2 Sheets—Sheet 1

J. A. DAYTON.

Machine for Veneering Moldings.

No. 203,896. **Patented May 21, 1878.**

Fig. 1

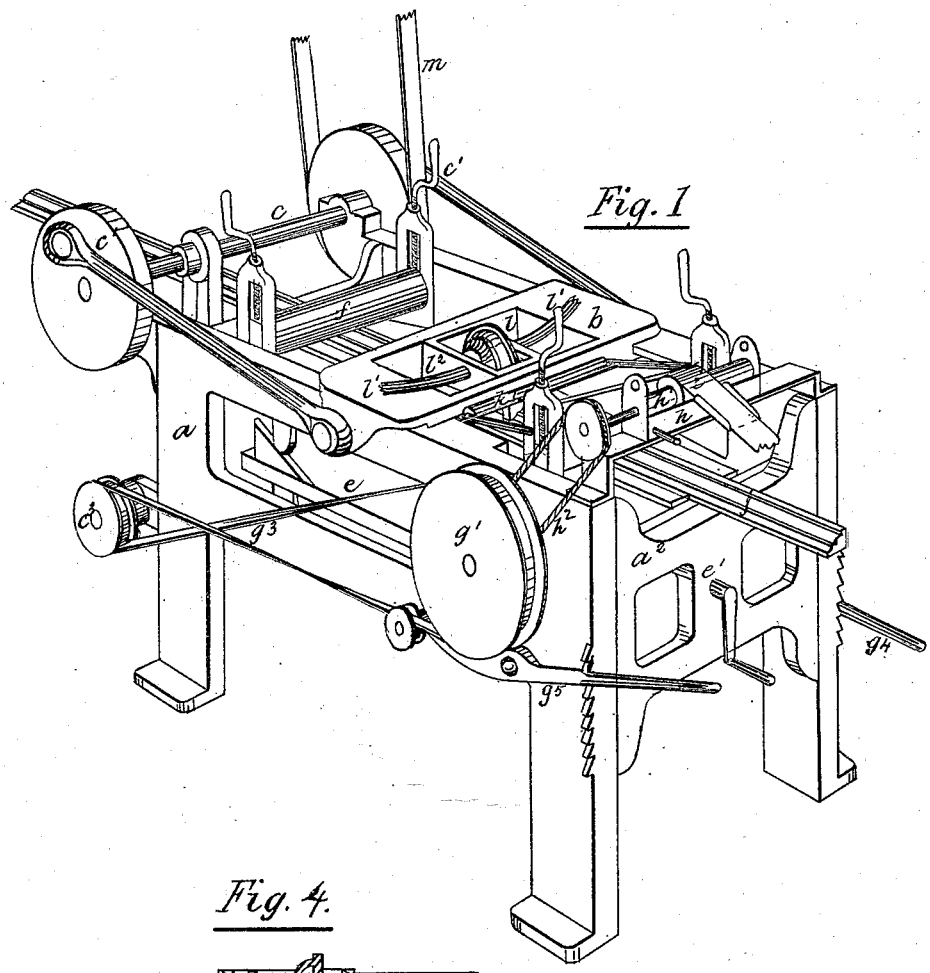


Fig. 4.

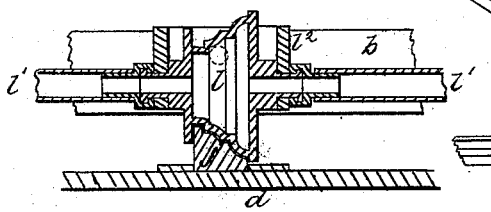
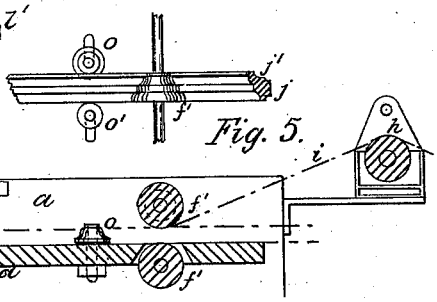


Fig. 5.



Witnesses.

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Chas. D. Gilmore.

John A. Dayton
Inventor.
per Alfred Shestock.
Atty.

2 Sheets—Sheet 2.

J. A. DAYTON.

Machine for Veneering Moldings.

No. 203,896. **Patented May 21, 1878.**

Fig. 2

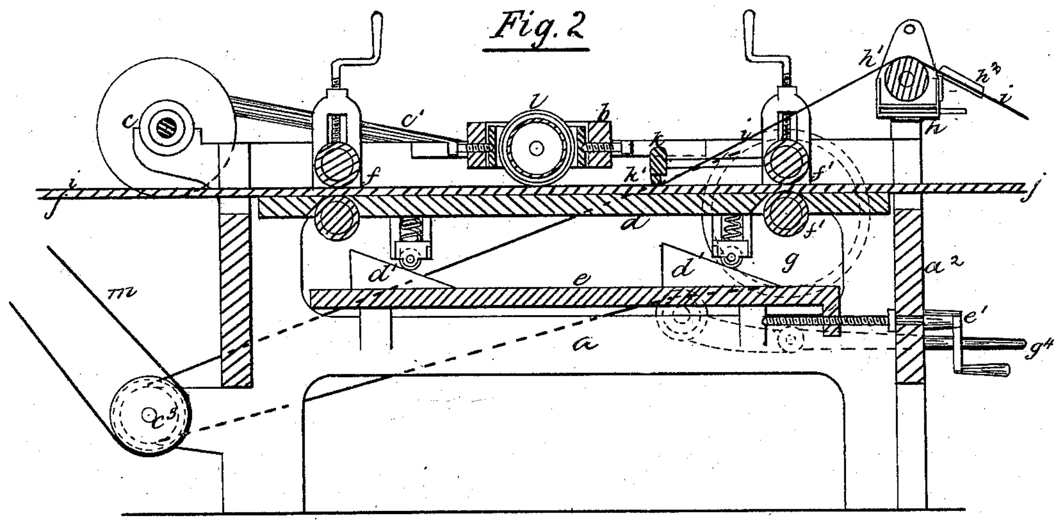
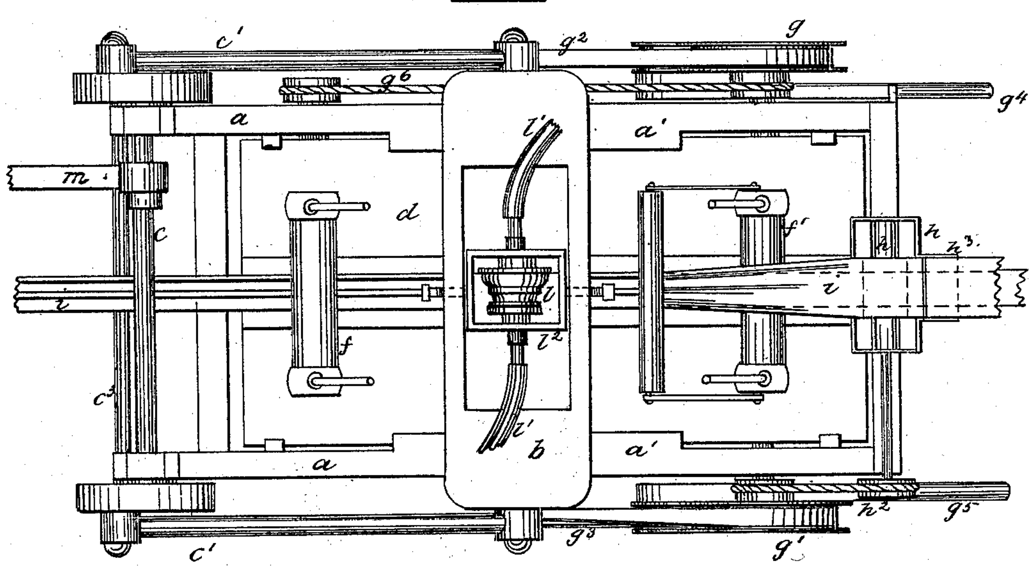


Fig. 3.



Witnesses.

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John A. Dayton.

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UNITED STATES PATENT OFFICE.

JOHN A. DAYTON, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN MACHINES FOR VENEERING MOLDINGS.

Specification forming part of Letters Patent No. **203,896**, dated May 21, 1878; application filed October 8, 1877.

To all whom it may concern:

Be it known that I, JOHN A. DAYTON, of Brooklyn, county of Kings, and State of New York, have invented certain Improvements in Machines for Veneering Moldings, of which the following is a specification:

This invention has for its object to render the machine for polishing moldings described in Letters Patent of the United States No. 165,073, granted to me June 29, 1875, more perfect in its operation, and also to adapt it to veneering moldings, &c.

The main portions of the machine, which are fully described in the hereinbefore-quoted Letters Patent, consist of a reciprocating frame carrying the scouring or polishing device, working on horizontal bearings on the top of the main frame; a bed capable of being raised and lowered, provided with two pairs of feeding-rollers, arranged one on either side of the reciprocating frame, so as to feed the material to be operated on under the reciprocating scourer or polisher; and the requisite mechanical devices for operating the reciprocating frame, the feed-rollers, and the vertically-adjustable bed. The device for moving the feed-rollers consists of a slack belt running over a pulley on one of the shafts of the front pair of feeding-rollers, and a tightening pulley and lever, so that the rollers may be caused to feed the material to the scourer or polisher, or remain at rest, at pleasure, the back pair of feeding-rollers being connected to the front pair by means of a belt or chain and pulleys, they drawing the molding from the polisher and discharging it from the machine. If the work was not properly performed in passing through the machine, or if parts only of the molding were properly finished, it was necessary to pass the whole length of it through the machine a sufficient number of times to perfect it. This objection is overcome in the present machine by placing another slack belt on the other end of the shaft of the feed-roller, and a pulley and tightening lever, the belt being so arranged as to turn the feed-roller in the opposite direction, so that if the attendant notice any part of the molding, &c., is not properly finished, he reverses the direction of the feed, and allows such part to be operated upon by the scourer or polisher until finished, and thus save considerable time, besides which the double feed saves time in handling the material by admitting of its being passed through the machine at either end.

This invention further relates to certain devices by which the machine is adapted to veneering moldings and other articles in lengths; and they consist of a gluing apparatus, a former for forcing the veneer after being glued into all parts of the molding, and a heated roller, the periphery of which is shaped to correspond to the section of the molding, for pressing and setting the veneer in place, all of which will be fully hereinafter described by reference had to the accompanying drawings, forming part of this specification, in which—

Figure 1, Sheet 1, is a perspective view of my improved machine for veneering and finishing moldings. Fig. 2, Sheet 2, is a longitudinal sectional elevation of the same. Fig. 3, Sheet 2, is a plan view. Fig. 4, Sheet 1, is a transverse sectional view of the heated roller; and Fig. 5, Sheet 1, embraces views of a modification of the veneering mechanism.

The main side frames *a a* are provided at the top with horizontal guides *a' a'*, on which the reciprocating frame *b* works. This frame is connected to and receives its motion from the main shaft *c* by means of the disk-cranks and connecting-rods c^1 c^1.

The vertically-adjustable bed *d* rests upon inclined bearings *d' d'* on the horizontal sliding frame *e*. This frame *e* is operated by the crank-handle and screw *e'*, which has its bearings in the front end frame *a'*.

On the bed *d* are two sets of bearings, which carry the two pairs of feeding-rollers *f* and *f'*. The shaft of the lower roller of the pair projects beyond the side frames *a a*, and secured to it are the pulleys *g* and g^1. The roller *f'* derives its motion from the main shaft *c* by means of the two slack belts g^2 and g^3 passing over pulleys on the intermediate shaft c^3, one of which is a straight and the other a cross belt, so that the direction in which the feed-rollers move is determined by one or the other of the belts g^2 or g^3 being made to gripe their respective pulleys by operating the tightened levers g^4 or g^5. The two pairs of feeding-roll-

ers are connected together by the chain or belt g^6, so that they revolve together in the same direction.

Secured to the front end of the main frame is the gluing apparatus, which consists of a receptacle, h, for holding the glue, having a hollow bottom for passing a heating agent through it, by which the glue is kept in a heated condition. In this receptacle h is placed the roller h^1. Motion is imparted to this roller by means of the belt h^2 passing over a pulley secured to its shaft and a pulley on the shaft of the feeding-roller f'.

On the front of the receptacle h is secured the guide h^3. The strip of veneer i passing through this guide h^3 over the roller h^1 thereby receives a coating of glue at its under side. The veneer from here passes over the feed-roller f' down onto the molding j, which is fed along by the rollers f' f', and is caused to assume the same form of section, and to fit to the molding j by means of the forming device, which is shown as consisting of a bar, k, hinged to the standards supporting the rollers f' f'. To this bar is attached the former k', it having the same contour as the face of the molding. This former may be circular and fitted in bearings, so as to revolve. It is expedient in some cases to make it of soft elastic material, and in others of rigid material.

After the veneer is pressed in its place by the former k' it is made to adhere firmly to the moldings by the pressure-roller l, whose periphery is made to conform to the shape of the molding, as shown at Fig. 4, which is drawn on an enlarged scale. It is hollow, to allow of its being heated by passing steam through it by means of the flexible pipes l^1 l^1, and it revolves in bearings in the frame l^2, which is pivoted to the reciprocating frame b. The reciprocating frame b may be held stationary by tightening up the gibs, in which case the driving-belt m would be passed around a pulley on the intermediate shaft c^3, as shown at Fig. 2, Sheet 2; or it may be reciprocated the same as in scouring or polishing, in which case the driving-belt would be passed around the periphery of one of the crank-disks, as shown in the perspective view, Fig. 1. There may also be two or more heated pressure-rollers, to more fully dry the veneered molding before it leaves the machine.

In the drawings, the former k' is shown as being placed between the feed-rollers f' f' and pressure-roller l. The same result will follow if it be placed in front of the feed-rollers; or the upper feed-roller f' can be so formed as to obviate the necessity of using an extra former. The gluing apparatus would then be placed at a greater distance from the rollers than shown, or it may be placed on an independent frame, so that it could be moved from one machine to another when more than one of these machines were used, thus reducing the cost of them.

At Fig. 5, Sheet 1, the feed-roller f' is shown, having the same form on its periphery as the section of the molding, and acting as a forming as well as a feeding roller.

The vertical side guide-rollers o and o' press the veneer on the sides of the molding; and if one or both sides are grooved, as shown at j', then the roller or rollers are made to correspond therewith, as shown at o'.

Having now described my invention, I claim and desire to secure by Letters Patent—

1. In a machine for veneering and polishing moldings, the combination of the straight and cross belts g^2 g^3 and their tightening-levers with the feed-rollers f and f', adjustable bed d, and reciprocating frame b, constructed and operating substantially as hereinbefore set forth.

2. In combination, the gluing apparatus h h^1, former k', and pressure-roller l, substantially as and for the purposes hereinbefore set forth.

3. The adjustable bed d and feeding-rollers f' f', in combination with the gluing apparatus, former k', and pressure-roller l, substantially as hereinbefore set forth.

4. The gluing apparatus h h^1 and pressure-roller l, in combination with the feeding-rollers f' f', the upper feeding-roller being so constructed as to operate also to form the veneer on the molding, substantially as hereinbefore set forth.

5. In a machine for veneering moldings, the combination of the gluing apparatus h h^1, the feeding and forming rollers f' f', the vertical side pressure-rollers o and o', and the heated pressure-roller l, substantially as and for the purposes hereinbefore set forth.

In testimony whereof I have hereunto set my hand this 5th day of October, 1877.

JOHN A. DAYTON.

Witnesses:

CHAS. J. GILMORE,

ALFRED SHEDLOCK.