This claim is not intended to detract from the merit of Mr. Hunt, as an inventor, as he no doubt is not aware of his having been anticipated; but simply to show that the priority of design and introduction to active use, belong to Capt. Loper. J.

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Proposed remedial alterations of, and additions to, the present Law regulating the grant of Letters Patent for Designs.

By H. HOWSON.

By the third section of an Act approved August 29th, 1842, "in addition to an Act to promote the Progress of Science and the Useful Arts, and to repeal all acts and parts of acts heretofore made for that purpose," a new class of objects, for which no protection had been previously afforded by legislative enactments, was made the subject of Letters Patent, the duration of which is for seven years; the fees being fifteen dollars.

These patents are for new and original designs applied to any manufacture, whether of metal or other material, the act taking no cognizance of any peculiar advantages or utility which the object may possess, or of any process or art by which the form or ornamentation of the object is produced.

The ornamental articles of manufacture which would form appropriate subjects for this class of patents, are so numerous that it would be a difficult matter to classify them, and yet how few manufacturers of such articles avail themselves of a law which was evidently enacted for their especial benefit! How few instances of new ornamental fabrics, new styles of jewelry, or other objects, the merits of which depend, for the most part, on their ornamentation and pattern, are to be found in the list of patents for designs!

It cannot be supposed that the manufacturers of such articles have no desire to maintain a brief monopoly of their productions and a protection against copies and imitations of their wares by rival manufacturers.

How is it, then, that they so seldom avail themselves of the protection which the Act of 1842 is presumed to afford?

The cause of this cannot be attributed to any indifference or neglect on the part of the manufacturers, but to some radical defect in the law.

A lengthened experience as a Patent attorney has convinced the writer that such is the case; and that the defects are a source of general complaint, and that the law is generally unpopular.

The Act has been declared to be ambiguous by more than one good legal authority, and its ambiguity has been frequently admitted by the authorities of the Patent Office.

The defects of the Act regulating the grant of Letters Patent for designs may be classed under two general heads.

First, the duration of the patent and the amount of fees are the same for every ornamental article of manufacture, and this, it is believed, is the main imperfection of the law.

Secondly. The law affords a very doubtful protection against infringers on a patented design.

It is proposed to devote the present paper to the discussion of the defects arising from the uniformity in the charges for and the duration of the time of patents for designs, and to suggestions as to the most appropriate remedies, leaving the inquiries as to the insecurity of this class of patents for a future communication.

It is contended that for some ornamental articles, a patent of seven years' duration is too short, and for other articles too long.

In order to demonstrate this clearly, it will be necessary to discuss the subject in reference to two objects of a very different nature.

A design for an ornamental stove and a fabric of a new and ornamental pattern, will be appropriate selections for this purpose.

Under the present law, the patent will endure for seven years and the fee will be fifteen dollars in both cases.

Now, in getting up a new design for a stove, the manufacturer must, in the first place, be possessed of a well cultivated taste, a readiness for producing figures and ornaments of pleasing effect.

In the second place, he must be in possession of the requisite capital to meet the expenses.

In preparing a new design for a stove, it is necessary to make three or four sizes; the patterns for these cost one, two, or even three thousand dollars, according to the nature and extent of the ornamentation.

Is there any just reason why a new and original ornamental manufacture which requires such an outlay as this, which demands no small amount of taste and artistic skill, should be protected by a patent of only seven years' duration, while trifling mechanical devices, many of them of doubtful merit, requiring but little outlay, and the exercise of very limited inventive faculties, are protected by a patent of fourteen years' duration?

It may be argued that in one case the object relates to ornaments of no intrinsic value; whereas the object in the other case is for the accomplishment of some useful end, and that one object is, therefore, a more appropriate subject for legislative protection than the other.

This would be a very contracted view of the matter.

It is true that the production of an original ornamental design and the invention of a new machine, art, or composition of matter, require different mental capacities, but both are of equal value to a civilized community.

Ingenuity and art go hand in hand together; both have an equal demand on the fostering care of the government; as much, and perhaps more, time and labor are expended in the production of ornamental articles of manufacture which are fit subjects for patents for designs, as in the construction of appliances which can be protected by the ordinary class of patents. Why then should the laws make an invidious distinction between the inventor and the artist? Why should the laws say to the designer of jewelry, "You can have a seven years' patent for your design for a bracelet," and to the inventor, "You can

have a fourteen years' patent for your device which forms the fastening for the same bracelet."

It is an anomalous law which restricts the duration of a patent for a design to seven years, because it is a superfluous ornament, and protects the fastening, on the ground that it is a mechanical device for securing the same superfluous ornament. There can be no just reason why the designer should not be allowed to protect his production for the same length of time as the inventor.

The framers of the Act of 1842 had, doubtless, no intention of legislating to the injury of the artist; they may have been actuated by every desire to encourage art in deciding upon the reduced term for the duration of this class of patents and the reduced fees, thinking that it would meet the wishes and requirements of the designers themselves.

They appear, however, to have lost sight of the fact that the law must have an unequal bearing on the producers of different ornamental articles.

To return to the manufacture of ornamental stoves. It has been already remarked that the preparation of the patterns is a most costly matter; so great is the original outlay that every stove manufacturer would be glad to secure his design for double the length of time at present allowed, by the payment of additional fees.

It is well known that small manufacturers, men with neither taste, enterprise, nor capital, are in the habit of waiting for the expiration of a patent of a popular and elaborately carved stove, and after this expiration, of purchasing a stove, using the plates for patterns, and furnishing them to the public to the injury of the original producers.

If a stove will retain its popularity for twelve or fourteen years, who should reap the benefit of that popularity? Surely not the piratical foundryman, who not only makes a fac-simile of the stove, but actually uses the plates for patterns; but the original designer or producer, the man who can command the necessary artistic talent, the capital to turn that talent to account, and the business tact and enterprise which enable him to furnish the public with a highly ornamental article of utility, at a comparatively small cost.

An extended intercourse with stove manufacturers enables the writer to assert that quite as many patents would be obtained for designs for stoves at a charge of \$30 government fee, as are now procured at a cost of \$15; provided the duration of the patent could be increased in proportion.

If the duration of a patent for a design, however, be fixed at fourteen years and the fees at \$30, the law, while it worked to the advantage of stove manufacturers, would bear injuriously and unjustly on manufacturers of other ornamental articles.

The producer of the ornamental fabric would deem it a great hardship if he was compelled to pay \$30 for the protection of a design which would, most probably, be out of fashion in two or three years.

For a class of ornamental articles, the sale of which depends on the caprices of fashion, the duration of the patent as at present fixed by law (seven years) is too long, and the fees (\$15) too large.

It is, for the most part, the amount of fees demanded which has hitherto prevented manufacturers of an extensive class of ornamental goods from availing themselves of the protection which the present law affords.

Could the manufacturer of the ornamental fabrics obtain a patent for three years by paying a government fee of \$5, \$6, or \$7, there can be no doubt that numbers would avail themselves of an opportunity which they had hitherto neglected on the ground of economy.

It appears to the writer, that a very simple alteration of that part of the law which regulates the duration of time and the amount of fees for patents for designs would meet the exigencies of all manufacturers of ornamental articles.

The proposed alteration is, to establish three classes of patents, as follows :

First class, duration 14 years,	fee, \$30·00
Second “ “ 7 “	“ 15·00
Third “ “ 3½ “	“ 8·00

Then will arise the question—“who shall have the power of classifying the different ornamental articles which form the application of patents for designs?”

Not the authorities of the Patent Office, for this would be too arbitrary a measure, and one which would give rise to tedious and expensive correspondence between the applicants and the Office, and would be a certain source of much dissatisfaction.

Let the producers or applicants themselves select the class under which they desire the patent to be granted.

This is a power which may be safely entrusted into their hands.

The stove manufacturer will deem it to his interest to select the first class; the designer of a bust of some popular character, thinking that his production will retain its popularity for seven years, might select the second class.

The weaver, and wall-paper manufacturer, owing to the sudden changes in the fashion of their productions, would doubtless select a patent of the third class.

After the patent has been granted for the time selected by the applicant, he should be allowed no extension of this time; he should have no right to transfer his patent of the third class to that of the second or first class, by the payment of additional fees; should such a course be allowed, it would certainly give rise to much extra labor in the Patent Office, much confusion and constant litigation.

If an applicant has selected for his production a three years' patent, and subsequently discovers that the design patented will retain its popularity for a longer period than he expected, no fault could be found with the law, as it afforded him an opportunity of selecting a longer term; the blame rests with himself, and his own want of foresight.

The law, too, should compel the patentee to mark the article patented, not only with the date of the patent, but with the class under

which it has been issued, so that the public may be aware of its true nature and extent.

Should such modifications be established, it would be but an act of justice to introduce a provision by which the holders of unexpired patents for designs granted under the old law, might, by the payment of the extra fees, have their patents extended to fourteen years from the date of the original grant.

Whenever any sweeping modification in the law regulating the grant of Letters Patent is contemplated, there are three points to be considered in connexion with the proposed alterations.

First. How will it affect the public?

Secondly. What effect will it have on the manufacturer? and

Thirdly. Will it tend to increase or diminish the revenues of the Patent Office?

What effect will the alterations suggested above, have as regards the interests of the general public?

A manufacturer of ornamental articles, whose productions can be protected at a trifling cost, will have some inducement for calling into play superior skill, and a higher class of art, knowing that the monopoly will prove an ample re-payment for the outlay and exertion; the rival manufacturer will endeavor to outstrip his neighbor in producing articles of a superior and more attractive design.

Thus would the demand for labor be increased, the cultivation of the higher branches of art be stimulated, and the restless demands of the public for constant changes in all ornamental articles be satisfied.

It will be needless to remark, that the manufacturers and producers must be benefited by the above alterations; the benefit being especially felt by the manufacturers of stoves and other metal ornaments;—smaller manufacturers of this class of articles will, no doubt, continue to use as patterns the castings from the original design, even after the expiration of a patent of fourteen years.

But the alteration will, at least, allow the original designer to effect sales sufficient to repay him for the outlay before the piratical foundryman can deprive him of his monopoly.

What effect will the proposed alterations have on the revenues of the Patent Office?

As many, or perhaps, more patents for designs for stoves would be granted under fees of \$30, as have hitherto been issued under fees of \$15, so that the revenue arising from this class of ornamental articles would be at least doubled, without the demand of any extra labor on the part of the Patent Office clerks.

Then the alterations would open a channel for a further revenue arising from patents of the second and third class.

It is impossible to estimate the probable number of applications of the third class of patents, but it is very certain that as soon as the producers became aware of the facilities which the law afforded for protecting their productions at a trifling cost, the number of applications would be very large, and the revenue proportionately increased.

It is true that an extra number of clerks might be necessary to attend to this influx of patents of the third class, but the salaries of these additional clerks would be but a fraction of the revenue derived from the additional fees resulting from the alterations suggested above.

*On Phosphorescence, Fluorescence, &c.** By Prof. FARADAY.

The agent understood by the word "light," presents phenomena so varied in kind, and is excited to sensible action by such different causes, acting apparently by methods differing greatly in their physical nature, that it excites the hopes of the philosopher much in relation to the connexion which exists between all the physical forces, and the expectation that that connexion may be greatly developed by its means. This consideration, with the great advance in the experimental part of the subject which has recently been made by E. Becquerel, were the determining causes of the production of this subject before the Members of the Royal Institution on the present occasion. The well-known effect of light in radiating from a centre, and rendering bodies visible which are not so of themselves, as long as the emission of rays was continual—the general nature of the undulatory view, and the fact that the mathematical theory of these assumed undulations was the same with that of the undulation of sound, and of any undulations occurring in elastic bodies, were referred to as a starting position.—Limited to this effect of light it was observed that the illuminated body was luminous only whilst receiving the rays or undulations. But super-added occasionally to this effect is one known as *phosphorescence*, which is especially evident when the sun is employed as the source of light. Thus, if a calcined oyster-shell, a piece of white paper, or even the hand, be exposed to the sun's rays, and then instantly placed before the eyes in a perfectly dark room, they are seen to be visible *after* the light has ceased to fall on them. There is a further philosophical difference, which may be thus stated; if a piece of white oyster-shell be placed in the spectrum rays issuing from a prism, the parts will, as to illumination, appear red, or green, or blue, as they come under the red, green, or blue rays; whereas if the phosphorescent effect be observed, *i. e.* that effect remaining after the illuminating rays are gone, the light will either be white, or of a tint not depending upon the color of the ray producing it, but upon the nature of the substance itself, and the same for all the rays. The ray which comes to the eye in an ordinary case of visibility, may be considered as that which, emanating from the luminous body, has impinged upon the substance seen, and has been deflected into a new course, namely, towards the eye; it may be considered as the same ray, both before and after it has met with the visible body. But the light of phosphorescence cannot be so considered, inasmuch as *time* is introduced; for the body is visible for a time sensibly after it has been illuminated, which time in some cases rises up to minutes, and perhaps hours. This condition connects these phosphorescent bodies with those which phosphoresce by heat, as apatite and fluor-spar; for when these are made to glow intensely by a heat

* From the Lond. Athenæum, July, 1859.