

**Why there are not More American Exhibitors in London.**

In our London correspondence of last week, some of the causes why there are not more exhibitors from the United States, were presented in a clear and candid manner. The letter appeared in the London Times and has cured that paper, in a great measure, of its sarcasm in respect to the American department. It is well known that a central committee was appointed at Washington to devise measures and assist in carrying out the intentions of what was called "central authority," of the United States, but as stated, no funds were provided by Congress, so the committee had to waddle away as best they could. But did they do all they possibly might in the premises? We trow not. They printed a few circulars and had a few meetings, and a respectable bill in all likelihood will be presented to the next Congress, to pay them for bamboozling the whole affair. We received one circular from the executive committee of the central authority, and published it on page 74, this volume, Scientific American, and we should have been glad to have presented all the information we possibly could on the subject to our readers, but we were much in the dark. There was as much energy displayed by these authorities as there is in "prime pork" headed up in a barrel.

Our correspondent says "there was a want of information throughout the length and breadth of the States in reference to the character of the exhibition."

No goods or articles could be received at the exhibition without the certificate of this central authority, and everything was to be examined by their agents, yet what did we, or our countrymen generally, know of the arrangements made, or the persons selected to carry them out? Nothing; all the news we got about them (except in one instance,) was second hand. We do not suppose that any of the State Committees expended as much as would provide each member with a Jonny Cake, in order to spread correct information and stir up the pride and spirit of our people on the subject. The one in this State, at least was eminent for its inefficiency. It would have cost these committees but little to have printed short and pithy circulars, which we would gladly have published, without charging them anything, and then when it is considered that there is not a factory, foundry or machine shop in the United States but receives one or more copies of our paper every week, the effect—the good effect of such publications might have been anticipated. But these committees did not know enough to know this, and our people have now cause to regret it, and wish it had been otherwise.

**New Scotch Steamer—Some Peculiarities.**

We learn by the Glasgow Daily Mail that a new steamer, for the Glasgow and Dublin Steam Packet Co., has recently been launched on the Clyde, and has some peculiarities about her which are well worthy the attention of our engineers. Let us point them out. She is the first of her class there, having a spacious saloon deck.

The engines are of the kind known as side-levers, the levers being each formed of two plates of malleable iron connected together with studs and eyes. Considerable weight is saved by this substitution of wrought for cast iron, and the possibility of fracture obviated. The cylinders are 60 inches diameter, with five feet stroke. The paddles have feathering floats, actuated by an eccentric on the inner side of a panel. The mechanism for producing this feathering motion is very strong, and yet simple. The floats are larger than usual, being 8 feet 9, by 3 feet 6; but they are fewer in number, as there are only 14 in a wheel of 23 feet in diameter.

This is the "Morgan Paddle Wheel." She is free from all tremor and runs at the rate of 17 knots per hour at 25 strokes per minute.

The two boilers are tubular, and fired from both ends, each pair of furnaces communicating at the centre with an upright box, from which the tubes proceed at a small angle towards the end of the boiler, where the vapor is received into a chamber, and conveyed at once

to the chimney. The tubes are 6½ feet long, and 3½ inches diameter. Air is admitted through the ash-pit to the fire bridge, where it meets the smoke and converts it into vapor. The result is, that no smoke is visible at the funnel head, and a serious nuisance to passengers, as well as a heavy loss to the owners in unconsumed carbon, is obviated.

The principal dimensions of the Herald are,  
 Length over all . . . . . 200 feet.  
 Beam . . . . . 25 "  
 Depth of hold . . . . . 15 "  
 Measured tonnage . . . . . 650 tons

Deck flush, fore and aft, with a top-gallant fore-castle. The steering wheel is on the platform amidships.

Her hull was built by Reid, of Port Glasgow, her engines by Messrs. Thompson, Engineers, Glasgow. The steering wheel on the platform is taken from the American river boats.

**To Millard, Filmore, the President of the United States.**

Sir—Permit me to advocate the cause of the inventors, who, from their ignorance of the management of the patent office, and their isolated situation, are unable, if not incompetent to represent their interest.

I am conscious that I am not a member of Congress, and although it may appear presumptuous for a private citizen even to suggest any particular course to the Chief Magistrate, yet I crave your indulgence as a boon to those whom I wish to serve.

And what I crave is, that the four vacancies in the examining corps in the patent office may be filled with men who are practical machinists or manufacturers. For it is extremely hard upon many meritorious inventors who have spent years in perfecting an invention, and have stinted themselves and their families to save the means to enable them to make an application for a patent, and then to have an examiner who knows nothing of machinery or manufactures practically, reject the application because he does not understand it sufficiently to comprehend its merits. Imagine for a moment the dismay that follows those rejections; when the inventor receives notice that his application is rejected, his fondest hopes are blasted, and his spirit crushed, perhaps forever; for many of the inventors have neither intelligence nor money sufficient to enable them to prosecute the application further, having exhausted their entire capital in perfecting their invention and applying for a patent.

The inventor of the machine for turning lasts, gun-stocks, busts, &c., became so poor before he completed his invention, that his brother refused to trust him with medicine for his sick wife of the value of ten cents.

The reason why practical machinists or manufacturers should be appointed, instead of professional men, is this, because the questions submitted to them are questions of fact, not of law; and the question is simply this,—“is the invention identical with or alike something that existed before?” or, “did it require some invention to make it?” For the law says, sec. 7: “The Commissioner shall make, or cause to be made, an examination of the alleged new invention or discovery; and if, on such examination, it shall not appear to the Commissioner that the same had been invented or discovered by any other person in this country, prior to the alleged invention or discovery thereof by the applicant, or that it had been patented or described in any printed publication, in this or any foreign country; if the Commissioner shall deem it to be sufficiently useful and important, it shall be his duty to issue a patent therefor.” And the question for the Examiners to report upon is this,—“could a person with a knowledge of what existed before, have made the invention for which a patent is asked, without further invention?” or, “would it require some thought, some exercise of the mind, some arrangement of new ideas; in fact, some invention?” For an invention is defined in law to be a thought or idea first conceived in the mind by the inventor, then embodied in a material form or representation, so as to be apparent to others; and so as to be comprehended

and understood by those skilled in the art to which it appertains.

It appears to be the Examiner's duty to decide whether the invention in question, “has been patented or described in any printed publication in this or any foreign country,” consequently he must first understand the invention before he can so decide; and he must not only understand the invention presented to be patented, but the one already patented or described, which is supposed to be similar or identical; and it often requires the most skillful machinist, with the nicest discrimination, to determine where, and at what precise point, the identity ceases and the novelty begins; and it is under such circumstances that the skill of the Examiner is put to the severest test. If he is deficient in skill so as to be unable to solve the problem, and errs in the case, he gives more to the inventor than his invention entitles him to receive, and robs the public; or, he refuses the inventor what belongs to him, and robs him of his just and dearest rights, and gives them to the public.

The 7th section also says, “but whenever, on such examination, it shall appear to the Commissioner that the applicant was not the original and first inventor or discoverer thereof, or that any part of that which is claimed as new had before been invented, or discovered, or patented, or described in any printed publication in this or any foreign country, as aforesaid, or that the description is defective and insufficient, he shall notify the applicant thereof,” &c. Now, I believe, it will be readily admitted that the most competent person to decide whether the description is sufficient, or otherwise, is a practical machinist, for the 6th section says, “before any inventor shall receive a patent for any such new invention or discovery, he shall deliver a written description of his invention or discovery, and of the manner and process of making, constructing, using, and compounding the same, in such full, clear, and exact terms, avoiding unnecessary prolixity, as to enable any person skilled in the art or science to which it appertains, or with which it is most nearly connected, to make, construct, compound, and use the same, and in case of any machine, he shall fully explain the principle and the several modes in which he has contemplated the application of that principle or character by which it may be distinguished from other inventions; and shall particularly specify and point out the part, improvement, or combination which he claims as his own invention or discovery.” The object of this description is to enable the public to make and use the invention after the patent expires; and who is so competent to decide upon the sufficiency of the description as the practical machinist, who would be called upon to make the machine or thing from the description, after the patent had expired?

Let us borrow a little light upon this subject from the practice of the courts in patent cases, and see who it is that is relied upon to decide these questions. The question of identity of the machine involved in the controversy, and the question of the sufficiency of the specification, and what kind of testimony is required. It is not the testimony of professional men, neither is it decided by the lawyers, for they are only advocates; nor by the court, however learned in the law; nor by the jury, until the testimony of the most skillful practical machinists that can be obtained, is had upon the questions in issue; and it is their testimony that decides the case.

Now if a court, however learned in the law, aided by lawyers, however profound they may be, are not able to decide these questions, or present them to an intelligent jury, so that they can decide them understandingly, without the aid and testimony of practical machinists or persons skilled in the art, to explain them; how much less can a lawyer alone (for he has no authority to procure testimony) if he is appointed Examiner, however learned he may be in the law, be able to decide the question of identity of two complex machines, or inventions, without a competent knowledge of machinery, and its operation when in use? And if, after an invention has been known and used, and infringed, courts and juries, with the explanations of the lawyers, cannot de-

cide these questions without the aid of practical machinists or persons skilled in the art, how much more important it is that the Examiner, who has these questions to decide in the first instance, before the invention is communicated to the public, (and that without the aid of testimony,) should be a practical machinist instead of a lawyer. Besides, it would not take a machinist one-tenth of the time to acquire a knowledge of the laws relating to granting patents, that it would take a lawyer to acquire any considerable knowledge of machinery and manufactures, even if it were possible for him to do so, and attend to the duties of his office.

Many valuable inventions have been lost to the inventors, because they were incompetent to describe them so that a theoretical examiner could comprehend them sufficiently to report that the description was insufficient; for the law requires the Commissioner, if he deems the description insufficient, to notify the applicant thereof, giving him briefly such information, &c. Now the kind of information which I consider the Commissioner bound to give the applicant, under the law, is, to inform him what he has omitted to claim or describe, for which a patent could be granted, if there is anything patentable in his alleged invention. If the Commissioner fails to do this the inventor is not the only sufferer, but the public lose the benefit that would be derived by the introduction and use of the invention. Because there are few inventions that would compensate the inventor, or any other person, for the trouble and expense of introducing them into use, if they did not possess the exclusive right to do so.

Numerous inventors have made themselves poor by spending their time and money in making and perfecting inventions, which, from some defect in the specification, they failed to sustain a patent in a suit at law, and are now struggling in poverty, while those who have used the invention, are rioting in luxury upon the profits derived from the skill and ingenuity of the poor inventor.

From the best information that has been obtained, it does not appear that there is any person employed in the Patent Office, in any capacity, who has any practical knowledge of building or operating machinery, or its application to manufacturing purposes. Your most obedient servant,

**THE INVENTORS' TRUE ADVOCATE.**

**Improved Machine for Making Barrel Heads.**  
 Mr. E. G. Brown, of Montville, Waldo Co., Maine has taken measures to secure a patent for certain new and useful improvements in machines for making the heads and ends of barrels and casks, and for cutting other similar shaped parts or pieces. The inventor employs a concave circular saw, carrying cutters on its inner face which enable the saw to cut the inner and outer bevel on the barrel heads. The pieces of wood are fed to cutters by an inclined table attached to a slide which has a forward motion, the heads being held in a clamp and turned by hand, so as to present continually its edge to the cutting surfaces. This machine operates with great rapidity.

**The Coming Cotton Crop.**

A correspondent of the Savannah Republican (Ga.) predicts that the cotton crop of this year will be below the average of last year. The reason he adduces—and a good one, we think—is, that “time once lost can never be regained;” and the crops this year are about two weeks behind those of last year at this period. “Cotton,” he says, “never before at this season gave promise of so poor a yield.” He believes, that the crop of 1851 will prove as great a failure as has been known for several years past.

**To Make Water Cold for Summer.**

Put the water into a porous earthen ware vessel, and cover it with a thick cotton cloth, or a piece of blanket which must be kept constantly wet. Expose the vessel to the sun, and in a short time the rapid evaporation will carry off the heat from the water inside, reducing it nearly to the freezing point. In Arabia and India this is the plan practised by the natives, who know nothing about the luxuries of ice to cool their waters.