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Remarks on the Report of the Commissioner of Patents.

The Report of Judge Mason, which was published in the two previous numbers of the SCIENTIFIC AMERICAN, deserves the serious consideration, not only of every inventor, but every citizen in our country. It is an eloquent, elaborate, and original document. The rapid increase in patent business during the past ten years, is graphically described by stern and incontrovertible rows of figures. In 1845, 1,246 applications for patents were made, 502 were granted; $51,076·14 were received, and $39,395·65 were expended. In 1855, 4,435 applications were made, 2,024 granted, $176,380·57 received, and $179,540·33 expended. There has therefore been a quadruple increase of inventions in ten years. During the past year the expenses of the P. O. have exceeded the income by $3,159·76. These have been incurred for payment of the increased force of examiners and clerks in the Office, for the purpose of making examinations, and executing the business promptly Applicants for patents have not been obliged to wait in suspense for six, ten, and twelve months before their applications were acted upon, as was the case formerly; their applications were acted upon within a few weeks, generally, after they were presented. This has given universal satisfaction; and as the Office cannot go on and do its business correctly and promptly, with an expenditure constantly exceeding its income, our inventors will respond heartily to any reasonable increase in patent fees, for the continued proper and prompt execution of business by the Office. The Commissioner suggests the increasing of the revenue, and charging applicants fees according to the work performed; that is to have a *sliding scale* of prices for examinations. This would be the most just method, but also the most difficult to carry out, unless the scale of fees was rated by the number of words in a specification, or the pages of parchment it occupied—which is according to the English plan of drawing up such documents. The more simple plan for increasing the revenue would be the increase of the patent fee to $40—ten dollars more than the present fee. According to the number of patents granted last year, such an increase of the fee would have exceeded the expenditures by $17,081.

In discussing the evils arising from the want of system and harmony, in deciding upon applications for patents by the different examiners, Judge Mason seems to feel that injustice may have been done to many inventors by rejecting their applications without just and proper reasons. He therefore suggests the creation of a new officer, that of an Examiner in-Chief, whose duty it shall be to review the decisions of all the examiners; or else to have three such officers to form a court, to decide upon difficult and disputed cases. This suggestion appears to be a good one, but Judge Mason is of opinion that it would be very difficult to get persons capable of filling such an office. He says truly, "there is no situation under government for which it would be more difficult to find a suitable incumbent."

The Commissioner also discusses the returning to the old plan of issuing patents without an examination—the office of examiner being only advisory. We cannot entertain the idea of a return to this system upon any consideration. It would open a door for the granting of two or more patents for the very same invention, and the owners of these would so inflict and disgust the community with their claims, criminations, and recriminations, that patent property would very soon become almost valueless.

We cannot agree with Judge Mason in the views which he presents relating to what may be called "the property of inventions." He places an invention on the same basis as the property of real estate, a piece of goods, or crop of grain produced by labor. The rights of inventors to their inventions, he considers, should be perpetual in them and their heirs, as a *natural* right, and the only argument presented in favor of the law limiting patents to a certain number of years, is *expediency*. We could not advocate the abrogation of any *natural* right upon the principle of expediency.—The logical mistake in the Report, as it appears to us, consists in viewing the granting of patents for discoveries, as the conferring of natural rights upon inventors. A patent confers no natural right upon any man. If the law of patents were abolished to-morrow, no man would be deprived of a *natural* right thereby. Every man could invent and use his own machine without let or hindrance, and the common law of the land would protect him in this use. The property of inventions as recognised and provided for by the law of patents, is simply *legal*. J. W. Scott in his opinion in the patent suit of Goodyear versus Day, dated at New Brunswick, N. J., Dec. 13, 1852, clearly explains the nature of patent property. He says "a patent right is strictly legal; it has not one of the characters of *rights equitable*; it is not the right of possession. It is the right of exclusion for a definite period of time, and it is the grant of exclusion by sovereignty and by force of positive statute.' Again he says, "some assert that by the law of Nature, the creature of a man's brain is as much his individual property as the work of his hands, and that the wild Indian who builds his wigwam in the forest, and the bird that suspends her nest from the branch, have each acquired, and do acquire, a title in nature of which it is unjust to deprive them." . . . "Is it worth our time or breath to ask the question, does the bird in the one case, or the savage in the other, acquire any right in nature to prevent others from imitating the nest or the wigwam? The right is exclusively and strictly legal. It is the creature of positive law; its duration is but for a short time, or it could not be endured by a free people."

Were patent property, based on *natural* right, the Woodworth monopoly ought to be continued forever. If it were a *natural* right, it would be wrong in us to oppose its extension—we could not do it conscientiously. Patent property is peculiar in its nature. In a certain sense it is *ideal*, and is totally different in essence from all other kinds of property, excepting that of the copyright in books, which is also legal, and which it resembles in most respects. No class of men have done more to benefit mankind, and advance civilization, than inventors; and patent laws have been enacted as a politic positive means of affording them some remuneration for their gifts to mankind. To fall back on the principles of *natural right*, in relation to inventions, would involve the abolition of our patent laws,—the only positive means yet provided by modern civilized nations for rewarding their inventors.

It affords us great pleasure to witness the hearty and noble sentiments uttered by Judge Mason in advocating a reduction of patent fees for foreigners. Every new and useful improvement introduced into our country—let it come from where it may—is a positive benefit to our people; it is an additional weight placed on that Archimedean lever which is elevating our race. It is a wise and honorable policy to invest the authors of them with legal rights at as low an expense as possible, knowing that in a few years their inventions will come into free and unfettered use, by the public.

We cannot better conclude this brief review of Judge Mason's able Report, than by quoting his own language, in reference to this question. "Fully confident that the interests of the country and the usefulness of this Office would be alike promoted by the course herein recommended, the candid consideration of Congress is again invited to the subject."

Important Patent Decision in the United States Supreme Court.

Israel Kinsman and Calvin L. Goddard *vs.* Stephen R. Parkhurst, appellee.—This was an appeal from a decree entered against Kinsman and Goddard in the United States Circuit Court for the Southern District of New York on the 3d of May, 1851, for $23,220·28, as profits made by them on the manufacture and sale of the Parkhurst Burring Machine, patented by him May 1st, 1845, and which is, in substance, a cylinder composed of narrow thin rings, made of sheet steel, having hooked teeth cut in their peripheries and strung on a light inclined cylinder, with rings of some packing, such as pasteboard between them, the rings of packing being a little less in diameter than the metal rings, so as to leave grooves about 1-16 of an inch deep on the surface of the cylinder between the metallic rings, thus forming a cylinder both stiff and light, to run in connection with carding machines to clean the wool preparatory to its entering the cards. The wool, as the cylinder revolves, being fed to, and caught by the teeth, which form the surface of the cylinder, and drawn into the grooves, leaving the burrs and other foreign substances on the surface of the cylinder to be knocked off by a guard or beater revolving in connection with the cylinder.

Among the defences set up, it was alleged that F. A. Calvert and Charles Sargeant were prior inventors; that Parkhurst obtained the invention from them; that the invention was not useful until made so by Kinsman; and that Kinsman and Goddard did not infringe the patent because they made the spaces or gullets between the teeth small instead of large.

George Gifford, Esq., of New York, who has been counsel for Mr. Parkhurst from the commencement, and in obtaining the decree in the Court below, argued the cause for him, and in favor of the decree in this Court. Charles M. Keller, Esq., who was not in the case in the Court below, argued the cause for Kinsman and Goddard against the decree.

The Supreme Court, on the 26th of Feb., decided the appeal in favor of Parkhurst, affirming the decree, with costs, and ordered interest, thereby overruling the defences and confirming the patent. Mr. Justice Curtis delivered the opinion of the Court.

Gold and its Uses.—No. 1.

Gold is one of the oldest of metals, and has been known and used by all nations—savage and civilized—from the dawn of history. It exists native in nearly every part of the world, as a metal, or associated with other metals It is of a brilliant appearance; a beautiful yellow color; is malleable and ductile, and is transparent in thin leaves. It is fusible at a full red heat; crystallizes partially when slowly cooled, and is not acted upon like zinc, copper, tin, or iron, by ordinary agents. That is, these metals are readily oxydized by some acids, moist gases, and exposure to a moist atmosphere, whereas gold is not readily acted upon by acids, and it stands exposure, untarnished, in the atmosphere for centuries. It has always been the most valuable of metals, owing to its scarcity, its beauty, its unoxydizable nature, and the facility with which it can be worked into any form. It comes down to us as a matter of history, that the ancients were acquainted with a method of reducing gold to fluid, and retaining it for any length of time in that state. We believe this may be set down as fabulous.

GEOLOGY OF GOLD—The present age is most remarkable for great discoveries of gold deposits in possessions belonging to nations whose inhabitants speak the English language. California and Australia have become watchwords for attracting the emigrant from the banks of the Thames, the Danube, the Seine, the St. Lawrence, the Merrimac, the Hudson, and the Mississippi; and the Chinaman from the shores of the Yellow Sea.

No one can tell why it is that gold is found in one part of the world and not in another. If it be true that this globe once existed as a molten mass, gold should be found as a component part, equally distributed among all similar rocks in every part of the world. Sir Roderick Murchison believes gold to be a peculiar production of the Silurian era, and that it is, as it were, "a silurian fossil." The rocks, however, of California and Australia, from which such large quantities of gold have been recently obtained by digging and washing, belong to the primary series, and not to the fossiliferous or sedimentary beds. The primary laminated rocks of our globe are always found more or less on edge, and their vertical cleavage planes are not due to the direction of chains of mountains, for they pass over mountains, but they appear to be due to currents of magnetism, or electricity, which seem to exert a crystallizing power.

Gold is found in scales, and in nuggets or pebbles, of every size. Its appearance is that of having once been combined with the primary slate rocks, and then separated by superficial actions of air and moisture. By the aid of surface moisture, and the absorbing action of the roots of large trees growing on the edges of gold bearing rocks, many of them have been gradually disentegrated and decomposed, leaving the gold behind, precipitated and aggregated into masses. Some of the largest gold nuggets of Australia had been found under such circumstances. It is a common opinion that gold is always found in greatest quantities in *drift*; in the deep still corners, and eddies of rivers, but it has not thus been found in California. On the contrary, it has been found most abundantly in the *ripples*, as they are called, those parts of streams where the edges of the primary gold bearing rocks have been most exposed to the action of moisture and the atmosphere.

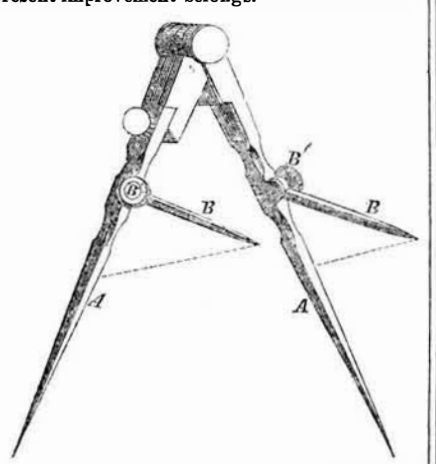
GOLD RESOURCES—The entire amount of gold received at the U. S. Mint and its branches, in 1855, was $55,151,902; of this vast sum, $49,351,789 were domestic produce—nearly all from California. Since 1848 no less than $313,234,000 have been obtained from the California mines. Since 1851, the mines of Australia have produced $200,000,000. The gold produce of Russia is about $6,000,000 per annum, a mere trifle in comparison with that of the United States and England.

The principal use of gold is that of making it into coins, as a medium of exchange to represent and be an equivalent for labor, merchandise, permanent and floating property.

Recent American Patents.

Marble Sawing Machine.—By Schrag and Von Kammerhueber, of Washington, D. C.—This is a very ingenious invention intended for the simultaneous sawing of two sides of a block of marble, the cuts being made at angles or in parallel lines, as desired. Most of the patents heretofore granted for machines of this description have only related to one or two special points, without covering a complete machine. The present patent covers several important points, and inaugurates a new method of operating the guiding and adjusting saws so that the machine, as a whole, may be called original. Without drawings it would be useless to attempt a description. In a future number we shall probably illustrate the invention by engravings.

New Drawing Instrument.—By Henry M. Parkhurst, of Perth Amboy, N. J.—In linear drawings of various kinds it is desirable for the artist to possess some convenient instrument whereby the scale of representation may be accurately changed, either by reduction or enlargement. Such instruments are known as Proportional Dividers, and to this class the present improvement belongs.



Proportional Dividers are generally large, costly, and somewhat clumsy. But the invention here illustrated consists of a simple and inexpensive attachment to the common dividers. A A are the long legs to which the short legs, B, are attached, as shown. This constitutes the chief feature of the improvement. The short legs are fastened by the adjusting screws, B'.

Referring to the cut it will be seen that the spread of the short legs is less than the long legs. In reducing a drawing the dimensions are measured with the long legs, and the short legs will indicate the reduced proportion; if a drawing is to be enlarged, the dimensions are