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Commissioner of Patents' Report.

Having briefly reviewed the Reports of three Chief Examiners, the fourth is that of Chief Examiner L. D. Gale: it is the best and most elaborate and interesting. He does not seem to have grudged his labors, nor does he complain of hard work, like Examiners Fitzgerald and Renwick. His field of examination embraces five classes—1st, Agriculture; 2nd, Chemistry; 3rd, Leather; 4th, Household Furniture; 5th, Wearing apparel. He examined 599 cases; passed 245, and rejected 354—[the report is not correct, here]—a great number, but not quite so many in proportion, as the two Examiners named.

The most important and valuable inventions presented in 1849, he states, are to be found in the class of chemistry, especially three of them: one was for an improvement in sugar manufacture [Melsen's process,] the other, Dr. Hare's process for converting animal matters into agricultural fertilizers, and the next was for the use of resin oil in making printers' ink. It is stated that neither of these inventions were patented, but there was a probability that they would be, after a prolonged correspondence was terminated, and Mr. Gale thought it was right to notice them. Bee-hives, washing machines, plows, churns, and bedstead fastenings, the Report states, have arrived at that point where the limits for improvement are very narrow. We understand that the Patent Office has decided that atmospheric churns are not patentable—that air has nothing to do with the churning to produce butter. It is no doubt true that butter can be produced by agitation in an air-tight bottle—we have seen this done frequently, with sweet milk, to produce a fine salve for burns. Six patents were granted for small improvements on Cultivators, and twenty for Seed Planters. Twelve Harvesting Machines were patented—one was for a rake to move the grain to the back of the platform, to deposit it in bunches on the ground. One patent was granted for a machine to harvest cotton and abolish hand-picking. The Report speaks doubtfully of its application to picking, as all the bolls do not ripen at the same time on the plant. If such a machine were practicable, it would be, perhaps, the most important invention of the day. Nine patents were granted for Hulling Machines, and nine for Grain Separators. Five patents were granted for Bee-hives: we shall publish the whole of the remarks about bees and their hives, next week,—new ideas are thrown out, which must be interesting to our apiarists. Three patents were granted for Distilling Apparatus; one was for elevating the head of the still into a cylinder, and having perforated pan-shaped vessels therein, containing charcoal, which purifies the spirits at one operation. Especial mention is made of the process for coating iron with copper—the invention described by us two weeks ago, a sample of which we have in our office. A process for making Water-gas was patented, and Prof. Gale states that an English patent was granted to Michael Donovan, (Prof. Donovan, of Dublin, we suppose,) 40 years ago, for mingling spirits of turpentine, at the burner, with gases derived from water,—the remarks about water-gas are judicious and conclusive, presenting a great amount of new information. He states that when gases are too highly charged with carbon, iron heated to redness will take up the excess of carbon, and produce a fine illuminating gas,—he does not think much of the water-gas processes. The process for making artificial manure, as a good substitute for guano, consists in submitting animal matters to the action of mineral acids—one part of sulphuric acid to five of animal substance. Coppers will also answer: as a deodorizer, the coppers has long been known.

A patent granted for an improvement in tanning, consists in unhairing the hides by a composition of lime, potash, and salt, and the use of acids to open the pores of the skin, then at once submitting the same to the tanning

process. Particular mention is made of the Apple-paring Machine, illustrated on page 84, Vol. 5, Sci. Am.

It is not possible to dwell particularly on all the inventions spoken of in this Report—we have noticed a few. We like the Report, it is able, useful, and does honor to the Patent Office.

The Report of the Machinist, Mr. A. B. Stoughton, informs us that there are 15,117 models in the Patent Office, and only 7,529 for which patents were granted. He says that no adequate provision is at present made for the proper exhibition of models pertaining to rejected applications. He says that many are rejected as machines invented in foreign countries, and only described in books not accessible to inventors. If he could have added that "many were rejected because they were supposed to be like some described in foreign books," he would have struck the nail on the head at once. The number of models, he supposes, cost \$500,000, and he justly complains that no adequate room nor provision is made for their exhibition, so as to benefit inventors. We subscribe to this sentiment, in part; we say that the Patent Laws should be so altered, that rejected applicants might have their models returned. Here we are informed that the Patent Office has locked up in its Black Room, more than \$250,000 of the property of our inventors—property for which no adequate return has ever been made. There is one wretched mode of action in the Patent Office, viz., to reject applications and give reference to some rejected application; this is a nonsensical mode of doing business. There are eight rooms devoted to models, and they are still accumulating with great rapidity. It is suggested that, for designs on stove plates, a drawing, and no model, be sent to secure a patent: this is a good suggestion. The Report of Mr. Stoughton is short, but very good for all that; the suggestions made by him evince good judgment and good sense.

Patent Laws of all Nations.

Many of the inventors, in Great Britain, threaten not to exhibit at the World's Fair, and to do all they can to prevent others from exhibiting, unless the Patent Laws are reformed by Parliament at the Winter Session.

It is not possible for a poor inventor to secure a patent in England. The patent laws of that country were made for the rich, and afford ample means for robbing the poor. To secure a patent in England, every step is attended with expense—money, not paid into the national exchequer, but absorbed by the great officers of state and their underlings. The Attorney General has a fee of four guineas for making a report upon the inventor's declaration—a subject about which he is as innocent as the hippopotamus is of astronomy.

The Home-office pockets seven guineas and a half for what is called a warrant. This warrant is sent to the Queen, and sent back with additional expenses; for even royalty, it seems, has some nice pickings out of the inventor's pocket. When the instrument comes back, the Attorney General has another slice of £5. It is again sent to the Queen, and returned with £7 13s. 6d. additional cost. The Signet-office, the Lord Keeper of the Privy Seal, the Lord Chancellor, the Lord Chancellor's Deputy, the Purse-bearer, the Clerk of the Hanaper, the Deputy Clerk of the Hanaper, the Deputy Sealer, and the "Chaff Wax,"—all have their pickings out of the inventor's money and brains. The "Chaff Wax!"—What an office to exist in the middle of the nineteenth century, and how characteristically the title describes the whole process! The fees, including the stamp duty, amount to the sum of £96, or about \$500.

The system of paying for public services by fees is one of the remnants which ought not to have survived the times of Castlereagh and Sidmouth. The public officers of England are handsomely, even extravagantly paid, without the tortuous system of extracting hard-earned money from the struggling sons of toil.

The cost of obtaining a patent, not including fees for agency—if unopposed—is, for England, about \$550; for Scotland, \$400 more; and, for Ireland, \$675 more—altogether about \$1,625—a most scandalous charge; and the curiosity of all this is, the great price of an Irish patent: it is not worth so much as a Scotch one, yet it is dearer than an English one. The effect of this is shown by 23 patents having been secured for Scotland, last September, and only 5 for Ireland. The British inventors want their Patent Laws altered so as to resemble those of France.

In France patents are granted to the people of all nations, for ten or fifteen years: the tax is 500 francs (about \$100) for five years, 500f. more for the next five years, and 500f. more for the fifteen years. These sums are paid in instalments of 100f. per year. The French law is superior to the American Patent Law, for the Government acts as public prosecutor, and holds the inventor harmless of expense. In our country the Patent Office often acts like a prosecutor of the inventor, and our law courts are more troublesome and expensive to inventors than those of any other nation.

In Belgium patents are granted for five or ten years, and the government tax may remain unpaid for two years after the grant. In Holland the patent fees are about \$750 for fifteen years. In Prussia and Russia the government exercises a discretionary power in granting or refusing patents. In Russia the patent is granted for ten years, and costs about \$250: in Prussia for eight years, almost nothing—not half as much as in the United States. The other countries of Europe are scarcely worth while mentioning.

We hope that the inventors of England will be able to get their Patent Laws reformed with all despatch, by Parliament: we also hope that the Great Seal will be modified from the size of a turnip to a decent sized crown-piece. To show how the English Patent Laws work, at the meeting referred to, Mr. Ward, an inventor, moved a resolution declaratory of the defects of the existing patent laws, and of the delays and expenses which were engendered by the legal tribunals. He chiefly dwelt on the latter point, observing that if a patent cost only 5s., the expense of maintaining it through the present legal processes would of itself be ruinous. Patentees were constantly exposed to infringements, and the first step in defence cost the poor patentee 200l. (Hear.) He (Mr. Ward) had experienced these difficulties; he had had to proceed in Chancery, and had been occupied five months in examining witnesses in the court, owing to the system pursued of daily hours and half-hours. He had had to go through all this though the party proceeded against made no defence. ("Shame!") The case occupied five, yes, and nine months, and he had to pay 1,400l. as costs, though he gained his cause triumphantly, and though there was not a shadow of pretence for the opposition—the case being at last decided in an hour. (Hear, hear.) He believed his opponent, who was an enormously rich man, would never have given in but that his health had suffered from the vexation caused by the suit. (Hear, hear.) At present, a patent simply gave a right to go to law; and hence a poor patentee was frequently ruined.

This is a black enough picture in the working of the law, but let no one suppose that the evil is one belonging exclusively to the other side of the water, the same evil exists here, our patents are granted upon the same principle, and our U. S. Courts are guided in their action and decision by the English law.

**A Permanent U. S. District Court in New York.**  
Our editorial page is mostly taken up, this week, with matters relating to patents. We believe that every class of our readers—those interested in patents, and those who have no interest in them—will find something of interest in them. Every man, we don't care who he is, should have some acquaintance with Patent Laws. We now touch upon another question—it is one for the consideration of our Government; we allude to that which is indicated in the caption of this article, viz., a permanent open U. S. District Court in New York City. The law business now before this Court—the number of cases which have been dragging their way, snail-like, through all the

tedious openings and closings of the terms, is a standard monument of its inadequate provisions to fulfil the claims of justice—the end and aim of all courts of law. There is as much business to be done in New York as would keep both Judge Nelson and Judge Judson sitting all the time; in fact, we believe that their time might all be nearly occupied in the trials of patent cases alone. The present term has been taken up with the trial of only two cases, and while there is a great number still on the docket, Judge Nelson had to set off and away. We know a witness who has come and gone back to his home, a distance of 190 miles, and his case was never brought up, and at last he had to go away altogether. It is wrong to have cases hanging on in suspense. Our courts are celebrated for "masterly inactivity." It is time that some reform was instituted, and one means to that end would be an open U. S. District Court in this city, for there are not adequate court provisions made for this city, in comparison with other Districts, when we take the number of inhabitants into account—for patents, we mean.

Improvement in the Manufacture of Sugar.

Three weeks ago we noticed an improvement in the manufacture of sugar, by the centrifugal machinery constructed by Mr. Hartson, No. 58 Vesey street, this city. Since that time we have heard some doubt thrown upon the subject—unbelief manifested. Well, we have now samples of the sugar before it undergoes the mechanical process, and after it has been submitted to it, the one is like red sand, the other like pure white. We saw the brown sugar mixed with molasses, and watched the whole process until it was completed. Mr. Hartson is now making two of these machines, every week, for the South. We believe it to be one of the greatest inventions of the age. The process of the sugar manufacture has been greatly simplified within the past few years, and it has yet to be made more simple still. We shall be enabled to present engravings of this machine as soon as patents are secured for the improvements of Mr. Hartson at home and abroad. The improvements relate to the mechanical arrangement and construction of the machinery, and are truly valuable and important.

California News.

The last news from California announced the breaking out of the cholera there. It had only appeared in a mild form, and the season was not favorable to its propagation. The gold was still abundant, but the Indians, in some parts, were getting troublesome, and a band of robbers were committing great depredations in the valley of the Sacramento. The wet diggings have been unfortunately subject to great freshets, and the dry diggings alone offered inducements.

A Present.

We have received a present of a draught of a Card Making Machine, made by Mr. J. E. Earle, a young man of Leicester, Mass., who presents it to us as among his first efforts at Mechanical Drawing: it is well done. Mr. E. is a young man, enthusiastic to be a first rate mechanical draughtsman; he no doubt will attain to this distinction, as he possesses the very qualities which will make him so distinguished.

Patents and Engravings.

Four out of the number of patents in our list of Patent Claims, this week, were secured through this Office. It is a matter of no small satisfaction to feel that the improvements secured are not trifling, but really useful. Along with publishing the claims, which are advertisements, it may be said, for the benefit of inventors, and of great moment to others interested in inventions—patentees would find it for their interest to get engravings of their inventions published in the Scientific American.

The Morse line of telegraph have laid their wires on the bed of the Hudson river a little above Fort Lee, which gives a free communication with the South and West.

Two hundred glaziers are employed on the Exhibition Building in Hyde Park. Each man can glaze sixty-four feet daily.