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## IMPROVED MACHINE FOR POLISHING MOLDINGS AND SURFACES.

In the ordinary process of making wood moldings, when the strips leave the cutting tools, they have a rough face, which must be finished before they can be oiled or painted. This operation is now done by hand by the use of sand paper, emery, etc. Like all hand labor, in which the workman becomes a mere animated machine, this proceeding is both tedious and costly; besides, it is at best imperfect, since the peculiar forms of certain patterns frequently prevent neat and careful work. In brief, the operation is one which so specially invites the labor of the machine that it will probably be a matter of some surprise for our readers to learn that, despite the immense variety of woodworking apparatus in the market, apparatus seemingly capable of converting wood into every possible shape and form, there has hitherto been no device for accomplishing so necessary and yet, as compared with a score of other every-day processes, simple a requirement. We need hardly preface the following description by saying that the machine referred to, and herewith illustrated, bids fair to be a very useful invention, the more so since its capabilities are not confined to moldings alone, but include the scraping and finishing of veneered surfaces, and the polishing of coach bodies, of metal work, of glass, and of marble.

In Fig. 1 we give a perspective view of the invention, from which its mechanical construction will easily be comprehended. Either of the pulleys, A, may receive the belt and serve as the driver, each having a pitman which connects with, and so imparts a reciprocatory motion to, the

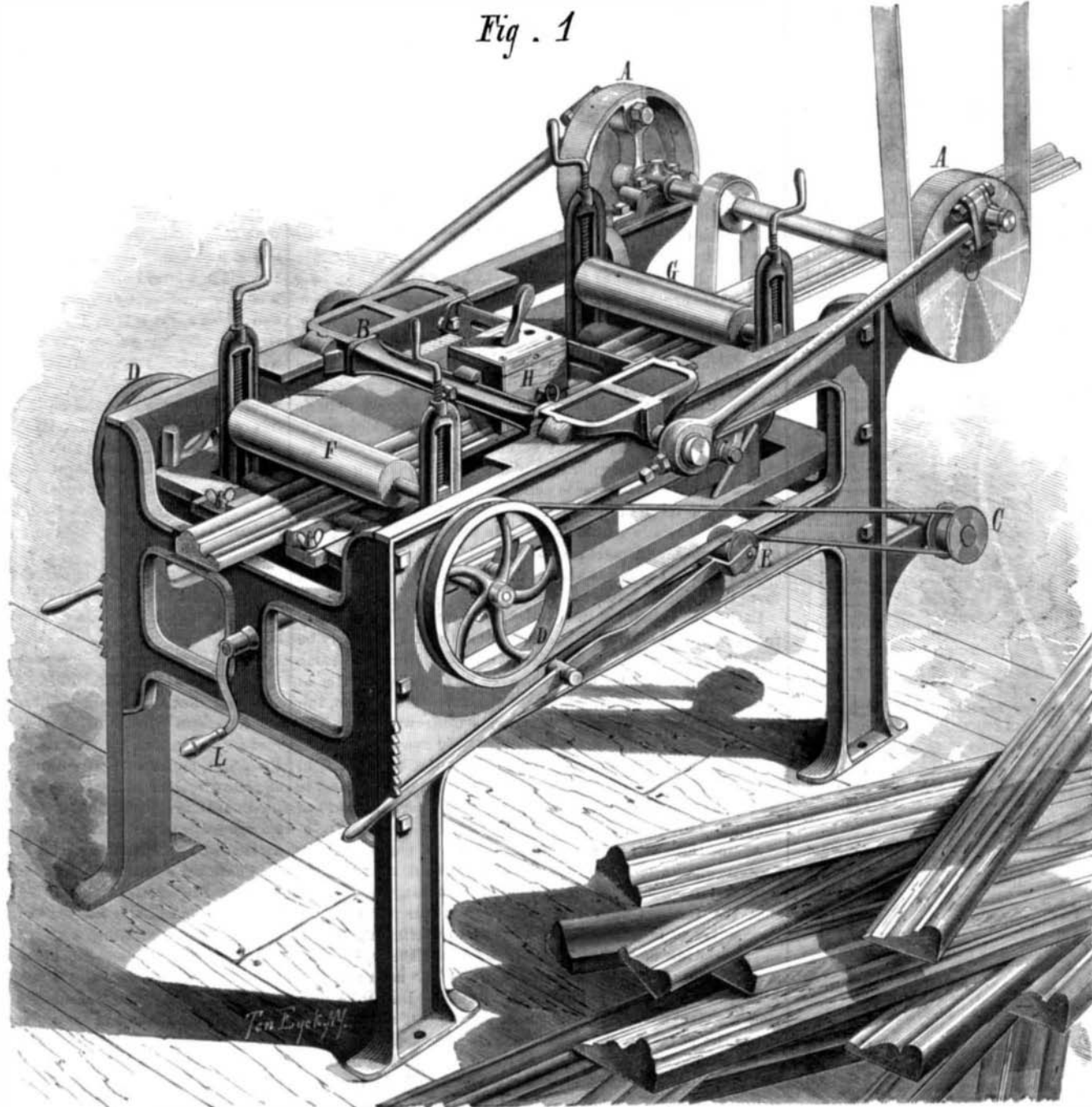
said belts rests a tightener, E, having a handle conveniently located, as shown, and so arranged as to be firmly secured, so as to hold the idler away from or against the belts, as desired. The object of this arrangement is to enable either belt to be thrown into action at will, so that the shaft of pulleys, D, may be caused to travel in either direction. Said shaft imparts motion to the lower feed rolls, the upper ones of each pair of which are respectively represented at F and

hard fine-grained stone, every curve and angle of the pattern, reversed, of course, but duplicated with sharpness and accuracy.

It remains now to secure the slab shown at J, Fig. 2, and separately in Fig. 3, to a wooden back, interposing between it and the latter a sheet of india rubber, K, to add to the elasticity, and then to fasten the whole in the box, H, by means of the set screw shown on the latter in Fig. 1. In the

box, however, as will be further seen from Fig. 2, is a simple arrangement for supplying emery dust, glass, or pumice, between the stone and work, or even for admitting water to the same locality when desired. The emery is introduced through the aperture shown in the cover, and falls to the bottom of the box, whence, if not prevented by the closing of the slide, L (operated as shown by the handle above), it gradually escapes through small holes to the face of the stone. The polisher then, as already described, travels to and fro, constantly rubbing the molding; while at the same time, having a free lateral play, it readily adapts itself to any twist in the same.

We have witnessed this machine in operation and can state that it turns out excellent work, the moldings certainly possessing much cleaner and sharper angles and corners than could be produced by the hand process, unless the polishing stone were removed from the apparatus and operated by hand, as it well might be, although of course at the expense of time. Hard wood or soft wood surfaces are polished with equal ease, a matter of some difficulty in the last



DAYTON'S MACHINE FOR POLISHING MOLDINGS AND SURFACES.

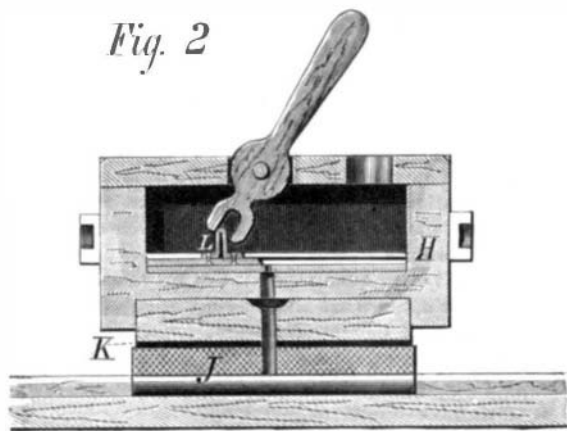
G. These rolls are covered with rubber so as to grasp the molding placed between them, and carry it under the reciprocating polisher, H, and so out of the apparatus. It will be seen, however, that, since the machine, as already described, may be caused to run in either direction, the strips may be introduced at either end, or may run through one way and (the motion being reversed) sent back again; and thus kept traversing to and fro under the polisher as long as may be desired. The rolls may be easily adjusted, as to their separation, by the screws shown above them, and are rigidly connected to the table, which last, however, is entirely detached from the frame on which the polisher works. It has a vertical motion, imparted by the handle at L, and thus the work held between the rollers may be raised or lowered bodily, and so adjusted with any degree of pressure against the rubbing materials.

So far we have described merely a neat mechanical contrivance of well known devices—the practical appliance whereby the gist of the invention is adapted for use. The essential feature of the whole lies in the rubber, H, an enlarged sectional view of which is presented in Fig. 2; and in the making of this, resort is had to a simple and ingenious process, namely, artificial stone manufacture. It being required to dress a certain pattern of molding, a small piece of the material is very carefully finished by hand to the exact form. This serves as a mold for a concrete of prepared materials, which set and crystallize very rapidly, producing, in

instance, as soft faces are usually gummy and difficult to dress, and the use of loose powder effectually relieves this trouble.

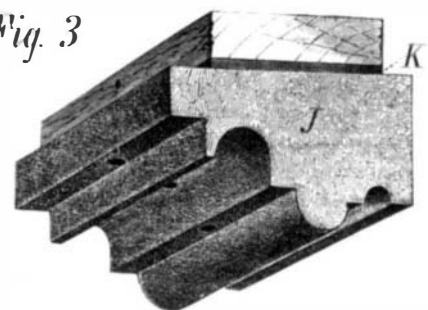
Patented June 29, 1875. For further particulars regard-

Fig. 2



carriage, B, in which the polishing arrangements, described further on, are located. From a small pulley on the same shaft as pulleys, A, descends a belt to another parallel shaft, on the ends of which are two more small pulleys, one of which appears at C. The pulleys last mentioned are connected to the wheels, D, at one side of the machine by a crossed, on the other by a straight, belt. Against each of

Fig. 3



ing price of machines, and for rights, address the patentee, Hon. John A. Dayton, 20 Hanson Place, Brooklyn, N. Y.

A NEW cheap coating for wood, which is very adherent even when exposed to the weather, consists in simply brushing the surface with a solution of persulphate of iron of 2° to 2½° Baumé. The blue gray tint which this acquires on drying changes to an agreeable brown when linseed oil varnish is applied.