibit the application of steam to the creation of power; prohibit the use of patents relating to agriculture and the production of the cereals and of cotton; prohibit the use of the inventions relating to electricity; prohibit the use of inventions relating to printing, and tell me how much you have subtracted from the value of the property of this country. Tell me what the property of the country would be worth with such a prohibition? Then banish the knowledge of them, and tell me how this wealth is to be reproduced.

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Take another instance: Many believe, I fully believe, that Ericsson, a foreigner, but I think an American citizen, by a single invention changed the whole theory of naval architecture, the naval warfare of the world, and prevented this country from dismemberment and disunion. That single invention, originating in the brain of an humble individual, whose invention was not favored by the Government, and who was never, to my knowledge, compensated by the Government, changed the history of the whole world. Consider this one instance of the effect of patents, and tell me what is the value of patented inventions and what they have added to the value of property in this country?

A distinguished member of the Army told me within a short time that the only reliance of this country in case of war was upon the inventive genius of its people, that it had no Navy, that it had no sufficient Army, that it could only defend itself by a special exercise of the inventive faculty of its citizens in calling into immediate use and power new implements of warfare.

Is not this vast system of property worth protecting? Does not the patent

system attain a dignity which entitles it to fair and generous treatment? Is it not large enough to be independent?

I have heard it said that we should have all these inventions anyway; that men would have invented without regard to the encouragement which was given to them by our patent laws; that if this exclusive use of their inventions had not been secured to them for a term of years, that if their property in patents were not proteced, yet they would have gone on and will go on inventing all the same; that there has been in some way a marvelous birth in this country of inventive capacity, and that it must grow whether it is protected or not.

Mr. President, it is not true. The inventor is no more a philanthropist than is the agriculturist. He works for his support. He works to achieve a competency. He invents, if you please, to become rich; but he is no more a philanthropist than any other man in any other walk or avocation of life, and you have no right to demand of him that he shall be a mere philanthropist. He is entitled to his reward. He is a laborer entitled to his hire, entitled to it more, if possible, than any other laborer, as his labor is higher in dignity and grandeur than that of any other laborer. I wish on this point to call attention to the testimony of Sir Henry Bessemer as I find it on page 103 of a work called "Creators of the Age of Steel." I ask the Secretary to read it.

The Chief Clerk read as follows:

Sir Henry Bessemer is a believer in patents; but to his varied experience in the introduction of new inventions another single fact has to be added. "I do not know," he says, "a single instance of an invention having been published and given freely to the world, and being taken up by any manufacturer at all. I have myself proposed to manufacturers many things which I was convinced was of use, but did not feel disposed to manufacture or even to patent. I do not know of one instance in which my suggestions have been tried; but had I patented and spent a sum over a certain invention, and saw no means of recouping myself except by forcing, as it were, some manufacturer to take it up, I should have gone from one to the other and represented its advantages, and I should have found some one who would have taken it up on the offer of some advantage from me, and who would have seen his capital recouped, by the fact that no other manufacturer could have it quite on the same terms for the next year or two. Then the invention becomes at once introduced, and the public admits its value; and other manufacturers, like a flock of sheep, come in. But the diniculty is to get the first man to move. The first man might say: 'Oh, my machinery cost me a great deal of money; I have my regular trade, and this new scheme is sure to be more trouble to me in the first instance; and when everybody asks for it, every other manufacturer will be in a condition to supply it, so it is not worth my while.' I believe inventions which are at first free gifts are apt to come to nothing."

Mr. PLATT. The universal testimony of all inventors is that it is the reward which they hope to secure which stimulates their efforts. Is it so that an inventor, of all the men in the world, has no right to his reward? Is it so that he has no right to be protected in his property? It is the security to an inventor of his invention which makes it valuable and which stimulates him in his effort to make new inventions.

NO LIMIT TO HUMAN INVENTION—IT REQUIRES NO PROPHET'S VISION TO SEE THE COMING GLORY AND THE COMING TRIUMPH OF THE INVENTIVE SKILL OF MAN.

I have heard it argued that we had approached the perfection of the patent system; that there were no new worlds to conquer; that nature had no more secrets to bestow upon mankind for their benefit. So far from this being the case, we stand but in the very vestibule of the great storehouse of nature's secrets. We have but gathered a few pebbles along the shore on which beats a limitless sea. There is no limit to the evolution of human invention until it reaches the realm of the infinite. It requires no prophet's vision to see the coming glory and the coming triumph of the inventive skill of man.

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No, Mr. President, every round of the ladder on which we have climbed to national preeminence is a patented invention, and every signboard which points to a greater future of achievement and progress shows that the path continues to lead through the field of invention. We are nearing the end of the contest to

which our fathers invited us when they gave to our Government the power to promote the progress of science and the useful arts by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries. That contest was for the supremacy of the world, and the prize is now in full view. Shall we forget, shall we neglect the system which has enabled us to outstrip our competitors in the race, or shall we the rather perfect and develop it, that through its perfection and development we may attain still grander results? We stand to-day in the gateway of a most marvelous future. Let us hope that eyes may be given us to see that the inscription over the gate reads, "Protection to the American patent system and all that it comprehends and involves."

Senator Platt's statement that—

I have heard it argued that we had approached the perfection of the patent system, that there were no new worlds to conquer, that nature had no more secrets to bestow upon mankind for their benefit. So far from this being the case, we stand but in the very vestibule of the great storehouse of nature's secrets. We have but gathered a few pebbles along the shore on which beats a limitless sea. There is no limit to the evolution of human invention until it reaches the realm of the infinite. It requires no prophet's vision to see the coming glory and the coming triumph of the inventive skill of man—

reminds me of a reference in Mr. W. C. Dodge's very interesting and instructive essay entitled "Our Country: What it is and What has Made it What it is," from which I quote as follows:

We sometimes hear it said that invention must cease, as the field is already covered. So thought the second examiner appointed in the Patent Office who, in 1854, resigned his position, giving as his reason for so doing that "in a little while there will be nothing for the Patent Office to do, as everything is already patented, and I am going to get out of this and engage in some permanent business."

The reference to action of the examiner in resigning his position in 1854 for the reason given reminds me of my own impressions of the limits of invention when I was a student in the office of ex-Commissioner Holloway. At this date there were only about 60,000 United States patents. While considering Mr. Holloway's advice to study patent laws and practice, as it was a growing branch of the law and that it would be useful to me, as a young lawyer, in whatever portion of the country I might locate, it seemed to me that nearly everything had been patented and there would probably not be more than 40,000 more inventions made and patented during my natural life, making a hundred thousand in all. For this reason I did not then attach as much importance to the study of the patent laws as did my distinguished preceptor. However, time has shown that I was as much in error as to future volume of business as the examiner to whom Mr. Dodge has referred, since there are now over 700,000 patents and we are still in the "vestibule of invention."

To show that the benefits of invention extend to all classes of society, that the inventors of some of the greatest and most beneficent inventions have had to overcome opposition, and, apparently, insurmountable obstacles, I again quote from Senate Document No. 438, Fifty-sixth Congress, first session, prepared by W. C. Dodge, entitled "Our Country: What it is and What has Made it What it is," as follows:

It is perfectly clear that our farmers have been as much, if not more, benefited by our patent system and its resulting inventions than any class in the country. In fact, without the labor-saving machines furnished by our inventors and manufacturers they could not compete for a day with their rivals in India, where the British Government has built over 15,000 miles of railroad to connect

with the Suez Canal, in order to cheapen and expedite the transportation of wheat to Europe and goods to India; or with Russia, which in like manner is building railroads for the same purpose and where labor costs less than one-fifth of what it does here. * * * When Jaquard invented his loom, which was so wonderful that the great French minister of war, Arnout, caused him to be brought into his presence and said to him: Are you the man who can do what the Almighty can not—tie a knot in a stretched string?—there was the strongest opposition to its introduction, culminating in a mob of the silk weavers, who took it from his house into the streets, broke it up, and burned the fragments.

It was the same with Kay, who invented the flying shuttle, driven by the picker staff, in 1733, and which doubled the capacity of the hand loom; of Hargreaves, who invented the spinning jenny; of Arkwright, who invented the spinning frame; of Crompton, who invented the mule spinner, and Cartwright, who invented the power loom, and who spent $150,000 in the effort to protect his patents. All of them had their machines destroyed by the ignorant mobs, and Hargreaves and Arkwright had to fly for their lives. Kay was ruined by expensive lawsuits in the effort to protect his patent from infringement by wealthy and unscrupulous parties, and when the mob destroyed his machine he barely escaped with his life to France, where he died in poverty.

These inventions, with that of the cotton gin by Whitney, who was outrageously defrauded of his rights, have changed the entire art of producing woven fabrics. Indeed, so far as the cotton industry of the world is concerned, they may be said to have created the industry which to-day gives employment to millions, and has so immensely cheapened the product that it is used the world over.

The biographer of Eli Whitney said of him: "This inventor actually created both personal and national wealth."

Palissy, the Huguenot potter, impoverished his family and starved himself nearly to death ere he discovered the secret of the famous enamel which afterwards made him rich and famous. He died in a dungeon, however, from political and religious prosecution, at the advanced age of 80 years.

Goodyear reduced himself, not only to poverty, but to isolation before his grand success. One witness testifies:

"I found in 1839 that they had not fuel to burn nor food to eat, unless it was sent in to them."

Jethro Wood, the inventor of the modern iron plow, and of whom Hon. W. H. Seward said, "I am fully satisfied that no citizen of the United States has conferred greater economic benefit on his country than Jethro Wood; none of her benefactors have been more inadequately rewarded;" and of whom Daniel Webster said, "I regard Jethro Wood as a public benefactor, and I would unite in any proper measure for the benefit of his family," was defrauded of all benefit from his patent by infringers, who availed themselves of the provision then in the patent law that if used in public before it was patented the patent was void; the public use in his case consisting simply of his trial of the plow in the field where his neighbors saw it.

And when in recent years a bill was passed by a two-thirds vote in the House to provide for his four indigent daughters, it was defeated in the Senate on the last night of the session by the single vote of a prominent Senator, who said if Congress wanted to pass such a bill it should do so for the heirs of Fulton, who had never received a cent, when the record shows that in 1846 Congress gave to the heirs of Fulton $75,000.

Morse struggled for years to secure attention to his telegraph invention; at times he had but a single meal in twenty-four hours; and when at last a bill was reported to appropriate $30,000 to build an experimental line from Washington to Baltimore it met with opposition and ridicule, one high official, to show his contempt of the project, proposing that half of the sum should be used in mesmeric experiments. And even after the bill had passed the House by 8 majority a friendly Senator advised him: "Give it up, return home, and think no more of it." And when, with a heart made sick by "hope deferred," he called for his bill as he retired for the night, he found that after paying the same he would have but 37½ cents left. But, fortunately for him and the world, as he rose in the morning a woman brought him the "glad tidings" that near midnight the Senate had passed the bill. To him she was truly "an angel of light," and it was, indeed, appropriate that she was selected by Morse to send over the first completed line that equally appropriate first message: "What hath God wrought!"

These, and others like them, were indeed the "martyrs of invention"—men

who devoted their lives to producing inventions which have done more for the progress, comfort, and happiness of the human race than any other class of men that ever lived.

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It was years after Nasmyth invented his steam hammer before he could induce the Government to even try it; but when he did get a trial, his hammer drove down a pile 90 feet long and 18 inches square in four and one-half minutes, while by the old method the workmen were twelve and one-half hours driving a similar one.

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When the Baltimore and Ohio Railroad was opened with horse cars, in 1830, Daniel Webster expressed grave doubts as to the possibility of railroads, saying, among other things, that the frost on the rails would prevent the train from moving, or from being stopped if it did move.

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TO INVENTORS WE MUST LOOK FOR MAINTENANCE OF HIGH WAGES OVER CHEAP FOREIGN LABOR.

With the illustrations herein given of the benefits of our patent system, one would suppose that opposition to patents would long since have ceased; but, unfortunately, while it has greatly diminished with the growth of intelligence and universal education, it still exists, and the strangest fact of all is that the strongest opposition in the United States has come from the farmers, who have been so benefited by it.

That the "drive well" patents saved the farmers of the country from twenty-two to twenty-five million dollars, since said invention reduced the cost of a well from $50 or $60 to $20 or $25; that it is practically clear that our farmers have been as much, if not more, benefited by the patent system and its resulting inventions as any class in the country.

Since 1870 our export of wheat has averaged 124,000,000 bushels, and in the year ending June 30, 1892, it reached 226,206,331 bushels, over one-third of the entire crop. Now, whether or not we can sell a bushel abroad depends upon our ability to place in on the foreign dock within 1 cent of a given price; because if we can not deliver it there as cheaply as they can buy it from the Black Sea region, and now from Argentina, India, and Russia, where labor costs but $30 a year, of course they will not buy of us.

Suppose we were to strike out of existence the dozen or more leading inventions used in the preparation of the soil, the seeding, harvesting, thrashing, storing, and transporting of the wheat crop of the country, and go back to the old-time methods of hand labor; the result would be that we could not sell a bushel, because it would cost so much that we could not deliver it in Europe as cheaply as our competitors could.

Or if the amount exported was retained at home and added, as it would be, to the home supply, what then would wheat be worth? Why, it would not pay the cost of raising it, and all engaged in wheat growing would be ruined. The farmers under such a condition would be thrown back where they were in the early days of Illinois, as recently described by one of them in a leading agricultural paper published in Chicago, in which he says he spent a week taking 20 bushels of wheat with an ox team over 90 miles to Chicago, through the sloughs and mud, and sold it for 40 cents per bushel, and took his pay in brown sugar at 15 cents per pound and coarse cotton cloth at 25 cents per yard.

* * * * * * *

There is not a man in the United States whose memory goes back forty years who does not know that, contemporaneously with the grand march of applied science, the condition of labor has improved. The introduction of labor-saving machinery has always had its opponents. Their predictions of disaster have been sounding ever since the first cotton-spinning machine was invented. They have incited some of the ignorant and credulous to riots for the destruction of machinery as the deadly foe of man.

But as years have passed on the intelligent workingmen of this country have learned that invention instead of enslaving them has been their best friend. They have shorter days' work, more comfortable and wholesome places to work in, better homes, better food, better clothing, better schools, and in all ways a larger return for their work. Not only that, but American laborers are far better paid than European.

The following extracts are from the annual reports of the Commissioners of Patents to the Congress of the United States:

[Samuel S. Fisher's report, O. G., vol. 1, p. 8.]

It must, however, be borne in mind that many good inventions are not developed for the want of means; many are laid aside because, although good and useful, they are in advance of the art to which they belong. The protection afforded by the patent and the hope of reward have proved the incentives to invention.

They do not deem it too much that the Patent Office, which is the only institution which they can properly call their own, and which they have built up with their money and established by their genius, shall be supplied upon a liberal scale with every appliance for the performance in the best manner of all legitimate duties.

[C. E. Mitchell's report, O. G., vol. 50, p. 716.]

But the territories of American invention know no Pacific Sea. Their farther bounds expand as their hither borders are occupied. Illimitable in extent and inexhaustible in resources, they will yield up unimagined treasures of invention in all the coming centuries, just as they have done in the hundred years of marvels whose recorded story, drawing toward its close, is at once the tribute and the glory of the American patent system.

[W. E. Simonds's report, O. G., vol. 62, p. 809.]

A vastly large number of inventions are of a greater value than the public dreams, and those which seem to fall dead contain within them the seeds of suggestion which later lives and grows to rich fruition.

[A. P. Greely's report, O. G., vol. 82, p. 1018.]

It is to the stimulus to invention given by our patent system that the greatest increase in our exports is largely due, and it is on American invention, as fostered and stimulated by the patent system, that we may confidently depend for ability to maintain the high rates of wages to American workmen and yet compete successfully in the markets of the world with nations where the workman receives but meager return for his labor.

REASONABLE REQUESTS OF INVENTORS AND MANUFACTURERS SHOULD BE HEEDED.

[C. H. Duell's report, O. G., vol. 86, p. 1178.]

At the present time, when our manufacturers are reaching out for foreign markets, I believe no greater aid can be given them than by fostering and stimulating invention.

Let us not forget that it is the American inventors who by their inventions and discoveries "have made the last fifty years of the nineteenth century the most remarkable of recorded time" and at the same time have laid the civilized world under tribute to American manufacturers.

In return for all this our inventors only ask for a fair field and fair treatment. An enlightened public sentiment demands that their requests should be considered with favor by the Congress of the United States.

[Patent Centennial Celebration, p. 480.]

The late Commissioner Fisher was reported to have said:

No class of our citizens have done more for the glory and prosperity of the nation than the inventors and mechanics of the United States, and they have never been favored children.

What is now needed is the perfection of the system, better and more complete means for carrying it on, and more effectual means for protecting the inventor.

In an address by Hon. John Goode before the Sons of the American Revolution, in which he was introduced as "the Nestor of the American bar and one of Virginia's most notable sons," he said inventors

had contributed more to the welfare of their fellows, in that period (referring to the last fifty years), than Alexander, Cæsar, or Napoleon, and their names would survive when those of the great conquerors had passed into oblivion. They have subdued steam; they have harnessed and controlled that subtle spirit, electricity; they courted coy nature; they have annihilated time and space with the telegraph and telephone. In future years the names of great soldiers will shine but dimly beside the names of Fulton, Morse, and Henry.

In order to show the appreciation of inventors of the dignity of their calling and of their claims upon the consideration of their fellow-countrymen by legislators, statesmen, civil officers, men of science, men who have achieved distinction as authors, and men who are in touch with our commercial development, I have prepared the following extracts for publication:

Prof. Alexander Graham Bell, the inventor of the telephone, in assuming the chair as president of the Centennial Convention, said, in substance, that the inventor may be described as one who is never satisfied with things as they exist, or as he finds them, that therefore he is constantly straining to make improvements.

Sir William Bessemer said:

I spent four years of time and $20,000 in gold before I was able to produce a pound of steel. I was not a manufacturer of steel, but I knew that there was a big stake to play for if I could succeed. I would not have spent a farthing in the effort had it not been for the hope of recouping myself under my patent, because if, when I had made it a success, others could step in and avail themselves of it, they would have had $20,000 and four years' time the advantage of me.

Commissioner of Patents Holt:

The class of men who have given to their native land and to the world these grand inventions, whose beneficent influences tell with measureless power upon every pulsation of our domestic, social, and commercial life, are indeed public benefactors, and may well be pardoned for believing that their wants should not be treated with entire indifference by that body which represents alike the intellect and heart, as it does the material interests of the great country of which they are citizens—the Congress of the United States.

Says Hon. R. Q. Mills:

All wealth is created by labor, and the greatest wealth is created when the greatest sum of products is produced in a given time; and that is done when the labor works in harmony with nature and the auxiliaries which the inventive genius of man has supplied. We use labor-saving machinery and make our labor more productive than any other people.

Says Professor Thurston:

There has never been in the history of the world a more impressive illustration of the value to a nation of that generous public policy, that just legislation, which gave to the man of brains the control of the products of his mind than is shown by the progress of the United States under her patent system. The genius of invention is the mainspring of advance in our material civilization, the foundation of that prosperity on which culture must rest for its solid support.

Said Carroll D. Wright, Commissioner of Labor:

There is something peculiarly educational in the very presence of the working of mechanical power—the witnessing of the automatic movement of a machine stimulates thought.

Senator Daniel, of Virginia, has said:

The inventor has redeemed us from the curse of poverty, dissipated the mysteries of humbug, and destroyed the monopoly of knowledge. He is compelling

peace by making war too terrible to tamper with. The world has grown wise enough to know that with every invention that saves labor luxury is laid at the feet of the toiler, and skillful hands and brains are released from menial tasks for others more exalted.

Said Hon. Benjamin Butterworth, Commissioner of Patents:

But for the patent system only an infinitesimal part of the triumph of inventive genius would have been accomplished, and if we would cut the ground from beneath the material prosperity of the age, there is no way in which this could be more effectively done than by the repeal of our patent laws.

Says Senator Vest:

The cheapening processes of new inventions everywhere are progress 'g, until now everything is cheapened. Human inventions, new modes, new dev ces, intelligent skill in producing everything, have brought down prices everyw ere.

Says Senator O. H. Platt:

Every comfort which we have, every convenience which we enjoy, every element of wealth which we acquire has its root and development in the patent system of this country. They are born of patents, and they live only by permission of patents.

As Hon. Chauncey M. Depew recently said:

The wildest dreamer of even five years ago would not have predicted that the products of our factories and mills could compete in their own markets with the manufactures of the Old World. But the carpets of Yonkers are being sold at Kidderminster, the rails of Pittsburg are being laid down in Liverpool, and the great bridge which Holland is to build over one of its inland seas was captured by an American firm against all European competition as to price, though denied the Americans from patriotic motives.

The alarm over the competition of American goods has been sounded in the Austrian, German, and French Parliaments by their far-sighted statesmen. Its restiveness is felt in the public opinion of Great Britain. Our democracy produces a skill and ambition in our artisans by which they do more and better work in eight hours than their European competitors in ten. Our inventive genius is constantly evolving better and more economical methods of production, and the machine of to-day is cast aside at once by the enterprising Yankee for the better one of to-morrow, while his European rival clings to the old machine until it is worn out. Our low rates for transportation, which are less than half those of European countries, have annihilated space. They have brought our cheap raw material alongside our improved methods and our more intelligent artisans, and are carrying the product to our seaboard and the markets of the world.

For the twentieth century the mission of the United States is peace; peace, that it may capture the markets of the world; peace, that it may find the places where its surplus products not only of food, but of labor, can meet with a profitable return.

[W. E. Simonds, Commissioner, O. G., p. 901, vol. 62.]

The western farmer may know it not, but the inventor of the compound marine engine is possibly the best friend he ever had, and that farmer will find his reward in ascertaining for himself what its effects in cheapening transportation across the ocean has been upon his fortunes. Another example: A single generation ago our carpets were made for us by foreign hands, and the prices were excessive. A great American inventor produced the Bigelow carpet loom; building upon the faith of an American patent, a million dollars in one instance, and a million and a half were risked in the experiment. The result to-day is that our carpets cost but one-third of what they did, and less than one-hundredth of them are made by foreign looms. Had there been no patent law, these millions would never have been risked in the experiment so rich in result to the American people. If to-day the sewing machine were produced for the first time and we had no patent law, its inventor would hawk it in vain up and down the land to find that foolish man who would risk a half a million in its commercial development, with the certainty that success would invite ruinous competition.

If there be one class of men above all others to whom the American nation and the American people are in debt, it is to American inventors. Why not grant them the poor boon of expending for their benefit the moneys they pay?"

[Robert H. Thurston, A. M., LL. D., director and professor of mechanical engineering, Sibley College, Cornell University. Patent Centennial Celebration, 1891.]

Boulton and Watt, the capitalist, with the inventor, gave the world the steam engine, finally, in such form and in such numbers that its permanent establishment as the servant of man was insured. The capitalist was as essential an element of success as was the inventor, and in this instance, as in a thousand others, the race is indebted to that much-abused friend of the race, the capitalist, for much that it enjoys of all that it desires. The industry and patience, the skill, and the wisdom required for the accumulation of this energy stored for future use in great enterprises is as important, as essential as inventive power or any other form of genius. Talent and genius must always aid each other. This firm was established in 1761, and its main resources, aside from the bank account, were Watt's patent, about expiring, and Watt's genius, and Boulton's talent as a man of business. The patent was extended for twenty-four years. The new inventions of Watt, now beginning to pour from his prolific brain in a wonderful stream, were also patented, and the whole works were soon employed upon the construction for which numerous orders had begun to pour in upon the now prosperous builders. The patent law established Boulton & Watt, and the firm paid back the nation with handsome usury, giving it unimaginable profits indirectly through its control of the work of the world, and large profits, indirectly, through the business brought them from all parts of the then civilized globe. There has never in the history of the world been a more impressive illustration of the value to a nation of that generous public policy, that simply just legislation, which gives to the man of brain control of the products of his mind. For a hundred years Great Britain has, largely through her encouragement of the inventor and her protection of his mental property, by securing the fruits of his labor, in fair portion, to him, gained the power of dictating to the world, and has gained an advance that can not be measured. Watt and Arkwright and Stephenson and Crompton and their ilk, protected by the Government and its patent laws, made their country the peaceful conquerors of the world. The story of the work of the invention is a poem of might, meaning, and wonderful deed. The inventor proved himself a mightier magician than ever the world has seen.

Since the days of Watt the improvement of the steam engine and the work of inventors has been confined to matters of detail. But these matters of detail had been found to involve opportunities to make enormous strides in the direction of securing improved efficiency of the machine. The further application of the principle which led Watt to his greatest invention—of the principle keep the cylinder as hot as the steam which enters it; of that which he enunciated relative to the advantage of expanding steam, and of that effecting the regulation of the machine—have reduced the costs of steam and of fuel to a small fraction of their earlier magnitude. One ton of engine to-day does the work of eight or ten in the time of Watt; one pound of fuel or steam gives to-day ten times the power then obtained from it. A steamship now crosses the Atlantic in one-eighth the time required by the famous "liner" of the "Black Ball Line." The wastes of the engine have been brought down from above 80 per cent to 8; and a half ounce of fuel on board ship will now transport a ton of cargo over a mile of ocean.

[Patent Centennial Celebration, 1891, page 66. Hon. O. H. Platt.]

So we see that each invention, great or small, by its own inherent force and power wonderfully stimulates and increases the inventive or creative faculty of man. * * * If they can but discover the germs of new inventions which are to cheapen production, which are to minister to the present and prospective wants of mankind, they will be satisfied with their life work and feel that they are entitled to a place among the world's great doers, though others shall enter in and reap more abundantly the money reward.

[Reference, page 75. Hon. O. H. Platt.]

We stand in the doorway of a new century. What of the future? Has invention reached its zenith? Has man attained his highest development?

Has he already reached the goal of human progress? Can he advance no further? I ask these questions because I firmly believe the limit of human invention is also the limit of human advancement; that he who writes the history of invention will write the history of mankind; that if invention has already done its perfect work man is all he can ever hope to be in this life.

[Reference, page 80. Hon. Carroll D. Wright.]

Wyatt did not succeed either in making his fortune or in introducing his machine into use. He lacked pecuniary means, but could not hold out long enough to realize the success which his genius merited; but, more than all, as often happens with many advanced inventions—inventions made in advance of the times—he lacked the time and the attendant circumstances, with all their subtle influences, which accompanied the train of inventions relating to spinning and weaving which came into use a generation or so after Wyatt's time. His invention slumbered for thirty years, until it was rediscovered, or, what is just probable, until its principles came accidentally to the knowledge of Arkwright, who, previous to 1769, had been a barber at Preston. These primitive efforts—that of John Kay, who in the invention of the fly shuttle, and that of John Wyatt, in the invention of spinning machines where rollers were used—formed the germs from which sprang that great line of inventions which has revolutionized industry and whose influence upon labor has been so widely marked in every direction.

[Patent Centennial Celebration. Hon. Robert S. Taylor. Reference, page 126.]

But the essentials of human happiness are not found in mere form of government. Personal liberty, a fair chance in the race of life, under the protection of equal laws, are all that is fundamental. The wants of man—the animal, to be fed, clothed, and housed; the higher wants of man—homo, to learn, read, think, travel, communicate, and receive—it is in the ample supply of these that the greatest sum total of human happiness is to be found. And in these this age and this country surpass all others.

We do not often stop to think how and whence our blessings come. We accept them with a dim sense of gratitude to somebody or something as a flower smiles its thanks to the sunshine. But in the light of the reflections which this occasion suggests we can realize how faintly, how vast is the obligation which we owe to the inventors of America. Not a garment that we wear, not a meal that we eat, not a paper that we read, not a tool that we use, not a journey that we take, but makes us a debtor to some American inventor's thought. Measured by what we can learn, see, do, and enjoy in a lifetime, we live longer than Methuselah, we are wiser than Solomon, richer than Cresus, and greater than Alexander. Archimedes has found his fulcrum; it is the brain of the inventor.

We can realize, too, to-day how wise the fathers were beyond anything they could have known in providing in the Constitution for the encouragement and reward of invention. On twenty-seven words—only twenty-seven words—in that great charter the American patent system rests. What other twenty-seven words ever spoken or penned have borne such fruits of blessing for mankind?

[Reference, page 120. Centennial Celebration. Hon. John W. Daniel.]

The Romans of old assigned the highest places in the Elysian fields to him who had improved human life by the invention of arts, and sure our own race—the most inventive of men, and our own country, the most inventive of nations—will not refuse the highest honors to those creative minds which have contributed so much to make it foremost of mankind.

[Reference, page 147. Hon. Ainsworth R. Spofford.]

Put your ideas into material form, and we will guarantee you the exclusive right to multiply and sell your books or your machines for a term long enough to secure a fair reward to you and to your children; after that period we want your monopoly, with its individual benefits, to cease in favor of the greatest good of all.

[Reference, pages 162 and 163. Octave Chaunte, president of the American Society of Civil Engineers.]

As stated by W. C. Church, the biographer of Ericsson, it is now possible to carry across the Atlantic 2,200 tons of freight with 800 tons of coal, where in 1870 it was only possible to carry 800 tons of freight with 2,200 tons of coal.

This is the result, it need scarcely be said, of the substitution of the screw propeller for the paddle wheel, of surface condensation, of high pressures, and double, triple, and quadruple expansion; each of them a successive step, resulting in such growth that steamers now plow on every sea, and their aggregate tonnage is nearly as large as that of the sailing vessels.

[Reference, page 204. F. A. Seely, principal examiner, U. S. Patent Office.]

Such a state of things is repugnant to human sense of justice. The same conception of the rights of the inventor that had found expression in the Constitution of the United States and of the French Republic forced thinking men to the conclusion that the rights in question could not be bounded by geographic lines, but that the protection of the inventor should be coextensive with the benefits he has conferred upon mankind. Hence the idea of international protection.

[Reference, page 403. Prof. Otis T. Mason, Curator U. S. National Museum.]

Every invention of any importance is the nursery of future inventions, the cradle of a sleeping Hercules.

It was not primarily to benefit the individual, but to promote the progress of science and useful arts that this power was conferred, in order that the whole nation might have the benefit of this progress—the benefit of the individual being merely an inducement to him to devote his time, labor, thought, and means to aid in the accomplishment of this desired result of progress by making new inventions.

Before Japan enacted its patent law, dated March 1, 1899, it appointed Mr. Karekiyo Takahashi a special commissioner to the United States to gather data obtainable in regard to our patent system as practiced at that date. The Commissioner of Patents directed the officers in his Bureau to give Mr. Takahashi every facility in their power to aid him in gathering facts available at our Patent Office, etc. In conversation with one of the principal examiners Mr. Takahashi was asked why the people of Japan desired to have a patent system.

I will tell you [said Mr. Takahashi] you know it is only since Commodore Perry in 1854 opened the ports of Japan to foreign commerce that the Japanese have been trying to become a great nation like other nations of the earth, and we have looked about us to see what nations are the greatest, so that we could be like them; and we said, "There is the United States, not much more than one hundred years old, and America was not discovered by Columbus yet four hundred years ago;" and we said, "What is it that makes the United States such a great nation?" And we investigated and we found that it was patents, and we will have patents.

Examiner Pierce, to whom the above statement of Mr. Takahashi was made, in commenting thereon, said: "Not in all history is there an instance of such unbiased testimony to the value and worth of the patent system as practiced in the United States."

In Robert Fulton, by Thurston, we have read that "Joffra, who experimented on the rivers of France twenty-five years before Fulton, might, with similar encouragement, have met with equal success. Yet, although Fulton was not, in any true sense, the pioneer inventor of the steamboat, his success in the work of introducing, developing, that miracle of modern times can not be overestimated" in its value and importance to the people.

Fulton was an inventor, but not the first inventor, but his marble statue would not have been placed in Statuary Hall by the State of Pennsylvania as one of two statues that a State is allowed to place therein if Joffra had received the same financial and legislative assistance in France which Fulton received in America twenty-five years after Joffra's invention. Thousands of cases like these might be cited to show that public interests would be promoted and the wealth of an entire nation increased by giving an inventor time to promote his patent and actually place the patented improvement on the market and available to the public. An extended patent costs the Government nothing, while the effect of giving the extension may be to benefit the nation.

Inventions point the way to new manufactures; patents lead to the promotion of new manufacturing plants, and the establishing of manufacturing plants increases the demand for labor and raw material, tends to increase the value of real estate, and to generally increase the wealth of a community in which new establishments are located. If the above doctrine is based upon sound principles of political economy, why should not the people of every town, of every county and State, and of the entire country be in favor of a law which, if enacted, would not only tend to increase, but would surely increase and develop, manufacturing in all parts of the country and enlarge both our domestic and our foreign trade?

If the extension of a patent enables a patentee to obtain capital and place his device on the market, no one will be injured thereby except those who have inferior articles. But we must not forget that the great object of the patent laws is to substitute, in whole or in part, superior for inferior articles, even though the makers of the latter may be injured.

Senator Platt has said:

> Remember that eight-tenths of the manufacturing of the country is dependent on patented processes. * * * The factory in this country has become the school of the useful arts. Every valuable patent builds a factory and every factory produces scores of patents, and so the invention and the practical education of our people goes on.

General Leggett, former Commissioner of Patents, in an address before a convention of manufacturers and inventors, said:

> Nine-tenths of all the capital invested in manufacturing was so invested by reason of its having patent protection.

Said Acting Commissioner of Patents William H. Doolittle:

> It may be safely said that two-thirds of the manufacturing interests of the country are based upon patents, and the welfare of all such interests are intimately connected with the welfare of the patent system.

May we not conclude that the establishment of manufacturing plants is a guide to the number of patents which any given community or State controls, and that therefore if we are advised as to the number of available patents that are taken out in different sections of a country we can ascertain the comparative growth of manufacturing concerns therein?

One reply (from E. E. Riep) which the writer received in answer to the question, "Should the Commissioner of Patents be again

empowered to grant an extension of the term of a seventeen-year patent by reenacting in substance the law of 1836? " was as follows:

Yes, decidedly. Such law should be unquestionably reenacted, in my opinion, as a matter of simple justice to the inventor. If the inventor is powerless, through lack of means or other reason, to commercially introduce his invention despite all possible efforts he may put forth, he is certainly in no condition to go to the enormous expense and incur the uncertainties of an appeal to Congress to extend his term, which is the only alternative he now has. There should be no difficulty in framing a law of this nature that would amply protect the class of inventors for which it is intended. A little reflection will show that the fixing of an equal term for all patents, while perhaps a necessary step for sake of uniformity and in issuing the original grant, is nevertheless on its face highly illogical. Some inventions may be immediately adopted and have a vogue of but one or two years, a matter in which the inventor may fully realize and understand in advance.

Another and perhaps far more important class of inventions, of which numerous examples both past and present will suggest themselves, may not come into use, despite all efforts of the patentee, and it is this class of inventions for which a liberal extension law is chiefly needed. Among these inventions I include those of a highly original and fundamental type, which may form a new departure on previous and well-settled practice; or, again, inventions that are ahead of their time, or which require the art to grow up to a point where they can be successfully utilized; or those that from their very nature require the investment and risk of a large amount of money before even a practical demonstration of the advantages claimed by the inventor can be had; or such inventions that can be used only by some existing monopoly, such as a government, a railroad, telegraph, or telephone corporation, whose interests, or fancied interests, may lie in throttling the invention, etc. Many of these classes of inventions are of a nature that eventually confer the greatest possible benefit on the world at large, yet those who are responsible for their creation, and have struggled for years to secure a favorable hearing, and have suffered all sorts of privations in their efforts to benefit themselves and their fellow-men, are not only left without substantial reward, but are often deprived of the credit and fame which an adoption of their ideas during the lifetime of their patents might have given to them. Indeed, such an inventor may deem himself fortunate if the training of the public mind or the growth of the art has been sufficiently rapid as to cause his invention to be adopted or to come into use in a tentative way during the last year or two of the life of his patent.

The objection with respect to the uncertainties in the public mind as to the date when a given patent will expire and the invention become public property is, in my mind, entirely wrong in principle. As a matter of fact, it is this certainty of the date of expiration that places the inventor at the mercy of manufacturing monopolies or operating corporations. If a certain invention is valuable to them, intending manufacturers or users should be obliged to negotiate with the patentee and not await his death or the death of his patent.

Of course, if an inventor has derived a reasonable profit during his tenure of the exclusive right conferred by his patent an extension of it should be barred, and this is a matter that can very easily be determined. The fees and expenses incident to the procuring of such extension should be made as low as possible in justice to the class of inventors or their heirs who are in need of and are entitled to the benefit of this provision. I am firmly of the opinion that such a law is not only eminently just both to the patentee and the public, but that it will be found in practice to greatly encourage inventors and aid them in procuring financial assistance, which the Government itself can not supply and of which they are as a class so greatly in need, and that it will bring about a much greater degree of activity in the lines of original research and in the production of inventions that greatly benefit the world.

Extensions were never granted, as is well known to those who practiced on extension cases, except for the benefit of the inventor and the public in general, even when the inventor had assigned his entire right to the patent and any extension thereof; the Commissioner would not extend the patent except upon proof that the inventor would thereby become a substantial beneficiary either by reassignment of the patent or an execution of a contract which, upon its face,

would make the extension inure largely to the benefit of the inventor. It was not safe to ask for an extension unless the proofs came up to the standard above indicated. As the application for an extension had to be made by the inventor, it will be seen that he held command of the field, that terms satisfactory to him must be made or he would not make the application. It was not safe to even try to take advantage of the inventor in making the contract; it would endanger the rejection of the application by the Commissioner on the ground that the terms were not as favorable to the inventor as they should be in view of the estimated value of the extended term. Again, as the extension had to be granted, if at all, before the patent expired, and as the Commissioner might not take the case up until the patent was about to expire, it will be seen that it would be too late to patch up a new agreement with the inventor in order to avoid rejection of the application on the ground that the inventor would not participate sufficiently in the benefits of the extension.

In the disposition of all applications for inventions that had not gone into commercial use, as well as all cases in which the inventor had not assigned his patent, the interests of the inventor and the public only were considered.

In answer to the argument that if a general extension law were passed some inventor might now and then secure an extension who, in the opinion of some, was not entitled thereto, it may be said that if this is a good ground against the proposed law it is equally good against every other court, commission, or board in the land. We do not, from a consideration of a possible abuse, disband our courts, wipe out all civil laws, and live in the primitive state of the original occupants of our country.

I may be excused for referring to one or two patentees of whom I had personal knowledge during my early practice as illustrations of two classes of inventors, to wit:

Atwood, the inventor of the sun burner and straight chimney, being unable to induce manufacturers to place his improvements on the market, borrowed the money to have his patented articles made and then himself peddled the same from an open wagon around the streets of Chelsea, Mass. In seven or eight years thereafter he had accumulated seven or eight hundred thousand dollars out of his invention.

Another party who obtained a fourteen-year patent, under the old law, then secured an extension for seven years, collected $63,000 during the last—twenty-first year—of his patent.

These cases are mentioned merely as examples of cases where meritorious inventions were not taken up by experts who ought to be able to appreciate the improvements, and of the delay that may follow the issue of a patent before the patent becomes productive.

While I have laid stress herein upon the necessity of the enactment of some law to provide for the extension of patents in order to promote the interests of the people at large as well as to reward meritorious inventors, I am not unmindful of the fact that in proportion to the cost of patents there is no form of investment, taken all in all, that begins to compare in the measure of benefits with that which results from the promotion—development—of patents. It is a poor patent indeed that does not yield, in one form or another, a handsome return. Every patent does not produce a million, or a hundred thousand, or ten thousand, but the rewards

come in every conceivable form. Notwithstanding this favorable showing in the behalf of patents, it constitutes no argument, from the standpoint of the statesman, why even better results, if possible, should not be brought about in favor of the unrewarded inventors when their rewards mean greater benefits to the public.

In connection with the writer's professional service in the prosecution of applications for extension while assisting the late Commissioner, Hon. D. P. Holloway, in the management of his large practice as a specialist in patent cases, I learned that only about 2 per cent of the total benefits of inventions went to inventors, while 98 per cent went to the public.

An argument that has been used in opposition to the extension of patents is that the extension would leave the date of expiration of a patent "uncertain," and that such uncertainty would unsettle the legitimate plans of intending manufacturers, leaving them all at sea.

That is to say, that an inventor who has made and patented an invention and diligently striven during the life of his patent to promote it and secure remuneration therefor, but has been unsuccessful; whose efforts may have represented years of labor and toil and the expenditure of all his means, even to the sacrifice of the necessaries of life for those whose prospective comfort and happiness was his chief aim and care, should be deprived of a further opportunity, admitted to be justly due to him in view of the facts in his case, to secure a reward for his invention because some ignoble, mercenary creature, himself incapable of making an invention which would add anything to the sum of human knowledge or happiness, and who has watched the fruitless efforts of the inventor to introduce his invention, and who, selfish being that he is, has been busy making money all the years that the inventor has toiled in making and perfecting his invention and exerting himself to put it on the market, objects to the Government doing that which would give reward to whom it is due and thus promote the progress of the useful arts, in order that he, ignoble wretch, may come in at the hour of victory and appropriate to his own use the reward that is justly due to the inventor. The most charitable view that can be taken of such an argument is that it is evidence of thoughtlessness and of hasty and superficial consideration of great principles.

Are such plans "legitimate?" Are they honest? Are they not inhuman, degrading, offensive to any man who appreciates his reasonable obligations to his fellow-beings? We might as fairly undertake to deprive the returning soldier or sailor, battle scarred or ruined in health, or both, of the credit for his patriotic service for his country and to transfer it to a stay-at-home, whose only excuse for not going to the front was his cowardice and his selfishness.

"Legitimate plans," indeed. We might as well give the grain of the farmer to crows, the game of the huntsman to vultures, and the product of honest toil to pirates.

ANOTHER CONSIDERATION PRESENTS ITSELF.

It has been the glory of the country that it has led other nations in its liberal treatment of inventors. This country was the first to enable the inventor to obtain, at a moderate cost, a patent which carried on its face a reasonable presumption of its validity. To this lib-

eral treatment of the inventor the vast progress of the United States has been largely due, according to the opinion of the most competent to pass on such matters. Yet, in one respect, this liberality halts. While other countries provide for extensions in proper cases, the United States, which owes a greater debt of gratitude to the inventor than any other nation, denies what he is entitled to by every principle of gratitude, good faith, and even of expediency. If this denial of justice resulted from a deliberate action of Congress we might well regard it with feelings of shame and discouragement. An examination of the records of Congress has, however, shown, as noted in a previous portion of this paper, that such denial was not deliberate, and that the change in the law which involved it was probably due to the anxiety of the conference committee to pass the main provisions of the bill under consideration, leaving a restoration of the extension clause of the old act as a matter for later action.

However, wittingly or unwittingly, a great wrong has been done which it becomes every day more incumbent on us to undo.

Respectfully submitted.

JOSEPH R. EDSON,
927 F street NW., Washington, D. C.,
or 141 Broadway, New York, N. Y.

WASHINGTON, D. C., *March —, 1905.*

Letters from prominent persons relative to the proposed amendment to the patent laws providing for the extension of letters patent in proper cases.

[Letter from W. C. Robinson, LL. D., etc., author of Robinson on Patents.]

JOSEPH R. EDSON, Esq.,
927 F street, Washington, D. C.

MY DEAR SIR: Allow me to express my hearty sympathy with your efforts to secure the restoration to our patent law of that provision which gave to meritorious inventors an extension of their patents in cases where they had been unable during their ordinary terms to obtain adequate remuneration for their services to the public. I can not imagine any patent system which would properly embody the spirit of the Federal Constitution unless it did furnish to inventors such protection; and the forty years which have elapsed since this protection was withdrawn have been replete with instances of hardship to great public benefactors, which demonstrate the justice of your claims.

Yours, truly,

WILLIAM C. ROBINSON.

[Letter from Gen. Ellis Spear, late Commissioner of Patents.]

JOSEPH R. EDSON,
927 F street NW., Washington, D. C.

MY DEAR EDSON: I have read your paper relating to proposed amendments of the patent law, providing for extension of patents, as printed in the Congressional Record. It appears to me to include everything that relates to the subject and is an exhaustive paper. I believe that the object you have in view is a good one. It is in accordance with the spirit of the American patent system and is in harmony with the original law providing for extensions. I believe that the change which extended the term of all patents three years, as a substitute for the right of extension of seven years, in meritorious cases, was a mistake. The term of fourteen years was enough, and perhaps more than enough, for very many of the patents issued, and the term of seventeen years is too little in many cases. I believe it would be just as beneficial to

extend many patents seven years, issued under the existing law, whether they be patents for inventions impossible within that original term to bring into use, or whether they be patents from which, by reason of persistent infringement and consequent litigation, the patentee has derived no benefit. I am of the opinion, also, should such an amendment be enacted it would not be wise to place the burden wholly upon the Commissioner of Patents, but that such cases should be passed upon by a commission or court of three persons.

Yours, truly,

ELLIS SPEAR.

[Letter from Hon. Halbert E. Paine, late Commissioner of Patents.]

Mr. JOSEPH R. EDSON,
927 F street NW., Washington, D. C.

DEAR SIR: I fully concur in the views expressed by Professor Robinson, in his communication addressed to you under date of April 14, 1903. His statement seems to me to embrace, in brief, the entire substance of the case.

Very respectfully,

H. E. PAINE.

[From Philip C. Dyrenforth, esq., of Dyrenforth, Dyrenforth & Lee, Chicago.]

JOSEPH R. EDSON, Esq., *Washington, D. C.*

DEAR SIR: In the main I concur in the views expressed in your paper on the subject of patent extensions. There is occasionally a patent for which the present statutory term is inadequate, and in such cases there should be provision for doing justice in a simpler and more certain way than exists now. * * *

[From Hon. Walter H. Chamberlin, late Assistant Commissioner of Patents, Chicago, Ill.]

Mr. JOSEPH R. EDSON, *Washington, D. C.*

DEAR SIR: * * * I will say, however, that I am in favor of the broad proposition provided the machinery through which the extension is obtained is neither too cumbersome nor, on the other hand, so loose but that the merits of each particular case will be inquired into with care and judgment. * * * And any statute which provides for patent extensions should at the same time provide for some tribunal which will carefully and efficiently pass upon the merits of each particular case.

[From Gen. Cyrus Bussey, late Assistant Secretary of the Interior, Washington, D. C.]

Mr. JOSEPH R. EDSON, *Washington, D. C.*

DEAR SIR: I have read with much interest your paper on the extension of patents, and heartily concur in the views so forcibly expressed by you, and hope the subject will receive the favorable consideration of Congress.

[From Hon. E. M. Marble, of New York and Washington, late Commissioner of Patents.]

JOSEPH R. EDSON, Esq., *Washington, D. C.*

DEAR SIR: I am in receipt of your favor of the 2d instant, with inclosure, in relation to a proposed amendment to the United States patent laws, providing for an extension of patents in proper cases.

* * * The patent laws of the United States should be *revised*, and not *amended* by piecemeal.

* * * I do not think that rival inventors and manufacturers should be allowed to contest his application for an extension of his patent. They were not heard when his original application was pending in the Patent Office, and I know of no reason why they should be heard now. If they are waiting for his

patent to expire before they commence using his invention, let them wait a little longer. * * * I have stated that the patent laws of the United States should be *revised* and not *amended* by *piecemeal*, and I say this because I think that a joint committee of the Senate and House of Representatives of the United States should be appointed to revise our patent laws and to make our patent code such as it should be. This can not be done by now and then adding an amendment to the law as it stands. * * * The fact that some amendments, however, have been made which are beneficial is no reason why we should continue to favor amendments which simply cover a single point or a single defect.

* * * I think the whole Patent Code should be revised and many new features embodied therein, and for this reason, particularly, I am opposed to the amendment you have submitted to me and which you are seeking to have enacted and embodied as a part of the patent laws of the United States.

The terms of all patents of the United States should be changed, classified, and systematized, and the Government fees should be changed and proportioned accordingly.

To my mind there is no reason for making the terms of patents for toys of the same length, and the Government fees the same in amount, as the term of patents in telegraphy, telephony, testing machines, and other important and long-lived inventions in machines and processes.

* * * The Government fees are now too large, and there is no reason why the Patent Office, after paying all of its expenses, should pile up and add to the accumulation of millions of dollars now to the credit of the earnings of the Patent Office.

I think inventions should be classified and the terms of the patents therefor should be five, ten, fifteen, twenty, and twenty-five years, at the option of the applicant.

* * * I agree with all that has been said by those who have expressed themselves as to the great benefits of our patent system, and as to the rewards which should be provided for the inventors for the inventions which have made this a great country, and our nation a great people, and for this reason I think the patent laws of the country should be so changed that the number of inventors shall be increased and the rewards to the inventors multiplied.

I do not believe, however, that such revision will ever take place so long as the friends of our patent system, and so long as those who appreciate the great benefits which accrue from inventions, seek simply by patchwork to amend in some one particular the patent system, and do not liberalize to inventors the rewards which they should receive.

Very respectfully, E. M. MARBLE.

I hope to have Mr. Marble's full letter, which covers nine pages, letter size, of typewritten matter, with letters from many others, printed by Congress at its next session.

[From Julian C. Dowell, esq., late of Butterworth & Dowell, Washington, D. C.]

JOSEPH R. EDSON, *Washington D. C.*

DEAR SIR: Your paper on the subject of an amendment of the patent laws to provide for the extension of the term of letters patent for inventions in meritorious cases is interesting and instructive and shows that the absence from the Revised Statutes of a general law governing the grant of extensions, without a special act of Congress in each particular case, is a mistake that no impartial reader having any proper conception of the importance of the American patent system can fail to recognize.

[Letter from Hon. W. H. Doolittle, late Assistant Commissioner of Patents.]

JOSEPH R. EDSON, Esq., *Washington, D. C.*

DEAR MR. EDSON: As you are aware, I have gone carefully over your papers on "Extension of patents" and the history of the patent system. You have performed a great labor well and thoroughly. Your historical review establishes without doubt two facts—first, that the principle of extension of the terms of patents to meritorious but insufficiently rewarded inventors has been ever recognized by our wisest statesmen as a good one; second, that by unfortunate legis-

lation no tribunal now exists in this country by which that remedy is practically obtainable—Congress, the only present tribunal, having, through its committees, declined to exercise its jurisdiction for the reason that the subjects are technical and complicated and require the labors of a specially constituted and qualified tribunal to intelligently pass upon and determine the same. The Commissioner of Patents, in person, is already overburdened with work. The only remedy, it appears, is the creation of a special tribunal for the purpose, as you have suggested in one of your bills. • I am in hearty accord with your views, and shall do all I can to aid you in your work.

Yours, very truly,

W. H. DOOLITTLE.

[Letter from Hon. A. P. Greeley, late Assistant Commissioner of Patents.]

JOSEPH R. EDSON, Esq., *Washington, D. C.*

DEAR SIR: I have been much interested in your proposed amendments to the patent law providing for an extension of the term of patents in meritorious cases. There is no question that in many cases extensions would be, aside from the question of justice to the inventor, of great benefit to the manufacturing industries of the country. Without the encouragement afforded by the patent law there would be little invention and little, if any, creation of new industries or development of old industries. Every inventor hopes that his invention will be appreciated by the public as soon as it is patented, and where this is the case the term of the patent may be sufficient to bring him a fairly adequate return. But the public is often very slow to appreciate even inventions of the greatest importance, and the process of educating the public to an appreciation of an invention is costly, and often the term of a patent expires before this can be done, with the result that neither the inventor nor the public gets any benefit from the invention. It is safe to say that no new industry is based on inventions not developed before the expiration of the patents granted on such inventions.

The question of extensions is not without its difficulties, but the difficulties relate to the determination of the propriety of extensions in particular cases and could be overcome by providing a suitable tribunal to determine in each case whether or not an extension should be granted. The broad proposition that some provision for extension should be made, without the necessity for securing a special act of Congress in each case is, I believe, generally accepted by all who have given careful thought to the matter.

You are certainly doing an important service to the public in this matter, and I wish you success.

Very truly, yours,

A. P. GREELEY.

[Letter from Hon. S. T. Fisher, late Assistant Commissioner of Patents.]

Mr. JOSEPH R. EDSON.

DEAR SIR: I am heartily in sympathy with your desire for the passage of a law providing for extensions of patents.

I know that in very many cases the inventor does not receive a reward at all commensurate with the value of his invention. In one of my own cases the inventor took out a patent in 1887, and it was not until 1899 that arrangements were perfected for putting the invention on the market in a commercial form. Twelve years of the patent had expired before the inventor had received any reward to speak of.

I sincerely hope that your efforts in this line may be successful.

Yours, very truly,

S. T. FISHER.

[Letter from W. D. Baldwin, esq., late president of the Patent Law Association.]

JOSEPH R. EDSON, Esq.,
927 F street NW., Washington, D. C.

DEAR SIR: I have carefully read your paper on the subject of the proposed extension of patents. The subject is a large and important one.

The matter is well worthy the consideration of Congress, and I hope your efforts to attain that end will be successful.

I think there are cases worthy of special consideration and further extension. A general law providing for the consideration of such cases would be beneficial and far better than special consideration on particular cases.

Very truly, yours,

W. D. BALDWIN.

[Letter from Hon. W. W. Skiles, late chairman of House Committee on Patents.]

JOSEPH R. EDSON, *Washington, D. C.*

MY DEAR SIR: Yours in relation to the subject-matter for extension of patents granted to inventors, etc., received. * * * I have no doubt but that there would be a wide disagreement as to a general law extending patents wherein the inventor has been well paid for his invention. I can see that an injustice might be done to a party or parties who have not been permitted by reason of extended litigation, etc., to get a proper remuneration for their invention. I know of a case or two that was before the Committee on Patents last winter, and, in my opinion, one or two of those cases were meritorious and extensions should have been granted. * * * If it (a general extension law) could be worked out along certain lines wherein meritorious cases could be heard and decided on their merits by a proper tribunal, I think it might do good and be in the line of justice and right. Will expect to give the matter due consideration and be governed by that which is right so far as possible.

Yours, very respectfully,

W. W. SKILES.

[Letter from Hon. Z. C. Robbins, the oldest practitioner before the United States Patent Office (aged 94 years), and who was attorney for the late President Abraham Lincoln in his successful application for a patent.]

JOSEPH R. EDSON, Esq.

DEAR SIR: In reply to your inquiry I would say that I am decidedly in favor of the enactment of a law that will insure fair and reasonable protection to all meritorious inventors. * * *

Probably no invention has added so largely to the wealth of our nation, and I might say to the wealth of the world, as Eli Whitney's cotton gin. And yet the fact must be stated that that great inventor and patentee expended more money in litigation than he ever received from cotton planters for the use of that invention. After years of hopeless effort Whitney applied to the United States Congress for relief, and with the result that that honorable body refused all pecuniary relief and also refused an extension of his patent. * * *

And therefore it is decidedly my opinion that it is the duty of our national lawmakers to enact a law that will render a repetition of such disgraceful facts impossible in all the coming years.

Very truly, yours,

ZENAS C. ROBBINS.

(Mr. Robbins's full record states cases in which Congress has refused to pass private extension bills. There is no record showing that Congress has refused to pass a general extension law.)

[Letter of Hon. Adolph Meyer, M. C., of Louisiana.]

COMMITTEE ON NAVAL AFFAIRS, HOUSE OF REPRESENTATIVES,

Washington, D. C., June 23, 1903.

Mr. JOSEPH R. EDSON,
Attorney at Law, 927 F street NW., Washington, D. C.

DEAR SIR: I am in full sympathy with your efforts to secure the passage of the amendments proposed by you to the patent law, providing for the extension of patent rights.

Yours, very truly,

ADOLPH MEYER.

[Letter from H. C. Townsend, of New York, formerly principal examiner in United States Patent Office, in charge of class of electricity.]

JOSEPH R. EDSON, Esq., *Washington, D. C.*

MY DEAR SIR: I have read with great interest your exhaustive paper on the extension of patents.

I believe that practically all members of our profession are in accord on this subject, and that reason and justice alike demand remedial legislation. The present term of patents is altogether too short in very many cases, just as in many others it is wholly adequate, if not too long. This, I believe, is the observation and experience of those members of our profession who have been in practice for any considerable length of time.

It seems to me that concerted effort will quickly bring about such a change in the law as will permit meritorious patentees, without undue expense, to obtain, by extension, that just reward that the framers of the Constitution had in view.

Very truly, yours, H. C. TOWNSEND.

[Letter from Hon. M. J. Wade, M. C., of Iowa.]

JOSEPH R. EDSON, *Washington, D. C.*

DEAR SIR: I am in hearty sympathy with your effort to procure some general law pertaining to the extension of meritorious patents under equitable conditions. I trust that the American Bar Association may give it the most hearty indorsement, and hope that it may receive the favorable consideration of Congress at the coming session.

Very truly, yours, M. J. WADE.

[Letter from Francis H. Richards, president Inventors' and Manufactures' Association.]

JOSEPH R. EDSON, Esq.

DEAR SIR: * * * Regarding the subject of extensions generally, it has been urged by a number of parties, especially by the late Doctor Gatling (inventor of the Gatling gun), that in view of the time required to develop an improvement so as to make it profitable to the applicant, and in view of the many other inequities incident to the practice under our present system of patent laws, it might be the most expedient plan to extend the term of patents to twenty years. * * * Undoubtedly the present term of seventeen years is much too short a time to bring to full development an important industrial improvement, and afterwards to reap a fair equitable reward for the advantages it may confer on the public. Of course in this connection we have to consider the fact that so many of the more important improvements are really begun, as to their development, many years before a public demand can be created. * * * It (the extension of patents) would be, in many cases, just and equitable.

Yours, very truly, F. H. RICHARDS.

[Letter of Hon. Geo. C. Hale, ex-president of the Association of Fire Chiefs of America.]

JOSEPH R. EDSON,
927 F street NW., Washington, D. C.

DEAR SIR: I have read your paper relating to the proposed amendments to the patent law, providing for the extension of patents, as printed in the Congressional Record. * * * I believe that the object you have in view is only fair and equitable to the inventor, who spends his time and money on inventions which are new and useful and have done so much toward promoting civilization throughout the world. You are no doubt aware that many poor inventors spend the best part of their lives in working hard to perfect their inventions; that during the experimental stage of an invention the short time allotted by the Government fleets away and the short life of the patent takes from its value such an amount that it is discouraging to the inventor to enter the field with his usually limited means; and while we know that a patent has really no commercial value at the time it is granted to us by the Government,

and that it is worth only what can be made out of it when placed in the proper hands for promotion, I sincerely hope that the law-making power of our Government will act favorably upon your proposed amendments to the patent law.

Wishing you good success in your undertaking, I remain,

Very truly, yours,

GEO. C. HALE.

[Extract from a long letter dated December 5, 1896, from present examiner in chief, Thos. G. Steward, to President McKinley.]

"The patent system is the corner stone of the nation's industries. * * * Occupying, as it does, this important position under our scheme of government, the patent system is deserving of the serious attention of those whose influence is sufficiently potent to control its destiny."

Police Commissioner (now President) Roosevelt, after reading this letter, replied, under date of January 11, 1897: "I entirely agree with that letter * * *."

[From Edward Taggart, of Grand Rapids, Mich.]

Mr. JOSEPH R. EDSON,
227 F Street N W., Washington, D. C.

DEAR SIR: In answer to your letter of the 10th instant, I will say that I certainly believe there should be a new law providing for the extension of patents for meritorious inventions in certain cases. Such law should be very carefully guarded, however, in order that all patented inventions should not be extended.

I have, from time to time, seen the necessity of such a law. In one case, which will illustrate my idea, I obtained a patent for a client on a simple device, but the invention made a great advance in the art to which it pertained. My client struggled for several years to get his invention introduced against a very vigorous competition. Such, however, were the merits of the invention that when it became known to the public the public would not do without it. Then followed infringements, and, following the infringements, litigation. Suit after suit was fought out until, finally, after $50,000 or thereabouts were spent, the patent was sustained in the court of last resort and was broadly construed. The infringements now ceased and the owner of the patent secured a decree for more than $90,000. The defendants, however, had fought the patent so vigorously that they had exhausted their funds and became practically insolvent, so that the degree was a barren one. The patent had at this time only one year further to run. In this case the inventor had produced such an invention as ought to have made him a princely fortune, but he really secured very little beyond expensive litigation.

Could this patent have been extended for seven years, he would have been at least fairly well paid for his invention and his efforts in prosecuting the infringers.

I have no doubt that there are many cases where inventors or owners of patents have had similar experiences.

I think that in case of the new law the owners of patents should be entitled to make an application and, if the case justifies, should be allowed to obtain an extension and the benefits of the same, provided they hold such assignment as would entitle them to extension.

Yours, truly, EDWARD TAGGART.

[Letter from Frank S. Manton, president of the American Ship Windless Company, established 1857.]

PROVIDENCE, R. I.

DEAR SIR: * * * I have no doubt whatever that it would be of great benefit to the country to have patent extensions on inventions that take a long time to introduce and on which a great deal of money is spent. * * * There is no question in my mind but what patents in certain cases should be extended. Now, take the towing machine, for instance. It cost an immense sum to get that machine onto the market in sufficient numbers to convince even a small proportion of the people engaged in towing of its utility, and there is not profit

enough in such a machine to pay for its increased expenditure unless there is a chance for the extension of the patent. I am therefore heartily in favor of such a law as you refer to and as proposed in the Congressional Record.

FRANK S. MANTON, *President.*

[Letter from Ephraim Banning, of Banning & Banning, of New York and Chicago.]

DEAR SIR: Without going into details, I strongly favor a carefully prepared conservative amendment to our patent laws providing for reasonable extensions of patents in proper cases. I have known of many instances in which for lack of such a provision inventors have not received the reward to which they were in all fairness entitled. A common instance is where an inventor is so far ahead of the times that the term of his patent expires, at least in large part, before the public fully understands, adopts, or appreciates his invention. Another instance is where persistent infringements necessitate prolonged and expensive litigation, thus oftentimes not only unjustly dividing the inventor's business for many years, but making his patent the source of expense instead of profit.

Trusting that you may be successful in your efforts along the line suggested,

Yours, very truly,

EPHRAIM BANNING.

[State of Ohio, office of attorney-general, Smith W. Bennett, special counsel.]

Your review of the patent laws and argument for the enactment of a general law for the extension of patents has received my attention, and while I have not made a specialty of the study of this branch of the law, yet I recognize the merit claimed by you in your proposed legislation and favor the same.

Very truly, yours,

SMITH W. BENNETT.

[From Hon. Joshua Pusey, of Philadelphia, Pa.]

In the course of an active experience of more than thirty years as a patent lawyer, I have often been impressed in particular instances that the term of seventeen years for which patents are granted is frequently entirely inadequate to enable inventors to reap the pecuniary reward to which the merit of their inventions entitled them, and this through causes not arising from any fault on their part. I am, therefore, decidedly in favor of a suitable act of Congress providing for the extension of patents in proper instances, not only as a matter of justice to the inventors, but because I believe that such an act would still further stimulate invention, which I take to be the main purpose of the patent laws.

[From Mr. Arthur Steuart, of Steuart & Steuart, Baltimore, Md.]

* * * I think a bill providing for the extension of letters patent in proper cases would be an admirable one and would be particularly advantageous to the public of the United States, and that is for the reason which is often misunderstood by those who are not familiar with the way in which patent property is handled and the effect of maintaining patents upon the general commercial conditions of the country, to wit, that the greatest benefit to the public is derived from any set of conditions which will bring about the profitable employment of capital and labor. Every new enterprise meets with opposition in its development from the inertia of those who are engaged in the business and their devotion to old methods. * * * Many of the most valuable of inventions are made and patented long before they are ever gotten into use, and under the present system it often happens that the most meritorious inventors are deprived of the benefit of their inventions by the suppression of their patents just at a time when their inventions come to be appreciated. I think, therefore, that it will result in unquestionable good to the public to extend the term of patents upon valuable inventions wherefrom such an extension will not create too great and far-reaching a monopoly upon matters which shall become necessities of life.

[From H. A. Toulmin, of Springfield, Ohio.]

* * * Reflection and observation concur in convincing me that the proposed act ought to be passed. The great foundation idea upon which rests the constitutional provision for granting patents at all and the great fact upon which they are granted is just compensation to the inventor. Experience shows that this remuneration in a large number of cases where it is specially due fails of realization within the term of the patent. The loss falls on the inventor. This is contradictory to and a defeat of the intention of the Government in granting the patent, hence a law similar to the old repealed statute authorizing extensions in just and proper cases is demanded by considerations of justice and propriety.

[From A. D. Marble, esq., of Marble & Marble, Oklahoma City, Okla.]

* * * You deserve the cooperation of the nation's guardians and the gratitude of the fraternity of inventors, who are the pioneers of the mechanical, industrial, and commercial development, progress, and greatness of our nation. The successful inventors add to the national wealth, the unsuccessful ones should have another chance. Their efforts, as a rule, have been as great, and often greater, than their more successful brothers. * * * I would suggest that the patent laws be changed to grant patents for a term of fifteen years, with an extension of ten years in deserving cases; also to reduce the cost of filing an application.

[From Bowdoin S. Parker, esq., of Boston, Mass.]

* * * I am strongly in favor of this change, and am sensible of the fact that the present term does not in many cases allow the inventor time to reap the benefits of the invention. * * * The extension is supposed to be for the benefit of the inventor, and wherever this benefit can be obtained it should be practicable for the inventor to obtain it on proper facts set forth.

[From Chas. E. Allen, esq., of Burlington, Vt.]

I have read with great interest your exceedingly clear and able presentation of the subject of "providing by general legislation for the proper extension of letters patent." I think that I am within bounds when I say that no subject will be presented in Congress of greater vital interest to the development of our country than this. I heartily approve of your views and efforts. They are founded on right and justice.

You appear to have successfully met every point in opposition. It is difficult to imagine eventual failure to obtain what to every candid-minded man and good citizen should appear to be a reasonable and just demand. I shall take pleasure in doing all I can to assist you in the good work.

[United States Civil Service Commission, Washington, D. C.]

I have read your paper with much interest, and your views appeal to me as being sound, and which if enacted into legislation would, I believe, bring about a much needed improvement in the patent system.

Wishing you success, I am,

Very sincerely, F. M. KIGGINS.

[From Mr. John H. Whipple, of Chicago, Ill.]

* * * I am in favor of such an amendment. I believe many inventions patented since 1861 have not received, and under the present law can not receive, adequate compensation, and that extensions by act of Congress in individual

cases are entirely impracticable. I further believe that Congressmen generally are aware of this and would give favorable consideration to an amendment making reasonable provision for extensions if properly called to their attention.

[From James L. Ewin, esq., Washington, D. C.]

Congress should enact such a law in its own interest and that of the people at large as represented by Congress. The special bills introduced each session and the personal appeals to Senators and Representatives must consume enough time and cost the people enough to equal any additional expense that might be incurred in providing for the consideration of applications for extension by the Patent Office, and it would certainly be a comfort to most Senators and Representatives to be able to refer persons seeking such relief to a tribunal having power and ability to consider the question and to do justice as between the inventor and the general public.

Congress should also grant the relief asked for in the interest of the inventors as a class recognized by the Constitution as deserving such consideration, and for other reasons ably set forth in the numerous communications you have received in support of your proposition. * * *

[From Mr. Chester Bradford, of Bradford & Hood, Indianapolis, Ind.]

* * * There is one class of cases, however, where we believe an extension might properly be granted, and we would favor a law which was strictly limited to such cases. The cases we refer to are those where the original inventor, by reason of poverty, sickness, or persistent infringement, has been prevented from carrying on the business under his patent which he has made every reasonable effort to carry on, and which, except for the misfortunate circumstances, would, in all probability, have been successful. Such instances are referred to in some of the papers accompanying your circulars. These are cases of genuine hardship, and a law, carefully guarded, restricting such relief to such cases, and to where no reasonable compensation (by way of profits, judgment collections, or otherwise) has been had, ought not to meet with objection from any quarter, and would certainly have our hearty approval. But the conditions and restrictions to be embodied in such a law ought to be so clear that no advantage could be taken of it except by those for whose relief it was designed.

[From Mr. Thomas Drew Stetson, president of the Polytechnic Branch of American Institute, of New York City.]

You deserve great credit for efforts to promote extension of patents.

It will be in the interest of inventors and of progress generally to reenact substantially the provisions of long ago—a general act authorizing the Commissioner of Patents, or some board especially organized for the service, to consider testimony and grant extensions in cases which are found to justify it.

This ought to be done without curtailing the present period of seventeen years for the first grant. * * * The prospect of an extension is a very strong inducement to bring out and liberally manage inventions. * * *

[From Mr. Almon Hall, of Toledo, Ohio.]

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be entirely successful.

[From Mr. Frank Parker Davis, of Dayton, Ohio.]

I favor the enactment of general legislation for the extension of letters patent. * * * There is no doubt in my mind that sufficient instances exist of inventors deserving prolongations of term to warrant the enactment of a law providing for an extension of letters patent in exceptional cases. * * * And it might be that useless extensions would be granted, but I believe it were better that ten useless extensions should be granted than that a single deserving one should be denied.

[From C. H. Duell, of New York, late Commissioner of Patents.]

JOSEPH R. EDSON, Esq.,
927 F street NW., Washington, D. C.

DEAR SIR: I beg to acknowledge your favor of yesterday, and in reply thereto to say that I am quite well again and have taken the opportunity of reading your article in the Congressional Record relative to the extension of letters patent.

I am inclined to think that the old law granting patents for fourteen years with a possible extension of seven was better, all things taken into consideration, than the present law granting patents for seventeen years with no extension except by act of Congress.

I think it was the expectation of the framers of the present act that in proper cases Congress would extend patents; but the result has been, as we all know, that Congress has refused to grant extensions even in meritorious cases.

It is a question upon which much can be said both for and against. At the present time I am hardly prepared to say whether I would favor an amendment to the present law or not. Your argument is very persuasive, but, as I have before stated, there is much to be said on the other side.

It is an interesting question and should it come before Congress and be seriously pushed I should be quite anxious to hear the question presented by those favoring and opposing it. Your argument shows that you must have given a great deal of time and attention to the matter, *and I do not think a stronger presentation, from your standpoint, could be made.*

Thanking you for calling my attention to the matter,

I remain, very truly, yours, C. H. DUELL.

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Sample letters from prominent persons relative to the proposed amendment to the patent laws, providing for the extension of letters patent in proper cases.

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