

## RECENT AMERICAN PATENTS.

The following are some of the most important improvements for which Letters Patent were issued from the United States Patent Office last week; the claims may be found in the official list:—

**Improved Skate.**—This invention relates to a new and improved fastening for skates to the soles of boots or shoes, without the use of straps, and it consists, principally, in dividing the foot-rest or support of the skate, in the direction of its length, into two parts or sections, which sections have, at suitable points of their length and upon their outer edges, raised studs or clamps, and are so arranged upon the supports therefor of the skate runner or blade, as to be susceptible of a lateral movement with regard to, and toward, each other, so that when the foot has been placed thereon, they can be brought through their raised studs or clamps, upon and against the sides of the boot or shoe sole, with any desired degree of pressure, and there held, thus firmly and tightly clamping or binding the boot or shoe sole and heel, between the same; the foot being released by simply unloosening and withdrawing the two portions of the foot-rest from each other. John Lovatt, of No. 124 Summit street, Essex, N. J., is the inventor.

**Steam Boiler.**—This invention relates to a steam generator, the fire-box of which is surrounded by a water jacket extending all round. Suspended from the crown sheet of the fire-box is a cylinder which communicates with the water space of the boiler. The outside diameter of this cylinder is much smaller than the inside diameter of the fire-box, and the annular space thus formed in the fire-box is occupied by a series of pipes emanating from the lower part of said cylinder and terminating in its upper part, in such a manner that a very large heating surface is obtained, and the water is caused to circulate freely throughout the boiler. From the crown sheet of the fire-box rise a series of tubes through the upper part of the water space and through the steam space of the boiler, and by these means the heating surface of the boiler is still further increased, and the steam in the boiler is dried and partially superheated. James Connery, of Wilmington, Del., is the inventor.

**Improved Lock.**—This invention consists in combining with the sliding bolt and lock plate a small detachable case containing the mechanism for locking and unlocking, from which a false bolt projects, the head of which is provided with holes to drop over studs or pins in the inner end of the shank of the sliding bolt, in such a manner that not more than two holes are required in the lock plate to receive pins or rivets for the purpose of securing to the same, the case containing the mechanism for locking and unlocking, and the same case can be used for lock-plates of different size, nothing being necessary for different sized locks but to change the length of the shank of the sliding bolt. Rudolph Vollschwitz, No. 158 Elizabeth street, New York, is the inventor.

**Coating Electrotypes Plates.**—In the method of making or casting stereotype plates, known as the clay process, a mold or matrix is first made by spreading a putty or composition of clay and other ingredients upon a metallic plate, as iron, and taking an impression of the type by pressing the mold upon it. In order to obtain a stereotype plate from this mold, the plate is heated till the mold is dry. A wire, bent to form three sides of a parallelogram, is then laid around the mold on the plate, another plate is placed on the top of the wire, and all are held firmly together by clamps or other device, and, being set on edge, the space between the plates, made by the wire, is filled with melted metal which, when properly cooled, forms the stereotype plates. The object of this invention is, first, to hold the plates firmly together in contact with the wire or other equivalent device; and, second, to facilitate the turning of the plates on edge at any desired inclination for casting; and, third, to allow the free application of water to the plates and flow of the same from them in the process of cooling. The invention consists of a frame having an open bed furnished with narrow or toothed bearings, whereby the desired end is attained. W. F. Draper, of Andover, Mass., is the inventor.

**Illuminating Public Clocks.**—This invention relates to a new method of illuminating public clocks by which, among others, the following advantages

are obtained—first, the time may be seen at a distance far greater than by the present mode, consequently their efficiency will be largely increased; second, their original cost will be much reduced, no expensive glass dials being needed; third, a great saving effected in the consumption of gas; and, 4th, an entire freedom from the danger of explosion—the gas being consumed only on the outside of the building. The invention consists in placing lights upon the hands or pointers of a clock instead of behind the dials, as heretofore, and which is accomplished by making the spindles and sockets, that carry the hands, in part hollow, so that a stream of gas may be conveyed through said spindles and sockets to the center, and also to near the extremity of each hand, and terminating in small burners or jets. These jets are protected by means of a lantern or covering glazed with talc, horn, glass, or other suitable material, the center one being stained to show a colored light, so that it may be distinguished from the others, and the respective portions of the hand or pointer lights readily seen so as to indicate the time. In order to facilitate the cleaning or repairing of said lamps or jets, and also to provide for the freedom or inshake necessary in clock machinery, some portion of the tubes that convey the gas are constructed of india rubber or other flexible material. Thos. I. Bailey, Nashville, Tenn., is the inventor.

**Coloring and Polishing Wood.**—These improvements are embraced in two separate Letters Patent, one of which was issued upon the 28th day of November last, and relate to a novel mode of applying colors or coloring materials to wood, whereby at the same time an extremely beautiful and fine polished as well as colored surface is imparted to it, greatly resembling in appearance the ordinary china and porcelain wares. The invention is particularly appropriate, not only in the manufacture of table and fancy ornaments of all kinds, but also in the decoration of furniture and the trimming of apartments or rooms of dwelling houses and other buildings. Edward Knabeschuch, of No. 121 Greene street, New York is the inventor.

**Graduating Lubricator for Steam Engines.**—The object of this invention is to produce a lubricator with few parts, constructed and arranged in a simple manner, and yet retaining the character of graduating the flow of oil so that the operator shall be able to control it, and also containing a feed opening independent of and separate from the valve stem. Among other advantages in operating the lubricator which are conferred by this invention is that the steam in the reservoir when it is opened is discharged in such a manner that the hand of the operator cannot be scalded; that the oil can be readily poured in; that the air can freely escape; that the reservoir cannot be filled without always leaving an air space at its top into which the steam will rush when the valve is raised and quickly equalize the pressure and allow the oil to discharge at the bottom, and that there are no cocks or valves opening externally at the bottom of the reservoir to leak or waste the oil, nor any air passages or snifting cock at top. Furthermore the apparatus can be made at a small cost. John Broughton, of No. 41 Center street, New York, is the inventor.

## FOREIGN CORRESPONDENCE.

[For the Scientific American.]

The view which you take in your recent article regarding fairs and exhibitions as an advertising medium for manufacturers, is, in general, a correct one, but there are some considerations which I think you have overlooked. A universal exhibition, like the one to be held in 1867, serves a double purpose—comparison of the progress made in manufacturing by different nations in the same branches of industry, and a reliable test of their distinctive superiority. The profit that can be realized by the exhibitors is, in my opinion, but a secondary consideration compared with the satisfaction felt by one and all, as individuals or as a nation, at the recognition of our inventive and mechanical genius as compared with other countries. The rewards which are also given, when fairly and impartially bestowed, should be sought for by manufacturers as the soldier seeks the ribbon, which, on his breast, proclaims to the world some deed of daring by which he has rendered himself worthy of distinction and surpassed

his fellows. So the medal of the great exhibition rewards the skill, invention or genius of the manufacturer who has surpassed his competitors and entitles him to at once become a member, if I may use the word, of the aristocracy of manufacturers. Throwing aside the probable pecuniary advantage which may occur to the manufacturer, is not the feeling of national pride sufficient to induce our mechanics and machine shops to send forward specimens of their workmanship, and prove to the world that, though we have carried on for four long years the greatest war of modern times, yet that we are still far ahead of all other nations in our agricultural and mechanical tools, and that the war, which would have crushed and paralyzed the energies of any other nation, has but quickened and stimulated our inventive genius and facility of production.

A long experience in the machine business in France has convinced me of the immense superiority possessed by our machinists over all continental countries, and even over England, and our advantages are so great and so marked that our principal manufacturers have but to send over specimens of their tools to carry off the palm.

Agricultural implements are also exceedingly imperfect, and even in such articles as shovels, picks, rakes, scythes, etc., France and Germany are, as a rule, fifty years behind us.

There are hundreds of articles in daily use with us, and so common as not to attract our notice, which would be appreciated, and the inventors rewarded, if only sent forward.

I would appeal then, through your widely circulated and valuable journal, to all our principal manufacturers to send forward samples of their products, and the insignificant expenses that may be incurred are but a trifle compared with the pride and gratification that every American will feel at seeing his country assigned the first rank among manufacturing nations.

In 1862, our American department elicited so many sneering remarks, and our poverty of exhibitors was so great, that every American felt that, the opportunity again recurring, it was his duty to do all in his power to restore us to our proper place. We were then engaged in, and pursuing with all our energies, the restoration of our glorious Union, and that our exhibitors were so few in number is hardly to be wondered at. But the great end has been bravely and nobly accomplished, and now that the occasion is again offered, the hope of every American residing abroad is, that 1867 will avenge our miserable display in 1862.

That our clocks, porcelain teeth, and a few other articles only have found a good market here, arises from the fact that the attention of our manufactures has not been turned to the wide market that the continent offers. That a good demand would spring up for our lathes, our milling and digging machines, our patent chucks, our agricultural implements, etc., I am confident of from my own experience. I have refused hundreds of times to sell my own tools at a price which would have left me a very large profit, and no better speculation could be engaged in, than depots of American tools in all the large cities.

The exhibition of 1867 differs from all others from the fact that each exhibitor is allowed to ticket his articles, and make sales and take orders during the whole duration of the exhibition. I would appeal then to all our leading manufacturers to send forward samples of their products, and they may rest assured that they will not only have the proud satisfaction of obtaining the first place for our country, but will also open new markets, which, up to the present time, have been neglected. CHAS. R. GOODWIN.

Paris, November, 1865.

REFERRING to recent observations in our columns on the waterproofing power of paraffine, "A Policeman" inquires the proportion in which it must be mixed with other substances, to render boots or shoes waterproof. Perhaps some of our readers will kindly supply the information; pending which we offer the following:—Melt together  $\frac{1}{2}$  pint of boiled linseed oil, 2 oz. of suet,  $\frac{1}{2}$  oz. of bees wax, and  $\frac{1}{2}$  oz. of resin. We have found this most useful in rendering shooting boots impervious to wet.—*Mechanics' Magazine.*