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Commissioner of Patents' Report.

Part first of this Report, on the Arts and Manufactures, is at last published in a very handsome volume; by it we learn that 1,076 patents, including 30 re-issues, 5 additional improvements and 49 designs, were granted: five hundred and ninety-five caveats were filed. There were nineteen hundred and fifty-five applications, consequently eight hundred and seventy-nine rejections—nearly as many as the patents granted. The receipts of the Patent Office amounted to $80,725 78; the expenditures, &c., to $77,716 44. There are now in the Treasury $169,505 17. The amount added to the standing fund is small in comparison with previous years; good reasons are given for the increase of expenditure, by the number of rejections, and consequent withdrawal of the "two-thirds patent fee." One part of the Report states that there were 1,409 rejections last year; this, with 1,076 patents issued would make 2,485 applications—there seems to be a little discrepancy in this, perhaps a typographical error.

The Commissioner speaks forcibly respecting the wrongs suffered by inventors and patentees, in being plundered of their just rights by patent pirates. He proposes that rejected applicants should not be allowed the return fee of $30, but forfeit $20. The reasons for this, he states to be the actual expense of examination, "which, on an average, is much more than the sum of $10, which deficiency must be made up by others." Thus," he says, "the quasi inventor who has given nothing to the arts fails to pay his proportion to the Office, while the real inventor is required to make up the deficiency. Itnot unfrequently happens that the Office is speculated upon by inventors and agents with regard to examinations. They find it (as some have admitted) cheaper to give to the Office ten dollars for the investigation of a case, than to purchase the necessary books and examine for themselves. By this means an amount of labor is involved, costing the Office, in almost every case, more than the amount received." The Report also recommends that only $10 of the caveat fee be allowed on the Patent fee—thus making the applicant pay $10 for the filing of the caveat—in other words, his privilege. It is also recommended that patentees, for additional improvements to their patent, be charged $30, instead of $15. The raising of the fee of $15 to $30 for re-issues, is also recommended. The Report speaks strongly against granting patents to any but original inventors as recommended by some, and as is the practice in Britain; but he makes an exception to secret processes of foreign manufacture, not new in the country where they are employed, and not the property of any individual.

Four amendments are thus recommended to be made in the Patent Laws. All these relate to the fees of the Patent Office, every one of which is for an increase, viz., an increase of $10 for rejection fees, $10 for caveat fees, $15 for improvements, and the same for re-issues. It is no doubt true that the Patent Office is oftentimes subjected to a tedious correspondence, which amounts to more than the Patent fee, or the $10 of a rejected application; but the fault as often, if not oftener, belongs to the Patent Office, not the applicants for patents. We expected some sympathy expressed for inventors and the way many of them have been badgered by the Patent Office, but there is no word of condolence pervading it from beginning to end. We know one inventor who was put to the expense of $3,000 by a wrong decision of the Patent Office. It is the privilege of the Patent Office, because sheltered by law, that it only suffers a little extra trouble in cases of controversy, but the applicants are always subjected to great expense. We do not think that there would be many objections to raising the fees as recommended by the Commissioner, if applicants were satisfied that examinations were made candidly and thoroughly, correct decisions given, and full and proper references submitted to rejected applicants. A reform in this respect is certainly much needed, and it requires no new law, but the enforcement of measures under the control of the Commissioner himself.

The Report is a very excellent one, as a whole, and will form the subject of more articles in future numbers.

A Hint to Subscribers.

If each of our subscribers who receive their numbers in single wrappers would exert their influence to procure one or more subscribers, they would all receive their papers every week in a much better condition than they now do. Where there is but one paper directed to a post office, singly, it is sent in a single wrapper and folded smaller than when two or more are sent to the same place, consequently it is much wrinkled, and sometimes it possibly goes astray in the post office. All our packages of papers are made up in large stout wrappers, with a slip around each paper, neatly folded. A package seldom goes astray; and each paper is neatly preserved for filing away. The Scientific American is worth preserving and binding at the end of each volume. Subscribers who preserve their numbers in good condition, have a good volume—one worth twice the amount of subscription price.

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The Russ Pavement.

The constant smoothing of the Russ pavement by the wear of vehicles has rendered it difficult for horses to keep their feet upon it. Many horses have fallen on the pavement opposite the Park, and attention has been directed to the search of a remedy for the evil.

[The above is from an exchange. The remedy is to lay no more of such large block pavements, but to use small six inch wide blocks for new pavements, and to employ men at an enormous expense to roughen the present pavement by pick hammers. We pointed out the evils of the large blocks, long ago; the the public are beginning to find out the truthfulness of what we said about the said pavement, wrongfully termed *Russ*. The evils of the said pavement are not yet fully developed either; wait till the blocks get perfectly smooth, and then it will scarcely be possible for horses to travel over them.

War Against Machinery.

The journeymen Stone Cutters Association of the cities of New York, Brooklyn, Jersey and Williamsburg have passed resolutions that no member will work on any stone of the same quarry that supplies steam manufactories in New York for cutting or sawing *Brown Stone*. One resolution is a request that the stone cutters of Philadelphia and Boston will send a strong remonstrance to the quarrymen, and to aid and abet their "trice holy cause," as they term it. The journeymen stone cutters of this Association number 900, and they have pledged themselves individually not to work any stone that is got in the same quarry that supplies machines for cutting stone.

We exceedingly regret that any body of men is to be found, in this day, to pass such unwise resolutions. That they have a perfect right to do so, no one will question, but the experience of the past might have taught them better. If machinery can do their work, cheaper and as well, their occupation is gone, it makes no matter how strong they are in numbers, or how many resolutions they may pass. The first spinning jennies and power looms were broken by mobs, but neither the hand spinners nor weavers could arrest the progress of machine labor. We look upon every improvement in machinery in the light of a *general* benefit.

Invention in the Sugar Manufacture.

The "Sun" gives a description of a new invention for graining sugar, which has been purchased by Messrs. Howland & Woolsey, (the latter a well-known sugar manufacturer,) and is thus described:

"The sugar is taken in its black, dirty state, just as it comes from the planters' boilers, thrown into the machine, and in a twinkling the refuse stuff is separated from the mass, leaving the clean, white, sparkling sugar alone by itself, ready for family use. In *two minutes* the refining is completed, which, by the usual mode, required three weeks of time, the employment of many hands and the consumption of much fuel. In this new process no heat is required.

The invention is one of remarkable ingenuity and certainty in its operations. The sugar to be refined is mixed with molasses, until it is of a semi-fluid consistency. The mass is then placed within a revolving sieve, the wires of which are so fine as to retain the sugar but permitting the exit of the liquid parts. By means of steam power the tremendous velocity of two thousand revolutions per minute is given to the sieve, and so great is the centrifugal force thus applied to the mixture within, that the molasses and impurities instantly fly off, leaving the sugar behind, purified, white, and, what seems singular, perfectly dry. The article thus produced is what is generally known as refined brown sugar. It resembles powdered loaf sugar, and needs but one more operation to convert it into the loaf. The entire machine occupies but little more space than a good sized wash tub."

The first of these machines ever produced on a practical scale in this country, has recently been constructed at the large machine works of our old friend Mr. G. B. Hartson, Nos. 58 and 60 Vesey street; it is of a capacity to refine 200 lbs. of sugar in two minutes.

The idea never would have struck us, that, by giving sugar syrup a rapid centrifugal motion, the moisture alone would be thrown off, and the grain crystalized and refined. We do not yet see how it can be purified by this operation. A machine for drying and depurating sugar by steam and centrifugal motion, is illustrated and described in No. 41 Vol. 5, Sci. American. Centrifugal motion and its virtues were first displayed in a revolving machine for drying cloth, (one was patented by Mr. Nelson Chaffee, of Conn., two years ago,) it has been applied to moulding metal pipe, and now it is applied to the manufacture of sugar.

Belts of Machinery.

MR. EDITOR:—Some of your numerous readers in our city have had some discussion as to whether the thickness of a belt can make any difference in the speed of a machine:—some of us contend that, of necessity, it does make a difference; while others, some of whom are quite celebrated for mathematical acumen, stoutly contend that the thickness of the belt can have no effect on the speed whatever. Will you give your views on this point? Suppose, for example, a machine driven with a belt ½ of an inch in thickness, the driving pulley 20 inches in diameter, and the driver 10 inches diameter; would the speed be the same if the belt was eight times as thick? If the thickness does make a difference, how should we measure, in order to calculate? on the outside, or centre of the belt, or where? E.B.M

Manchester, N. H., Oct. 19, 1850.

[There is only one way to settle the question, and that is, to that the difference between a thick and thin belt by a "dynometer" applied to the driven shaft. The question "thick and thin belt," is not correct, but say belts of 1-10, 1-8, 1-6, 1-4, inches thick. A belt over a certain thickness will be too stiff and slip, and one too thin will stretch and slip; the grand question is, "what is the right thickness?" and even then the difference in the quality of leather of the same thickness will prevent any person from arriving at mathematical unswerving conclusions. We cannot further enlighten our correspondent. The machinist of good perceptive faculties, has what is called "a knack" in adapting everything under his care to perform its duty in the best manner; this "knack" like the skill of the painter, cannot be taught by any rule.—[ED.

Labor-saving Soap.

The following is a receipt for making a barrel of labor-saving soap; it was purchased of a pedlar by Mr. D. Edwards, Little Genesee, N. Y., one of our correspondents. He sends it to us for the benefit of the public, to relieve them of such taxes:—

Take 14 pounds bar soap, or 5 gallons good common soap, 3 pounds sal soda, 1 pound rosin, pounded fine, 8 ounces salt—boil it in five gallons soft water, empty it into a barrel, fill it with cold soft water, add 1 pint turpentine, stir it well, when cold it is fit for use.

To make hard soap all the articles mentioned, with the exception of the water, are doubled. As a soft soap receipt, the above is very good, but it is not "labor-saving," by any means. The articles employed, have long been known to every practical chemist, as good solvents of grease. We have seen some labor-saving soap receipts, far inferior to the one above, for it is a good one—among the best we have seen.—[ED.

Another Discovery in Daguerreotyping.

M. Niepce St. Victor, of Paris, has discovered that if a daguerreotype plate be immersed in a bath composed of the chloride of sodium and the sulphate of copper, and to allow it to remain therein for a short time, then wash in distilled water and dry over a spirit lamp, it is capable of receiving the impression of an engraving laid upon it and exposed to the sun for half an hour. It is afterwards washed with ammonica water, or a solution of cyanide of potassium or hypo-sulphite of soda; these washings remove all the chloride of silver. The plate is next washed in a large quantity of water, and allowed to dry, and the impression is fixed by the means of chloride of gold in the usual way. Impressions may be taken by means of these plates, if placed in a camera obscura and exposed to the light for one or two hours. This process is not adapted for portraits. M. N. St. Victor has also discovered that iodide of silver furnishes impressions by means of ammonia similar to the chloride, without the intervention of the mercurial vapors.

Our Cotemporaries.

If any of the papers in which our prospectus for Volume 6 of the Scientific American appeared, do not receive our paper regularly, as promised, they will oblige the publishers by making a complaint to that effect. Over 600 papers throughout the country have inserted our prospectus, and we have their names entered upon our books, but there may have occurred some omissions, and if so, we should consider it a favor to be advised of it, when due reparation will be made, and back numbers furnished to make their sets complete.

Notice.--Erratum--Patent Laws.

On page 35, No. 5, in our comments on the English Patent Laws, the sentence (16th line) reads, "when an application is made for a patent, notice is sent to all those who have *patents*:" it should read, "all those who have filed *caveats*." The difference is a very essential one—the error was not one of a misunderstanding of the law, but an oversight.

A strong effort will be made next session of Congress to get the Bill passed for a reform of the Patent Laws.