

THE PATENT OFFICE, AND HOW TO REPAIR ITS LOSSES.

It is very generally known that our patent system finds its origin in the English monopolies of Queen Elizabeth's days. Most of these privileges became justly odious, and were abolished by a statute of James I.; but an exception was pointedly made therein to grants of patents for the "sole working and making of any manner of new manufacture within the realm, to the true and first inventor or inventors of such manufacture, which others at the time of making such letters patent shall not use, so that they be not contrary to law nor mischievous to the state," etc. There is a close similarity between the plain, literal sense of this language and the actual state of American patent law to-day; but the interpretations of the English courts have brought about a very wide divergence.

In the interval between the separation of the colonies from the mother country and the adoption of the present constitution, the several States claimed and exercised the right of issuing patents for inventions. These grants seem to have been made in all cases by special legislative enactment. Thus, in 1788, we find John Fitch obtaining patents for his method of steam navigation from New York, New Jersey, Pennsylvania, and Delaware. Soon afterward James Rumsey applied for similar concessions; when, to use a modern technical phrase, an "interference was declared" and argued, *pro* and *con*, before the assemblies of two of the above-mentioned States. In the course of this controversy one Barnes published a statement, still extant, to the effect that in the year 1787 Mr. Rumsey had a working steamboat on the Potomac. Fulton's patent bears date February 11, 1809.

But with the adoption of the new constitution this form of state rights disappeared. That instrument empowered Congress "to promote the progress of science and the useful arts by securing, for limited times, to authors and invent-

ors the exclusive right to their respective writings and discoveries." Pursuant to this authority, Congress in 1790 passed an act vesting the power of issuing patents for inventions in a board consisting of three heads of executive departments: namely, the secretary of state, the secretary of war, and the attorney-general.

The first United States patent ever issued was granted June 29, 1790, to William Pollard, for an improved machine for spinning and roving. Then, and for three years after, the board, constituted as above stated, examined the applications brought before it, and exercised discretionary power in rejecting for lack of novelty or usefulness. But this organization was obviously fitted only for the infancy of a nation. As inventions increased in number, it became evident that some less cumbrous method of dealing with them must be found. The country could not afford to have three of its cabinet officers periodically withdrawn from their high functions to perform the work of one subordinate.

At first, the secretary of state (with the attorney-general for legal adviser) was substituted for the former board, and his duties were lightened by abandoning the attempt to pass upon the merits of applications, and simply granting patents to those who requested them. It was an easy way out of the difficulty, but not altogether a satisfactory one.

The work still growing upon the hands of the government, the office of superintendent of patents was created. That functionary was in effect a clerk who attended to this particular branch of the secretary's business. As more and more applications poured in, his position grew in importance, until at length he was dubbed "commissioner," in imitation of the English. For a long time the patent-office remained under the control of the secretary of state, but has since been a branch of the department of the inte-

rior. William Thornton was the first head of the office.

Of course, under the patent act of 1793, many worthless patents were issued, to the encouragement of lawsuits and confusion of titles; but it was not until after forty years of inconvenience and the great fire of 1834 that an effort was made to return to the system of examinations. The law of 1836 is often spoken of as having created our present system; but in reality it merely revived and improved the first system ever employed by our government, adapting that system to the great demands soon to be made upon it. To Mr. Keller, then the clerk of the patent-office, and lately deceased, belongs the honor of perfecting and reintroducing the most masterly scheme of the kind which the world has thus far seen.

The great fire above mentioned obliterated for the time being everything that was destructible in the patent-office, and some of the gaps then made still serve to check inquiry and hamper business. The records, it is true, have been in great measure replaced by the contributions of inventors who still retained their patents; but many of these documents had been lost, and many more had been carried into remote corners of the world by men who never learned that their assistance was desired. Thus many blank leaves still help to fill out the old books.

The growth of business in the patent-office went on, nevertheless, with rapid acceleration. All the books of the period before the fire, taken together, do not make so imposing an array as those which contain the issues of any recent year. In 1848 six hundred and sixty patents were granted; in 1869 very nearly fourteen thousand; in 1876 more than seventeen thousand. Yet the rate of increase has been far from constant. The requirements of the war and the period of artificial stimulus which followed caused a temporary flood of inventions which was the astonishment of the world; and on the other hand the revulsion of 1873 and the immediately succeeding years was accompanied by a corresponding ebb in the tide of invention, so that

1869 long continued to present the high-water mark.

If the system of simply registering and granting patents without inquiry had continued, a considerable increase in the force of the office would undoubtedly have been required; but the introduction of the element of examination made necessary a much greater development. Thenceforward the examining corps became the life and heart of the office, and that corps grew with the growth of its work.

Mr. Keller was naturally the first examiner or examining clerk. In 1840 there were two clerks. Two assistants were then added. In 1848, the work having more than trebled, the force was doubled. In 1853 the grade of second assistant was created, and six clerks were detailed to perform its duties. So the ball rolled, until there are now more than eighty persons engaged in examining. This force is distributed into divisions, each having exclusive charge of certain classes of cases, and consisting ordinarily of a principal examiner, a first, second, and third assistant respectively, and a lady clerk. Two of the third assistants are ladies also.

The examiners have *quasi* judicial functions, though a considerable part of their work is almost purely clerical. It is their duty to criticise specifications, so as to detect formal errors, and require their correction; and also to investigate the questions of novelty, utility, and abandonment, rejecting all applications found wanting therein. A thing is new if it has never been patented or published anywhere, nor known nor used in this country. It is useful if it will work without public injury. It may be abandoned either expressly or by implication resulting from two years' allowance of public use in this country. For the determination of this last question examiners have, however, but few facilities.

After rejection an application may be amended until the applicant, or his attorney, and the examiner are in accord or at issue. In the former case, the application is allowed, and, on payment of the final fee, ordinarily goes to issue.

In the latter case an appeal usually lies to a board of examiners in chief, thence to the commissioner, and thence to the supreme court of the District of Columbia. Questions purely of form are appealable directly to the commissioner.

The average cost of each examination to the government since 1840 has been not far from thirty-seven dollars. During that and the succeeding year the maximum was reached; but the figures fell off nearly one half between 1844 and 1848. In 1853 and 1854 the maximum was almost reattained, but the average then sank again, with slight fluctuations, till it touched bottom at twenty-four dollars in 1866. It has never quite repeated that last feat, though in 1869 it came a little within twenty-five dollars.

There have been in all but five years when the expenses of the office exceeded its receipts,—1853, 1854, 1856, 1857, and 1861,—so that it may fairly claim to have been a profitable institution from the very beginning.

The period between 1840 and 1869 was not marked by any notable changes, but in the few years succeeding the latter date they have come thick and fast. The rule of Commissioner Fisher (from 1869 to 1872) was remarkable in this respect. He first employed women in the work of the office; he introduced the system of competitive examinations in filling vacancies in the examining corps; he settled finally, by one decision, the practice of the office with regard to functional claims; he formulated in another the still accepted criterion as to duplicity in generic inventions; and he gave to the whole theory of the patent law, as applicable in the patent-office, a definiteness and precision which it had never before attained.

His immediate successor, Mr. Leggett, founded the Official Gazette, procured the abolition of the old patent-office reports and the introduction of women into the examining corps, created the positions of law clerk and chemical expert, settled the practice relative to design patents, and carried the verbal criticism of claims to a dubious extreme.

His successor, Mr. Thacher, following

the decisions of the courts, partly abolished the citation of rejected applications to defeat subsequent ones, substituting a system of *ex parte* testimony which proved a total failure. Mr. Spear, next in order (as acting commissioner), made the above abolition absolute. He also affirmed the right of a rejected applicant to make a second application for a patent on the same invention. Other changes have occurred from time to time, but they cannot well be noticed here.

Since Mr. Fisher's time the examiners (including assistants) have been generally appointed after competitive examinations and in accordance with the results thereof. The only considerable exception was during the last presidential campaign, when the exigency of the case brought about in high quarters a brisk impatience of anything except politics.

The examinations to fill vacancies have been very properly of a technical nature, with especial reference to the duties of the office; and the general verdict of competent judges is that the result has been satisfactory. The number of incompetent members of the examining corps is now very small and continually decreasing, and there are scarcely any mere drones; while the new blood of office is nearly all good.

The heaviest part of the examiner's work is in the determination of the question of novelty. A perfect examination on this point would involve a search through all patents from America to New Zealand, the formidable army of magazines, encyclopædias, scientific treatises, books of travel, and printed publications of all sorts. The Scriptures have been used as references several times,—once, I think, to show some article of dress worn by the Queen of Sheba, and again as an evidence of the fiery chariot which Ezekiel saw in his vision. In response to this last the applicant wrote, "Since the examiner is so apt in scriptural quotations, I trust he will inspect" a certain indicated text. This was found to read: "Let his days be few; and let another take his office."

Sometimes carelessness on the part of

the examiner has given rise to strange results; as when a certain inventor, after long delay, was rejected on his own model, which the rejecter had been using upon his desk until he had forgotten whence it came. A still more discreditable error was that of the examiner who gravely requested an applicant to correct his "*authography*." Such things would be scarcely possible now.

One source of trouble, confusion, and inaccuracy has always been found in the classification of the subjects of invention. Absolute lines of demarkation, not existing in nature, can hardly be discovered in art. There will be overlapping cases, and it is often necessary to choose between convenience and logic. Still, the ordinary human intellect is apt to experience a sense of the unfathomable on first learning that car brakes are distributed through three divisions, and that centrifugal clothes-wringers come under the head of sugar. An effort has recently been made to reform the classification, but all anomalies cannot possibly be discarded.

After the complete destruction of the old patent-office, it was generally supposed that the records would be intrusted for the future only to a fire-proof depository; and it does seem that the lessons of that appalling catastrophe were not wholly thrown away. The first two wings of the new interior department building were indeed made to stand, as their resistance to the recent fire proved. But as time went on, carelessness seems to have gained ground, and the remaining wings, though more expensive, had only an external resemblance to the earlier ones.

Thus, on the 24th day of September, 1877, the interior department building consisted of a casemate-like quadrangle, one half of which was well shielded by brick arches, while the other half had nothing but pine wood between its upper story and the tinder-box loft above.

Now that the patent-office has been so largely devastated by fire, the questions naturally arising are, What has it cost us? and, How is the loss to be repaired?

The former requires a brief examination of the nature and use of models in their relation to the convenience of the public and the rights of inventors under existing law. In the first place, then, very nearly one half of our finest national exhibition is at least temporarily ruined. Until the lost models are replaced, there is not and cannot be any adequate presentation to the public of the immense advance of American genius in many of the most important arts.

Again, until replaced, these models are unavailable as a means of ascertaining the novelty (or lack of novelty) of any invention. This was a great convenience to all persons having business before the office. Nor can the latter now adopt any course with reference thereto which will wholly avoid serious inconvenience. To allow promiscuous access to its drawings—though, perhaps, on the whole, the best course—would be in a measure to invite confusion and to clog its own work. On the other hand, to afford no facilities whatever for preliminary examinations would impose unnecessary expense upon meritorious inventors, and compel the examiners themselves to waste, sooner or later, a great deal of labor.

But a model is something more than an exhibition or a specimen. It is potentially, though not actually, a part of a patent. When the inventor makes his model, he has made his safeguard. Let his attorney be ever so negligent in the preparation of his papers and his drawings, his model is a reserve fund of invention upon which he can surely draw at will. It is good for all that it shows, and may at any time during the life of the patent form a basis for a reissue, including the omitted features. This is one of the very wisest provisions of the patent law, since it secures the ignorant or trustful client from wrong through the malpractice or dishonesty of his agent.

In this view of the case it becomes evident that the model is often of more importance than all the other records of a case which the office contains; and that, unfortunately, what is most valuable in it is also most utterly destructible. In

spite of the nicest means that can be devised for remedying the evil, the loss to worthy men by reason of this fire must reach many millions of dollars. And who will gain thereby? Unhappily, the men who are trespassing upon the property of others, and using without compensation the fruits of their minds. But this iniquitous transfer will certainly be greatly augmented if the scheme be adopted which seems just now to meet with most favor.

In truth, there are but four courses possible. The first is to leave the models unsupplied, allowing the drawings to be the sole memorials of the inventions embodied therein. This cannot be seriously contemplated. The people want the models and will have them. Moreover, in the agreement whereby the models were delivered there was an implied covenant that good care should be taken of them. Otherwise the requirement would be an oppression and a wrong as well as a folly. The government cannot shirk its responsibility for any part of the records committed to its care. A model is as truly a document as a specification or an assignment.

Still less can the government compel the inventor to reproduce his model. The law makes certain requirements, compliance with which is a condition precedent to a grant of a patent. When he has complied therewith, the inventor's right is certainly indefeasible by the negligence of the other party. It would seem unnecessary to state so plain a proposition but for the fact that one or more examiners assumed for a time to make this irrational requirement with regard to pending cases.

Nor can the government safely allow the inventors, where willing, to reproduce their models. In the case of applications awaiting payment of the final fee this plan has been adopted. Circulars were sent out soon after the fire inviting such contributions, but distinctly stating that nothing new could be introduced. As such cases are still subject to the revision of the examiners, the general objection can there have little force; but with regard to patented mod-

els such a course would open the door to all kinds of fraud. In very many cases the additions of unscrupulous assignees would far outweigh the importance of the original invention, and a plentiful crop of reissues would soon spring up, which would lay every manufacturer at the mercy of a horde of impostors.

The plan now most in favor seems to be to reproduce the models from the drawings. But this is proceeding in the opposite direction to an equally unjust and unwise extreme. It is in effect to make the government an accomplice of the fire, and to supplement negligence by willful wrong. Nothing can be reproduced from the drawings except what is already in them; and the chief value of the models (as already explained) lay in what is *not* in the drawings. Thus, such a limitation to reproduction is only another name for the destruction of legal, equitable, and moral rights; and that, too, by the very party chiefly intrusted with their protection.

There is yet another plan which can be and should be adopted. It is supported by analogy in the constitution and practice of the office, as well as by the plain dictates of common sense. The cardinal defect in the two schemes last mentioned is that each involves an utter surrender of the case to one of the two parties pecuniarily interested in every question of reissue, — the men who may have to pay tribute, and the men who may receive it. The obvious remedy lies in the creation of an impartial tribunal, with power to hear both sides and determine precisely the right of the case. It is after all only the common expedient of all civilized society for adjusting disputed rights and wrongs. Such proceedings have long been the rule in the patent-office in extensions and interferences. There is no reason in the world why applications for reissue should be considered wholly *ex parte*. There are many and sound reasons why they should not.

This remedy may be applied in more ways than one. For instance, the models may be at first simply reproduced from the drawings, and such a change

made in the law as would unquestionably allow the introduction by testimony (on application for reissue) of features not shown in the drawings or specification, but embodied in the destroyed model. Of course this testimony, in conjunction with the adverse testimony, would properly be taken after due notice and before a designated official. On a favorable decision, the model could be made to conform to its original construction as thus established.

Or, before the reproduction of any model, notice could be sent to the patentee and his assignees (if any) of the intention of the department to accept, subject to his protest, the drawings and specification as its guides, and giving him a

certain space of time wherein to file said protest. On its filing, a future day could be set and advertised for the taking of testimony pro and con, and on the decision arrived at thereby the future construction of the model would depend.

Of course it would be advisable to operate only under congressional authority. Slight delay awaiting legislative action would be far better than taking the wrong road.

The only objection that can be possibly urged against this plan is that it would be costly. But it is often costly to retrieve (even partly) a lost opportunity or to redress a wrong; and we have no more right to shirk this duty than to commit any other act of repudiation.

W. H. Babcock.

JAMAICA.

I KNOW an island which the sun
 Stays in his course to shine upon,
 As if it were for this green isle
 Alone he kept his fondest smile!
 Long his beams delaying flood
 Its remotest solitude,
 Mountain, dell, and palmy wood,
 And the coral sands around
 That hear the blue sea's chiming sound.

It is a watered island, one
 The tropic rains pour down upon.
 Oft the westward-floating cloud
 To some purple crest is bowed,
 While the tangled vapors seek
 To escape from peak and peak,
 Yield themselves, and break, — or glide
 Through deep forests undescried,
 Moaning their lost pathway wide.

In this land of woods and streams
 Ceaseless Summer paints her dreams:
 White, bewildered torrents fall,
 Dazzled by her morning beams,
 With an outery musical
 From the ridges, plainward all;
 Mists of pearl, arising there,