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HENRY S. SWAYNE, OF TOLEDO, OHIO.

IMPROVEMENT IN MACHINES FOR FILLING MOLDINGS.

Specification forming part of Letters Patent No. **201,960**, dated April 2, 1878; application filed September 11, 1877.

To all whom it may concern:

Be it known that I, HENRY STUART SWAYNE, of Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Machines for Filling Moldings, of which the following is a specification:

My invention relates to improvements in that class of machinery employed for filling the pores of wood moldings and other strips or pieces of wood, and preparing the moldings, &c., for polishing, varnishing, gilding, &c.

My objects are to insure a proper application or supply of the filling mixture to strips or moldings, to prevent waste, to completely and uniformly fill the pores of the wood, to remove the surplus filling, generally to improve and simplify the machine, and to perform the work rapidly and automatically.

To these ends my improvements consist in certain peculiar constructions of parts and novel combinations of devices, which will hereinafter be described, and specifically designated in the claims.

In the accompanying drawings all my improvements are shown as embodied in a single machine. Obviously, however, some of the parts may be used without the others, and in machines differing somewhat as to details of construction from that therein shown and hereinafter described.

Figure 1 is a plan or top view; Fig. 2, a side elevation; Fig. 3, a vertical longitudinal section on the line 1 1 of Fig. 1; Fig. 4, a vertical transverse section on the lines 2 2 and 2 2, Figs. 1 and 2. Fig. 5 is a top or plan view, showing a modification of the fastening for the rubber holder or stock; Fig. 6, a section on the line 3 3 of Fig. 5. Fig. 7 is a view, in perspective, of the two-part rubber-supporting frame, showing a modification in the arrangement of the holders for the rubbers. Fig. 8 is an elevation of the filling-chamber, showing one of its end doors with the opening therein fitting around the molding, the molding being shown in cross-section.

The filling material, which may be of any of the well-known cheap compounds suitable for the purpose—such, for instance, as a mixture of benzine, whiting, and some coloring matter suited to the particular wood of which the molding to be treated is made, or plaster-of-paris in the semi-fluid state—is placed in a suitable reservoir or holder, A, mounted upon the top of and communicating by a hollow support or supply-pipe with the inside of the filling box or chamber B, through which the molding passes endwise. The box is made with open ends, and provided with detachable end pieces or doors *b b'*, and is mounted and firmly secured in a fixed position upon the front of the supporting-frame of the machine. These doors are shown as adapted to slide in and out of place vertically in guide-grooves in the box sides. They are fitted snugly to prevent leakage of the material from the box, and may readily be removed and other doors substituted, for a purpose hereinafter explained.

The doors have openings in them at their lower ends, shaped to correspond, or nearly so, with the transverse outline of the molding being operated upon. These doors, especially the outer one, *b*, have suitable packing, such as a felt lining, secured around the edges of their openings for the moldings, to prevent leakage.

The openings in the detachable box ends or doors shown in the drawings correspond to the form of the molding represented in Figs. 4 and 8. The molding passes through the box end *b'* with sufficient freedom (that is, the packing does not fit tight upon the molding) to allow the filling substance immediately adhering to the molding to pass out; or the packing around the opening of the door *b'* may, in some cases, be dispensed with, when in this way a sufficiently-close fit of the opening around the molding may be attained to prevent injurious waste or too thick a coating upon the molding as it leaves the filling-box.

When the form or outline in transverse section of the molding or wood strip is varied the doors or box ends are changed, new doors being employed, with openings substantially corresponding with the form of the molding. Slight changes in the forms of moldings would not render a change of doors necessary when a self-adjusting or yielding packing is employed around their orifices.

A gate or cock, C', in the tubular post C of the reservoir A serves to regulate the supply of the filling-mixture to the filling-box, through which the molding passes, and to shut off the supply when the work is to cease or the doors

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ADDISON M. TELLER, OF MORRISON, ILLINOIS.

IMPROVEMENT IN DEVICES FOR WATERING ANIMALS.

Specification forming part of Letters Patent No. **201,961**, dated April 2, 1878; application filed October 8, 1877.

To all whom it may concern:

Be it known that I, ADDISON M. TELLER, of Morrison, in the county of Whitesides and State of Illinois, have invented a new and useful Improvement in Automatic Tank-Covers, which is fully set forth in the following specification and accompanying drawing, in which—

Figure 1 is a side elevation. Fig. 2 is a front elevation.

My invention relates to an improved method for raising and closing the covers of water-tanks in which drinking-water is kept for the use of animals; and the object of my invention is to keep the water-tank cover closed except when an animal is drinking.

The cover should be quite thick and heavy to prevent the water from freezing in winter, and should be so arranged that on lowering it will not slam down, as that would, by alarming the animals, prevent them from using it. Where the cover is raised by the employment of a platform the latter should be long enough to permit the animal to stand upon it, and it should have so slight a depression as to be unnoticed by the animal, in order to avoid frightening it.

Referring to the drawings, A represents the water-tank; *b*, the hinged cover, which, in practice, is about two feet wide. Attached at each end of the cover is an iron upright, *c*, in practice about nine inches high, the top of which terminates in a horizontal loop, *d*, about three-fourths of an inch long, through which one of the chains passes.

B represents the platform, located in front of the tank, and hinged at one end, as shown at *e*, to bed-pieces *f*, which support the platform firmly when it is brought down by the weight of an animal.

Four posts, *h*, are bolted to the tank, and afford support for the operating-levers, of which there are two sets. The lower levers *i*, pivoted at *k* to the front posts, connect with the platform by the rods *m*. These levers have friction-rollers *t* attached near the end and at the point of contact with the upper levers. The levers *n* are pivoted at *p* to the rear posts, and connect with the cover by the chains *r*, which attach to the cover at points distant from the front edge equal to about one-third of its width. These levers extend back, and are weighted at *s*, the weights being adjustable, as desired.

The rods, levers, and chains are so proportioned that a depression of one and a half inch on the platform, which is effected by the weight of the animal, will raise the cover sufficiently.

Short chains V are attached to the front posts and to the cover, and serve to prevent the latter from going too far back. I prefer to make these chains heavier next to the posts, in order that the additional weight will start the cover down the moment the animal leaves the platform.

The operation and result of my combination may be set forth as follows: The platform is depressed when an animal steps upon it only one and a half inch. This slight depression causes the chains *r* to draw on the loop *d* of the upright attached to the cover, thus effecting a lifting power greater, by fifteen per cent., on a cover of the width specified than would be possible if the chains were attached directly to the front edge.

When the animal is drinking the cover is in a position nearly upright, and the stop-chains V are nearly straight, while the chains *r*, being drawn in a straight line from the point of attachment to cover, no longer bear on the horizontal loop of the upright *c*. Now, upon the animal leaving the platform, the weight of the chains V readily starts the cover downward, and when about one-third of the way down the chains *r* again bear on the loop of the upright *c*, whereby the advantages are at once effected of lowering the cover from the front edge instead of from the point of attachment, and also by taking up, as it were, the slack in the chain, the rapidity of the downward movement is moderated, while at the same time the weight of the stop-chains V diminishes as the cover lowers, until about three-fourths of the way down, when their weight is entirely removed. Thus the rapidity and force with which the cover would otherwise fall are so far checked and controlled as to prevent its slamming.

By this arrangement farmers may be provided with water-tanks having covers that act automatically, and which will remain closed