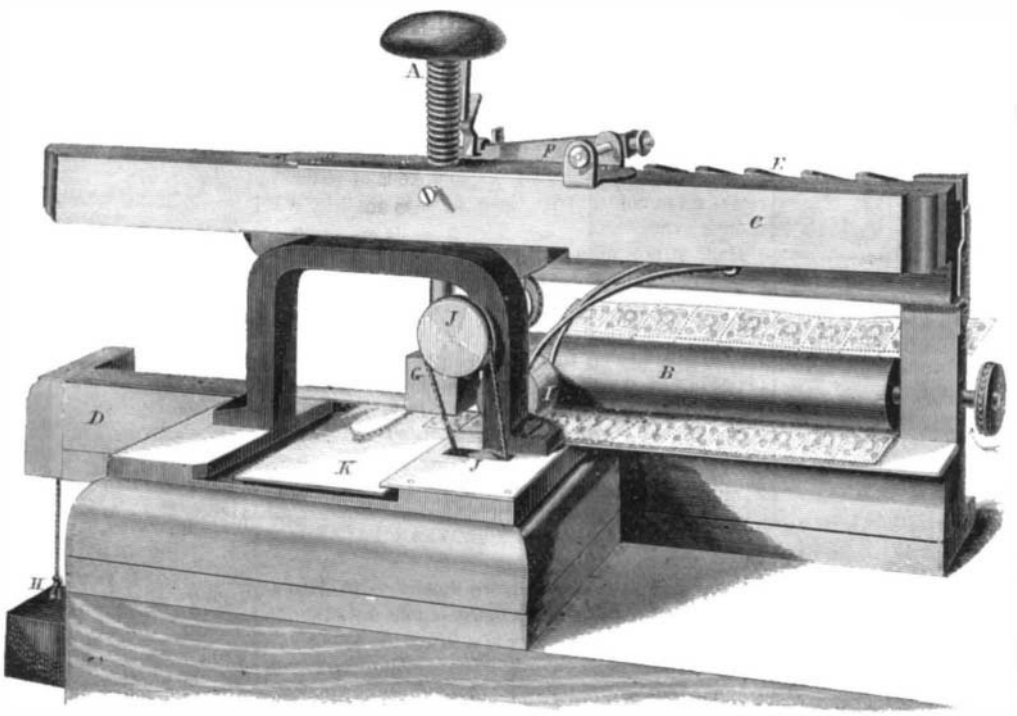
Machine for Applying Stamps.

Some months ago a photographer wrote a letter to the SCIENTIFIC AMERICAN, saying that a machine for applying stamps to *Carte de Visites* or other pictures, would be a very useful thing, and that one was much wanted by professional men. The inventor of the machine here illustrated has taken the hint thrown out, and in this engraving the means he has adopted to secure the end are shown. By a simple downward motion of the hand on the knob, A, the stamps are affixed as rapidly as the movement can be kept up, or the cards fed in. The stamps are inserted in the sheet, as shown at the roller, B. Below this roller there is another one, and the sheet is held between both; these rollers set in the carriage, C, which is made to slide in the frame, D, by a very simple arrangement. It is this. There is a rack, E, in the carriage which is held stationary (while the stamp is being stuck on) by the pawl, F; when the knob moves upward, after the stamp has been fastened by the block, G, this pawl is lifted and the carriage is drawn along the frame by means of the weight, H, at the end, thus carrying the stamp with it and presenting another to the action of the block, G.



SMITH'S MACHINE FOR APPLYING STAMPS.

Provision for moistening the stamps is made by the roll, I; this presses the sheet on a roller below which runs in a little tank of water, said under roll being operated by the pulleys, J.

When all the stamps on one row have been affixed, a new strip is presented by turning the rollers, B, in the direction of the arrow. The stamps are detached from the sheet by withdrawing the card, shown at K.

Thus all the requisite features in a machine of this class are provided for, and in its operation it answers the purpose. One of them, we are told, has been for some time used by Meade Brothers, this city. The machine is about two and a half times larger than the engraving. These machines can be used for applying stamps to labels, packages, envelopes, match boxes, or for any purpose where stamps are used. The inventor will sell State or shop rights to manufacture, and samples can be seen by applying to John Frank Smith, Box 5257, P. O., New York.

A patent is now pending on it through the Scientific American Patent Agency, by Robert L. Smith, of Stockport, N. Y.; for further information address him at that place.

A Mud Sucker.

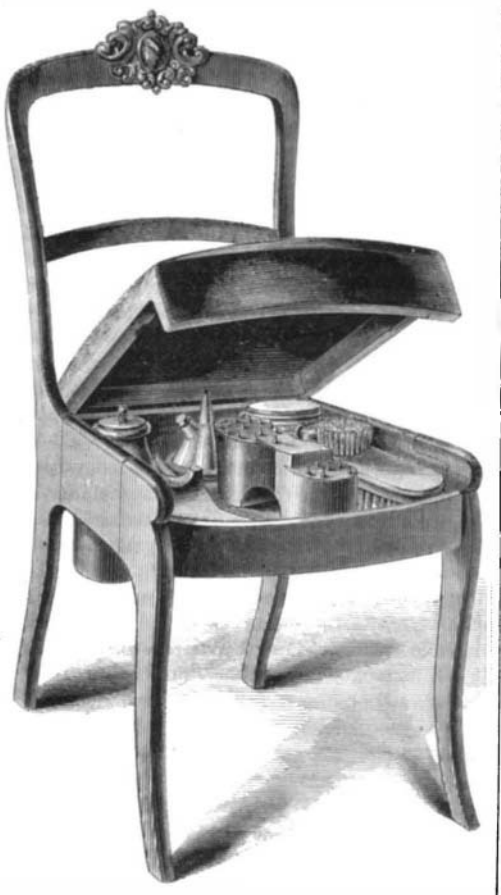
M. Agudio, the Italian engineer, who has undertaken the railroad which is to cross Mont Cenis, has invented a machine intended to be added to the mechanical sweepers, which are daily at work during this very muddy season, in the streets of Paris. The machine consists in a cast-metal receiver on four wheels, to the lower extremity of which is fixed a wide tube. A small air pump attached to the carriage creates a vacuum in the receiver. It is only requisite that the tube should graze the surface of the street for the mud to be, as it were, inhaled into this receiver—a sort of rake, fixed to the lower end of the tube, receiving the mud and facilitating its ascension.

New Method of Electro-Plating.

M. Well, a French chemist, announces a new method of depositing metals. The baths he employs consist of metallic salts or oxides in alkaline solutions by means of tartaric acid, glycerine, albumen, or other substances, which prevent the precipitation of the oxide by the fixed alkali, in some cases with, and in others without, the aid of zinc or lead, and at various temperatures, according to circumstances. He claims, also, to be able by like means, to give variety of color to articles covered with copper, by his process. M. Well says that the most important application of his discovery is the deposit of copper and the bronzing of iron (cast as well as wrought) and steel, without the preparatory dressings with conducting substances, which are necessary in proceeding according to the ordinary methods before the object is placed in the bath and submitted to galvanic action. This, if it bear the test of practice, is a very important fact. Iron and steel thus coated with copper may says M. Well, be afterwards silvered or nickelized by his process.

HARDING'S SHOE-POLISHING CHAIR.

A benefactor is by some one defined as a person who makes two blades of grass grow where but one



grew before. Inventors are, then, benefactors, for although they may not make grass grow literally, they make one thing serve two purposes sometimes, which is quite as much to the point, and very convenient to boot. The invention here illustrated relates to boots, and very closely, for those who desire to appear in a shining light, before men, as to their feet, must polish their shoes properly. It is all very well to throw the responsibility of this upon a servant; but what if one has no servant? What if one boards, or has a room of his own somewhere? What if one is a wretched bachelor without privileges or "fixins" of any kind, clearly he must provide himself with some such arrangement as that here illustrated. The object of it is apparent at once. The inventor has taken advantage of the fact that mankind are prone to put their feet on the nearest chair when their boots are to be polished, and has therefore provided an assortment of all the tools, instruments, and paraphernalia of whatsoever name and nature, used in the art and mystery of shoe-blacking within the compass of a common chair bottom, so that by merely lifting the seat there lies disclosed the wonderful machinery plain to the eye. The engraving illustrates this invention so clearly and beautifully that nothing is needed to explain it. Brushes, pots, boxes and water-can, are all at hand, ready for use. The model for this unique affair is one of the handsomest that has come into our hands for some time, and the inventor is deserving of praise for the skill and pains bestowed upon it. A patent is now pending through the Scientific American Patent Agency by F. G. Harding, of Boston, Mass.; for further information address him at 35 Sheafe street.

Subterranean Pneumatic Railway.

Of the new lines in London probably the most remarkable is that proposed under the name of the Waterloo and Whitehall Railway. This is a pneumatic line, not for the conveyance of parcels only, not an iron tube like the gigantic pipe between the Post Office and Euston Square; it is an extension of the plan that has been for some time exhibited in operation in the grounds of the Crystal Palace at Sydenham. The tunnel admits about a full sized omnibus carriage, which is impelled by a pressure of the atmosphere behind the vehicle, produced by lessening the density of the air in front. It is an underground railroad worked without locomotives. The proposed line will run in a tunnel under the Thames, and open a communication between Whitehall and Waterloo Station, near Vine street. As a means of communication between one part of London and another this line will be quite an experiment.

Burglars Using Wedges.

The Birmingham correspondent of a London cotemporary says:—

"By the aid of the wedge now so much used by burglars, a safe, considered thief-proof, was opened in Birmingham on Friday night last, at the office of Mr. H. Dixon, of the Old Wharf. The safe was 3 feet by 2½ feet, and was made of three-eighth inch plates. The door was forced open, and such was the violence that had been applied that one of the sides was not only bent and broken, but the bolts by which the safe was riveted together were driven completely out of the metal. The noise of the concussion of a sledgehammer upon the wedge seems to have been muffled by the use of a book. There was only 3½d. in the safe."

THERE are now packed away in the different storehouses on the banks of the Hudson about 153,000 tuns of ice, gathered this season.