

PRIZE ESSAY.

Essay on the Patent Laws.

WITH SUGGESTIONS OF ALTERATIONS AND ADDITIONS FOR THEIR IMPROVEMENT.

By Edmund Maher, Civil and Mechanical Engineer, Washington, D. C.

(Continued.)

The great expense attending this appeal, moreover, in the form of government, and counsel fees, and the other necessary outlays incurred, apart from his unwillingness to leave the decision of the question to a person whom he regards as unqualified for the task, from ignorance of the subject to which his invention belongs, deters the inventor, who is generally limited in means, having in most cases expended his all in the perfection of his invention, from availing himself of this alternative of the law, and causes him to abide by the decision of the Examiners expressed through the Commissioner, although conscious in his own mind that it is unjust.

By specifying in clear and exact terms in this section of the law, what shall form a patentable subject, and striking out all portions contained in the whole code giving an extreme discretionary power to the Examiner and Commissioner, to reject an application for a patent for an invention, possessing wholly or in part a novel combination, or arrangement of known parts, or a difference of form from any thing heretofore discovered, or in fact containing any material variation from a previous invention, because it is not in their opinion useful, or does not accomplish a beneficial object, over such previous invention; and otherwise restricting the powers of said Examiners, and Commissioner, many useful inventions that have been rejected, and consequently lost to the world, would have been patented, and the litigation and consequent trouble and expense, occasioned by appeals to the appellate tribunal, have been prevented. If upon a thorough examination of an alleged invention, by the proper tribunal, it is found to possess a patentable difference, an exclusive governmental privilege or right, to hold and enjoy such difference, of whatever character it consists, as his own property, with the same reservations as other property is held, should be extended to the inventor, without regard to its usefulness, except in cases of difference of material, or others of a like nature, where the effect or result produced is apparent to the general understanding of all—or is in opposition to well established principles or rules of the branch of the arts to which the alleged invention refers, or the alteration made is designed to evade an existing patent, on which it professes to be an improvement. In all cases, a discretionary power to reject a patent should be invested in the Commissioner and Examiners. Many of the greatest inventions ever produced have met upon their first introduction with either adverse opinions as to their practicability or utility, or lukewarm receptions from scientific men, tending to influence and prejudice the public generally against them, and have from such causes been delayed or forestalled in their development. In proof of this assertion, I might instance the cases of the Magnetic Telegraph, and the application of Steam to river and ocean navigation, in which delays of many years, occasioned by erroneous opinions formed in the public mind, through the agency of adverse opinions of persons professing to be versed in the mechanic arts and sciences, were caused to intervene between the time of their conception in the minds of the respective inventors, and their introduction to practical and general use. Scientific men, without practical experience in mechanics, are generally governed in their opinions by what they have read in books, and are only acquainted with the effects likely to be produced by a new invention, by rules bearing on the subject laid down in books, (which are in many cases nothing more nor less than fallacious opinions of book authors,) without understanding the nature of the several parts, and operating causes, from practical observation, and hence, if a problem is given them to solve, they invariably apply these rules to the exclusion of all others, to elucidate the result. The utility and practi-

cability of an invention, cannot be fully ascertained, until such invention is subjected to a suitable experimental test, and if the producer of any discovery or invention, of a patentable nature, believes it to be useful, and desires authority from the government to hold it as his own property, previously to subjecting it to practical operation, he should be granted this conferment or privilege, and in case of the alleged improvement proving otherwise, he alone will suffer from the result.

All inventions and improvements more or less, have their origin in new combinations and arrangements of known parts—differences in construction and form, or new modes of operation in the several branches of mechanics and the arts, and in order that inventors, who are generally practical mechanics, should have a fair and candid examination and decision of their claims to originality, in their alleged new combination, arrangement, or other patentable peculiarity or difference from any thing of a similar nature, the Board of Examiners should consist of persons of acknowledged ability, in the particular branch of the mechanical, or chemical arts, allotted to the department, to which they are respectively assigned by the Commissioner, and one half of their number at least, should be thorough bred mechanics who have served a term of apprenticeship, of at least three years with some mechanic, or mechanics, so as to become thoroughly and practically acquainted by their own labor and observation, with some department of the arts embraced in the branch to which they may be assigned. In fact, a proper numerical representation of intelligent mechanics in this department of the government, where their services could be brought to such good account, is not only demanded, by reason of their peculiar fitness for the trusts and duties reposed in the Examiners, but also as a return for the shameful neglect of the government towards this industrial class of citizens in the bestowal of its patronage, notwithstanding they contain within themselves the nation's wealth, and contribute in a greater degree than any other portion of the community to its increasing growth, in the various branches of commerce, agriculture, manufactures and science at home, and honor and fame abroad.

Mechanics being virtually excluded from all other departments of the government, the assignment to them of the offices in this mechanical department, which has its origin and present elevation from their exertions, is no more than a just and merited return for their labors, and would at once give an impetus to thought in the minds of those of our citizens who possess the natural attributes and genius essential to the production of original and useful ideas in mechanical and chemical philosophy, by the assurance that the results of their thoughts would be examined by men impressed with their importance by practical experience and observation, who sympathize with their efforts in elucidating and bringing to light the hidden treasures in the various elements of the mechanical professions in which they have themselves toiled, and are ready and willing to encourage and assist them to the extent of their powers, by the conferment of adequate security in the original conceptions of their brains. All the Examiners should, moreover, be possessed of a variety of scientific knowledge, co-extensive with the diversity of the mechanic arts, and other subjects, legitimately coming within the scope of Patent Laws, and should in fact, possess all the necessary attributes required to properly carry out the trusts reposed in them.

For the more perfect organization of the Board of Examiners, with a view to the correction of the evils arising from its present imperfect composition, and to more clearly define the powers and duties of said examining board, and what shall form proper subjects for patent, I propose the following amendments to the existing laws.

1st. Strike out all relating to appointment of Examiners in the code, and embody, in suitable legal phraseology in lieu thereof—

The Commissioner of Patents may, with the approval of the Secretary of State, appoint eight examining clerks, at an annual salary of \$1500, who shall be divided into four committees of two each, whose duty it shall be

to examine and pass judgment upon applications for patents, for improvements in the mechanic arts, in the particular branch to which their respective duties have been assigned; and those other Examiners, who shall be designated the chief board, at an annual salary of \$2500, whose duty it shall be to examine and pass judgment upon all rejected applications, and perform other duties hereinafter stated. And if the respective members of the first mentioned committees, concur in the prayer, wholly, or in part, of an applicant, whose case is before them for a patent, a patent shall forthwith issue, but if said committee shall reject said petition, or any part of the same, they shall state fully in writing the causes of objection, and reasons, and authorities, for so doing, and shall hand up such written objection, with the papers, drawings, and model, and all the information in their possession, bearing on the subject, to the chief board of examiners.

2d. The chief board shall consist of three examiners, whose principal duty it shall be to examine, and pass judgment upon all rejected applications. They shall first give notice to the applicant of the rejection of the application, and appoint a day, as early as will suit the applicant, and the members of the revising board, to hear the case, and the said applicant may appear by counsel, or in person, or in both, and be at liberty to overcome all objections, if in his power, and to produce all needful testimony to substantiate his rightful claim to a patent, and it shall be in the power of said revising or chief board of examiners to grant or reject the application, on second full hearing, and said decision shall be final. Said decision, to make it legal, shall receive the approval of a majority of the members of said board, and shall with all its views, be written out and recorded, together with the views advanced by the first, or inferior board of examiners, in a book kept for the purpose, which shall at all times be accessible to the public, either for examination, or for the purpose of transcribing copies for publication.

3d. No person shall be eligible to the first mentioned, or inferior board of examiners, who is not fully conversant with the Patent Laws, with common law, in its applicability to cases of litigation, in conflicting claims, to priority of invention, and other cases requiring such application, and who is not familiar with the advanced state of improvements in the various branches of the mechanical and chemical arts, coming within the scope of their respective duties. One half their number should, also, be thorough-bred mechanics, who have served an apprenticeship of at least three years with some mechanic, or mechanics, so as to become thoroughly and practically acquainted, by their own labor and observation, with the department of the mechanic arts, involved in the division or committee to which they may be assigned.

4th. No person shall be eligible to the board of chief examiners, who does not possess the same capabilities, as those required of the members of the first, or inferior board, and mentioned above, and one of their number should be a practical chemist, capable of subjecting to experimental test, or analysis, any composition of matter, or other alleged discovery of a chemical nature; and the remaining two members of said board, should be, like one half the members of the first mentioned board, thorough bred mechanics, who have likewise served an apprenticeship of at least three years, in some mechanical branch, and are otherwise, by experience, and acknowledged ability, and soundness of judgment, possessed of the necessary qualifications for the duties coming within the sphere of their action.

5. All applications for patents, that have been heretofore rejected, may be revived and revised, and again entered, with, or without alterations and additions, to modify and restrict their former claims, or to embrace improvements made, subsequent to the original presentation of their claims for adjudication, upon the payment of full fees, and may in all respects, be treated as if they had not been formerly made.

6th. All novel differences, in mechanical or chemical combinations, arrangements, constructions, or modes of operation, that, in the

opinion of the inventor, increases the usefulness or efficiency, or in any manner betters them for the object of their design, from the originals, shall be legitimate subjects of patent. Such changes may consist, in the material of which they are composed, or in the manner of construction or mode of application, or difference in combination, or form, forming in their perfection, a machine, compound, form or composition of matter, capable of producing different and more beneficial results, from such previous invention; provided, however, that the examiners be allowed a discretionary power, to patent or reject an application for a patent, for an alteration in a former machine, or composition of matter, or other alleged invention, where it is clear that such alteration was designed to evade an existing patent, or where the result designed to be accomplished by such invention, is in opposition to well established principles or rules of the arts, to which it appertains, or where the alteration, forming the subject of the claim, is a difference of material, in which latter case, the inventor or discoverer thereof, should fully state the beneficial objects, effected by the change, and the examiners should make such benefits a *sine qua non* to the issuing of a patent, for such difference of material.

7th. Any person obtaining a patent, for a new machine, or other invention or discovery, of a patentable nature, that shall be found to involve parts of other machines or inventions, already patented, shall be held liable to pay to the patentee of such invention or his representatives, such a proportionate patent value, as their relative importance has to his invention—such relative value to be determined by a jury to be appointed by the proper officer of the United States District Court, on application of such person, whose patent is used, and such decision shall determine, for said judicial district. Said jury may direct a gross sum to be paid, or shall direct a specific sum, for each machine, manufacture, instrument, compound, or composition of matter made—the costs, arising from this adjudication, to be paid by the parties, in proportion to their respective interests in the article, as determined by jury.

(To be Continued.)



THE BEST

Mechanical Paper

IN THE WORLD!

FOURTH YEAR OF THE

SCIENTIFIC AMERICAN!

416 Pages of most valuable information, illustrated with upwards of

500 MECHANICAL ENGRAVINGS!

The Scientific American differs entirely from the magazines and papers which flood the country, as it is a Weekly Journal of Art, Science and Mechanics, having for its object the advancement of the INTERESTS OF MECHANICS, MANUFACTURERS AND INVENTORS. Each number is illustrated with from five to TEN original ENGRAVINGS OF NEW MECHANICAL INVENTIONS, nearly all of the best inventions which are patented at Washington being illustrated in the Scientific American. It also contains a Weekly List of American Patents; notices of the progress of all Mechanical and Scientific Improvements; practical directions on the construction, management and use of all kinds of MACHINERY, TOOLS, &c. &c.

It is printed with clear type on beautiful paper, and being adapted to binding, the subscriber is possessed, at the end of the year, of a large volume of 416 pages, illustrated with upwards of 500 mechanical engravings.

TERMS: Single subscription, \$2 a year in advance; \$1 for six months. Those who wish to subscribe have only to enclose the amount in a letter, directed to

MUNN & CO., Publishers of the Scientific American, 125 Fulton street, New York.

All Letters must be Post Paid.

INDUCEMENTS FOR CLUBBING.

5 copies for 6 months	\$4 00
5 " " 12 " "	\$8 00
10 " " 6 " "	\$7 50
10 " " 12 " "	\$15 00
20 " " 6 " "	\$15 00
20 " " 12 " "	\$30 00

Southern and Western Money taken at par for subscriptions. Post Office Stamps taken at their full value.

A SPLENDID PRESENT!

To any person who will send us Three Subscribers, we will present a copy of the PATENT LAWS OF THE UNITED STATES, together with all the information relative to PATENT OFFICE BUSINESS, including full directions for taking out Patents, method of making the Specifications, Claims, Drawings, Models, buying, selling, and transferring Patent Rights, &c. This is a present of GREAT VALUE, yet may be obtained for nothing, by the reader of this prospectus, if he will take the trouble to get Three Subscribers to the Scientific American. It will be an easy matter to obtain two names besides his own.

MUNN & CO., Scientific American Office, N. Y.