

Scientific American.

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The Patent Office Report.

The conclusion of the Report of the Commissioner of Patents, which we publish this week, together with that which was published in our last number, affords much matter for reflection to all those who are interested in our patent system, and the number of such is not small. The first striking feature in the Report is the excess of the expenditure over the income. The amount received was \$9,471,11 more than in 1852, and the expenditures have been greater by \$36,952,92. Allowing \$11,923,35 to have been paid for furniture, the increase of current expenses is still \$25,029,57 more than for 1852. The additional force made to the examining corps, &c., greatly increased the expenses; but for all this, it is stated in the Report that the deficit is not caused by any extraordinary increase of expenses for the transaction of the real business of the Patent Office, but for agricultural purposes. The amount paid out last year for such purposes amounted to more than \$7,000. This was expended for collecting agricultural statistics, and seeds of various kinds, purchased and received from abroad. We believe that an agricultural bureau has done some good, and may be productive of much more, although some members of Congress have declared that the seeds distributed by it were always liable not to grow. But we protest in the name of all our inventors against the appropriation of money from the patent fund for such purposes. Such appropriations by Congress are neither just nor honorable. The patent fund should never be applied for any other objects than those connected with invention and discovery. Appropriations for agricultural purposes should be made from the National Treasury, as the object is national, and has nothing to do with new inventions. There is not a single farmer in our country who will say that it is anything but unjust to tax our inventors yearly for collecting agricultural statistics. It would be equally as just to appropriate \$7,000 per annum of the Post Office Fund for the Patent Fund, as to appropriate the latter for agricultural purposes. In making these remarks we do not wish to be understood as speaking against appropriations for agricultural purposes; we only speak against the injustice of such appropriations from the inventors fund. The working expenses for this year (1854) will not be so large in proportion as they were for last year, as the Commissioner says the present force of the office will be able to issue 1,200 patents. We hope Congress will take prompt measures for increasing the room required for the real business of the Office, and remove the collections of the Exploring Expedition, (which have no business there) from the large hall, and allow it to be appropriated for the legitimate purpose of its erection. Our inventor's rights have been too long disregarded, with respect to a proper exhibition of their models. This clearly illustrates an important fact, namely, that however much we may, as a people, be distinguished for inventive genius; however high a place our nation justly holds for being distinguished in arts, sciences, and inventions, the members whom we send to represent our interests at Washington, with few exceptions, are neither by habits, tastes, nor profession, men of science, nor lovers of the arts—agricultural or mechanical. This should not be; our farmers and mechanics should form at least seven-tenths of the members of Congress.

It will be observed that the Commissioner has recommended that when application is made for a patent, that only the amount not allowed by law to be withdrawn, shall be deposited at first, and that the total amount need only be sent when the patent is passed for issue. This is a good idea, it will save all the trouble of withdrawals, and all the uncertainty about the disposal of such moneys.

A reduction of the patent fee for foreigners is also recommended; such a reduction we have always advocated, and we hope our patent laws will soon be so amended. We think that

a fee of \$100 for all foreigners would be very satisfactory as the first step of reform.

There two are other questions of great importance suggested. One relating to a reform in the Patent Laws for trying appeals, before patents are issued, and the other for mitigating the great amount of litigation which seems to attend every valuable patent. We believe it would result in great dissatisfaction with the office if any more power were concentrated in it than there is at present. We do not think there can be much danger in carrying a model from the Patent Office to the court where the appeal is to be tried in Washington, but all appeals should be facilitated, in order to have as little delay as possible. The present Commissioner of Patents is perfectly capable of judging of any question of fact and law, but if the ultimate appeal was to be made to the one who appointed the Examiner from whose decision the appeal is taken, some might be with propriety suspicious of an undue regard to the views of the latter.

The great expense of litigation attending very profitable patents, is a serious evil, but we confess we cannot see any remedy for this, excepting in the U. S. Courts, ordering every trial to take place promptly. It would not be constitutional to pass a law granting an absolute and unquestionable title to any patent. Owing to the nature of our Federal Government, every citizen can demand a trial by a jury of his peers, and that in the place where he is sued for trespass or infringement. No citizen should be deprived of his property without due process of law, and to make a patent absolute, would involve such power. This Report of the Commissioner certainly contains many excellent suggestions for reform in our patent code; we can heartily subscribe to the most of them, as all our inventors no doubt can. We hope they will receive due and just attention from Congress.

Good Common Roads.

There are four kinds of common roads known and used in our country, namely, mere trodden paths, paved, McAdamized, and plank roads. Good common roads have been held up as an evidence of a country's civilization, but be this criterion of civilization a correct one or not, one thing we know, they are exceedingly pleasing, comfortable, and beneficial to the people who have the good fortune to possess them. Throughout the rural districts, in almost every part of our country, the people suffer great inconvenience from bad roads—especially in the spring when the frost is leaving the ground, and during long periods of wet weather. Of this all are well aware, but even very near our cities, as we have had opportunities of witnessing this year already, the common roads, are also often rendered almost impassable. It would be a great benefit to our people, especially our farmers, if all our rural districts were interlaced and connected with our cities, by firm and substantial common roads, such as would not be converted into rivers of mud, as too many of them are, by a few heavy showers of rain. The Romans made excellent paved roads, "in the brave days of old," and in modern times McAdam proved himself to be one of the greatest benefactors of our race by first constructing roads of small pieces of broken granite. (If we knew who the inventor of plank roads was, we should like to pay him a like tribute of respect.) It is difficult in many parts of our country to obtain stones, either for paving or making McAdamized roads, but where the right kind can be easily procured, the latter kind of road is to be preferred. We consider plank roads one of the most beneficial inventions, for common travel, ever introduced into our country. The materials to construct them can be obtained in almost every part of our extended domains, and we cannot but speak strongly of their usefulness, utility, and economy, and endeavor to impress upon the minds of our farmers, and those who dwell in the rural districts, the great benefits that would accrue to them by the construction of such roads between farm and farm, village and town, country and city. We admit that no inventions have tended to advance civilization and benefit man more than those which have been applied to facilitate public travel, such as steam navigation and rail-

roads, and it is encouraging to know that our country, which is naturally so well adapted for railroads, has now more lines in operation and under contract, than all the other nations of the world put together. But such roads cannot supply all our travelling wants; common roads always have been and ever will be a necessity. The parties most interested in good common roads, are those who own carriages and horses—our farmers chiefly. For public travel and the transport of heavy goods, railroads are the grand desideratum. But when a farmer wishes to draw a load of potatoes, or wheat, or butter, a short distance to market, he cannot afford to pay for a steam carriage to draw the same on a common road; he therefore employs the means which are at his command; he harnesses his team and drives it jocund, whistling as he goes, if the road is good. There are some who keep continually bumbling about the use of steam carriages on common and plank roads, but these are not required on such roads—such roads are required for totally different objects. There are some who are loud in advocating impracticable schemes, and exterminating insurmountable difficulties on paper. They can vault over mountains on crutches, and march over seas in paper boots, and yet, somehow or other, they never do anything of note, although they are always about to do something. If steam carriages could be economically employed on common roads, those who have advocated them have had abundant time and opportunities for proving themselves to be something more than mere projectors.

We have said this much about the necessity of having good common roads, because so much interest is absorbed in our great and grand railroad projects, that the minor—but none the less necessary on that account—common roads are liable to be overlooked. The commencement of the favorable season for out door work on common roads, we consider is a good time for urging these remarks upon the attention of those who are most interested; we therefore hope that while joint stock companies are making our country the great emporium of railroad enterprise, that our farmers and those who reside in the rural districts will set about to exert themselves, and make it equally famous for good common roads.

Indestructible Water Pipe.

FIG. 1. FIG. 2.

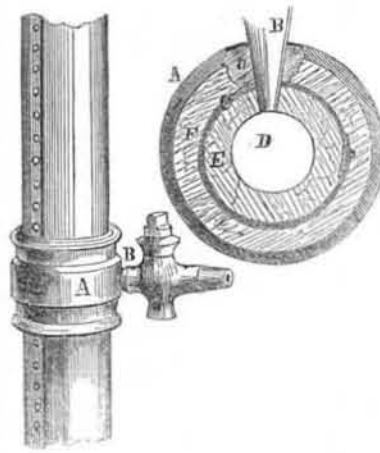


Figure 1 is a perspective, and figure 2 a transverse section through the tap and collar of J. Ball's patent water and gas pipe. This pipe is composed of an interior tube, E, made of prepared hydraulic cement, covered with a pipe of sheet iron, C, such as stove pipe, and which is riveted along its length, as shown in figure 1.

A is a metal collar placed around the part where two sections of pipe are united, and is filled between with cement, F. The pipe for the reception of the cock, B, is tapped through the middle of the collar, A at c; D is the interior of the pipe. When laid in the earth these pipes (to protect the sheet iron from rusting) are covered on the outside with a coat of hydraulic cement. The collar, A, for the purpose of receiving a tap and rendering the pipe strong at the joint, is an excellent device. This pipe is presented as a substitute for cast iron and other metal pipes for the supply of water for cities, or for any other purpose of conveying water, &c., where cast iron or lead or other pipes are used. The interior being composed

of cement, the water will never act upon it as upon a metal pipe to oxydize the same. It is therefore indestructible, so far as oxydization is concerned, and the water that flows through it, is not rendered impure by its decay. It is said to be stronger than the common cast iron water pipes in general use. In many places this pipe has been in use for some years, especially at Saratoga Springs, where 25,000 feet of it has been laid, and the Water Commissioners consider it preferable to iron pipe—being cheaper and more durable. We believe it to be a very durable and excellent kind of pipe, and suitable for some situations—such as marshy localities—where metal pipes cannot safely be used. For more information respecting this kind of pipe, we would refer to the advertisement on another page, of the Patent Water and Gas Pipe Co., of which Mr. Joseph Battin—the inventor of the celebrated Coal Breaker—is President.

Premium Bank Bills.

Although we have no personal interest whatever in the matter advertised in the "Scientific American," a few weeks ago, offering a premium for a perfect mode of preventing the alteration of bank bills, yet we dare say we have received more communications on the subject than the parties who offered the reward. Upon the question as presented in that advertisement we cannot decide, because we have nothing to do with it whatever; we therefore will not express any opinion upon this or that plan presented to accomplish the object, so as to meet the views of the Bankers.

We have a letter now before us from S. Sully, of Ida Mills, Troy, N. Y., who proposes to form bank notes by weaving any design in silk, linen, or cotton, in black on a white ground. These notes could all be made on the Bank premises, and several could be woven in one and afterwards separated. Geo. A. Clark, of Fall River; Mass., proposes to manufacture bank bills in nearly the same manner. E. F. French, of Franklin, Vt., proposes to perforate the letters which express the denomination of the bill. M. Gerhard, of Delaware, Ohio, proposes the same plan exactly. N. Young, of Lancaster, Ohio, in a second letter proposes the same plan, only that it shall be the name of the bank which shall be perforated, and that a blank space should be left in the center of each bill for this purpose. Geo. Harvey, of Richmond, Va., suggests that nearly the whole face of the bill be occupied with the figures expressing its value, so that the whole would have to be altered.

An Apology.

We owe an apology to the "Polytechnic Journal,"—and it affords us pleasure to make it—in regard to the statement made in our last issue to the effect that the Commissioner's Report, as published in that journal, was obtained surreptitiously. Its appearance in advance of its regular publication by Congress led us to institute inquiries as to how it was procured, consequently we addressed a note upon the subject to the Commissioner of Patents; he replied that he had no knowledge of the matter. Since the date of his first letter, he has again written us, stating that copies were obtained from the records of the Patent Office, upon the same terms as other documents are furnished; this of course is satisfactory, and assures us that our cotemporary procured the Report in a fair and honorable manner.

It seems that it was entered upon the records of the Office, therefore copies could not be refused to any one who felt willing to pay for them. This is a new and excellent plan, and if carried out in future, the readers of the "Scientific American" may expect the reports to be published in our columns as soon as they are sent to Congress.

Judge Mason, the Commissioner of Patents, is now absent from the Patent Office, on a short visit to his friends in Iowa. He is expected to return in about four weeks.

A number of ships which have recently arrived at this port, report great quantities of ice in the Atlantic. The Pacific was detained for some hours among icebergs in her recent voyage.