G. Henze,

Enameling Machine.

No. 49829. Patented Sep. 5, 1865.

Fig: 1.

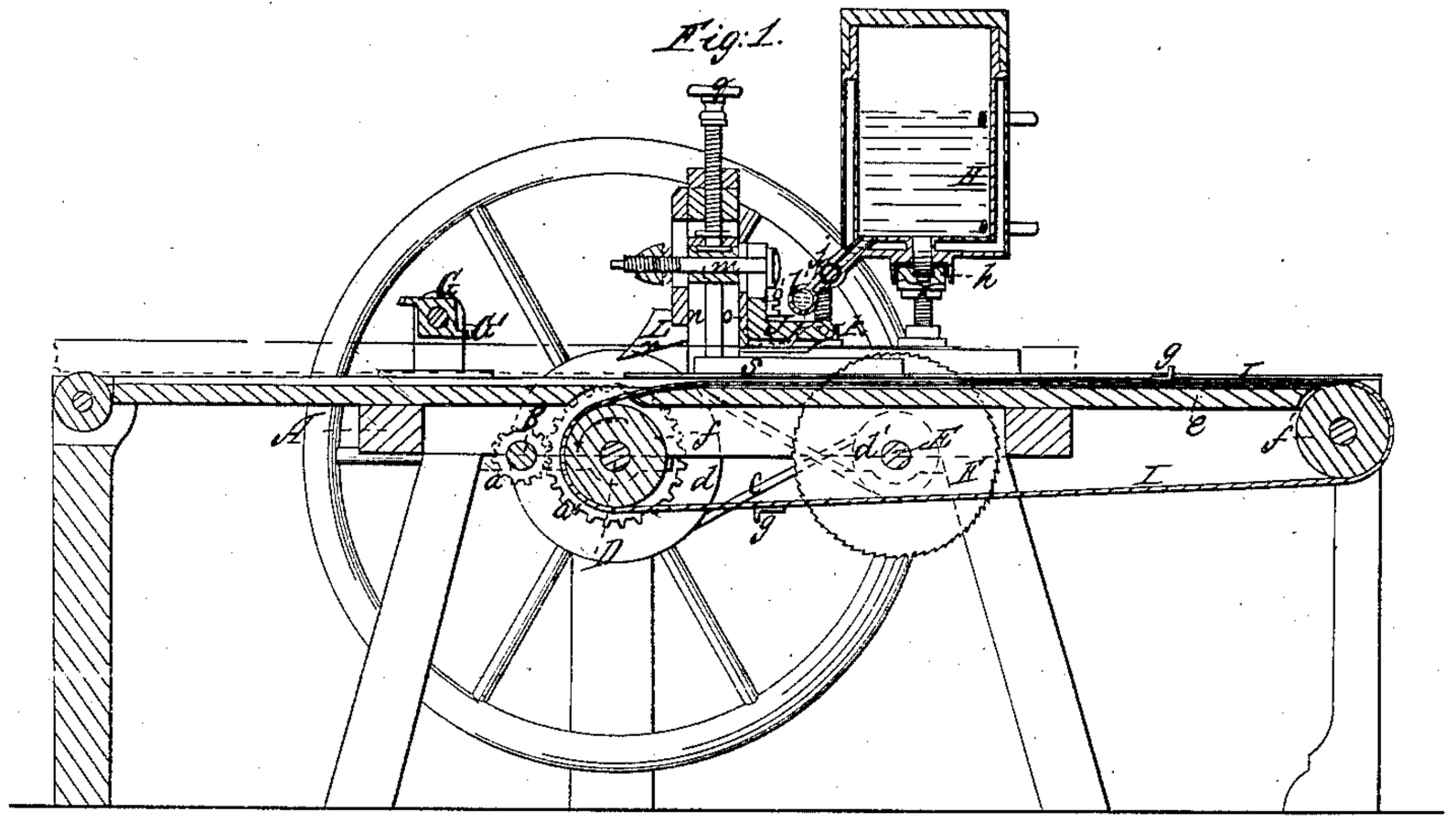


Fig: 3

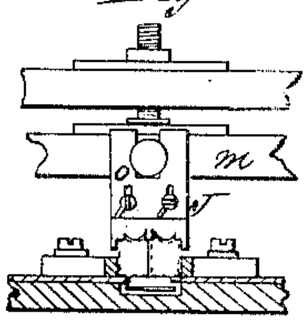


Fig: 4.

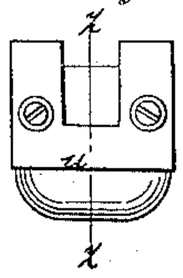


Fig: 5.

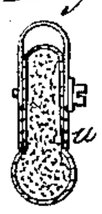
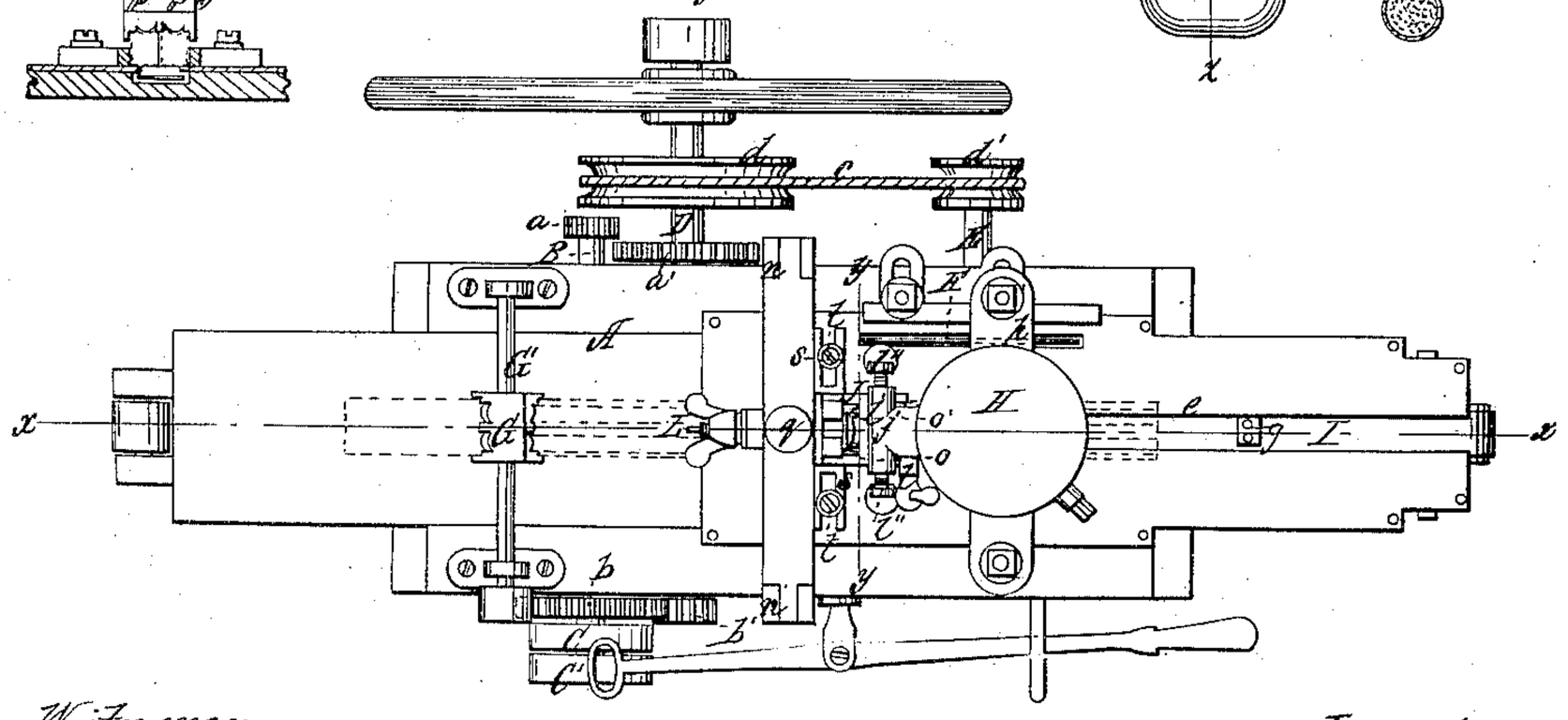


Fig: 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

GUSTAVE HENZE, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND EDWD. R. SOMMERKORN, OF SAME PLACE.

MACHINE FOR MAKING MOLDINGS AND FRAMES.

Specification forming part of Letters Patent No. **49,829**, dated September 5, 1865.

To all whom it may concern:

Be it known that I, GUSTAVE HENZE, of the city, county, and State of New York, have invented a new and Improved Machine for Manufacturing Moldings and Frames; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a longitudinal vertical section of this invention, the line *x x*, Fig. 2, indicating the plane of section. Fig. 2 is a plan or top view of the same. Fig. 3 is a transverse section of the same, the plane of section being indicated by the line *y y*, Fig. 2. Fig. 4 is a similar view of the polisher in a larger scale than the previous figures. Fig. 5 is a transverse vertical section of the same, taken in the plane indicated by the line *z z*, Fig. 4.

Similar letters of reference in all the figures indicate corresponding parts.

The object of this invention is to produce a machine which combines a number of operations, and in which provision is made for sawing the wood into strips of the proper size, providing these strips with moldings of the desired shape, applying and smoothing or leveling the preparation, and cutting or splitting the prepared molding in strips of the requisite width.

A represents a frame, made of wood or any other suitable material of the requisite strength for the occasion. This frame forms the bearings for the driving-shaft B, on which are mounted a fast and loose pulley, C C′, and from which motion is transmitted by suitable gear-wheels to the fly-wheel shaft D. On one end of the driving-shaft is mounted a pinion, *a*, and on its other end, next to the pulleys, is a gear-wheel, *b*. By moving the shaft in a longitudinal direction the pinion *a* can be thrown in gear with a cog-wheel, *a′*, on the fly-wheel shaft, and in this case the speed of the fly-wheel shaft is geared down. If it is desired to gear this speed up, the cog-wheel *b* is thrown in gear with the pinion *b′*, as shown in Fig. 2.

A belt, *c*, extending from a pulley, *d*, on the fly-wheel shaft over a pulley, *d′*, on the end of the saw-arbor E, serves to impart motion to the saw F. This saw is intended to cut up the wood into strips of the requisite size for the moldings, and it may also be used with advantage for cutting miters in finishing the frames. After the strips of wood have been prepared they are exposed to the action of the molding-cutter G, which is mounted on a shaft, G′, on the top of the frame A, and to which the requisite motion is imparted from the driving-shaft B in any desirable manner.

The platform of the frame A forms a bed to support the moldings while the same are cut and covered with the desired preparation. This bed is provided with a slot, *e*, right over a belt, I, which is stretched from a drum, *f′*, mounted on an arbor in the end of the frame A, as clearly shown in Fig. 1 of the drawings. Secured to this belt are a series of hooks, *g*, at such distances apart as the length of the moldings may require, and they are fastened in such a manner that they can easily be taken off and adjusted to suit different lengths of moldings.

As the pulley *f* revolves in the direction of the arrow marked on it the hooks on the belt travel along in the slot *e*, projecting above the platform of the frame, and the moldings placed thereon are pushed through under the box H, which contains the preparation, and under the leveler J, which is intended to smooth the preparation as the same discharges from the box H on the surface of the molding.

The box H is made cylindrical, and it may be made with double walls, forming a steam-jacket, whereby the preparation can be kept hot in a simple and efficient manner; or said box may be heated by any other desirable means. It is supported by a cross-bar, *h*, which slides up and down on standards *i* rising from the frame A, and said standards are provided with screw-threads and nuts, so that the box can be raised or lowered as circumstances may require. From the lower edge of the box H extends a discharge-spout, *j*, the mouth of which is situated over a slot, *k*, in the leveler J, and through this spout and slot the preparation passes down upon the surface of the molding. A suitable stop-cock, *l*, in the discharge-spout serves to regulate the discharge. The outer end of the discharge-spout is provided with a tubular attachment, *l′*, the ends of which are closed by plugs *l″*, so that by removing one or both of said plugs easy access can be had to the interior for the purpose of cleaning it out.

By means of these plugs the width of the discharge-opening is regulated to suit the width of different moldings.

The leveler consists of an L-shaped piece of brass, the upright shank of which is firmly screwed to the cross-bar *m* sliding up and down in slotted standards *n*, which rise from the frame A. By these means the leveler is made adjustable, and its working-face can be made to bear upon the surface of the moldings with the requisite pressure. This working-face is shaped to correspond to the shape of the moldings, and it is obvious that for different moldings different levelers have to be used. Its outer edge is protected by a plate, *o*, of iron or steel, which is secured to the upright shank of the leveler by screws *o'* passing through oblong slots, so that said plate can be adjusted up and down. The inner end of the working-face of the leveler, or that part nearest to the box H, is inclined upward, beginning at the middle or about one-third of the length of said face, and by these means the preparation, on passing down from the box H into the slot *k*, is revolved over and over as it comes in contact with the longitudinal sliding surface of the molding, and it (the preparation) is thereby kneaded and rendered soft and flexible, so that it applies itself evenly to the surface of the molding. By the action of the leveler the preparation is pressed down evenly, and the plate *o*, attached to its end, serves to preserve the shape of the molding, and it brings out sharp corners in the preparation.

A set-screw, *q*, which bears on the sliding cross-bar *m*, serves to force the leveler down on its work with the requisite pressure. By this arrangement I am enabled to apply the preparation to moldings of any desired width; and, if desired, double moldings may be prepared simultaneously and split while being prepared. This latter object is effected by the attachment of a splitter, L, which is secured to the sliding cross-bar *m* by the same screw which holds the leveler, or in any other desirable manner. By pressing the cutter-edge *r* of this splitter gradually down by means of the hand-screw *m*, while the molding is moved along by the belt I, said molding is split throughout its entire length in a simple and effective manner. While passing through under the leveler and splitter the molding is held in the proper position by guide-bars *s*, which are adjustable to suit moldings of different widths by set-screws *t*, as shown in Fig. 2.

If desired, a second carrying-belt may be applied on the opposite end of the frame A to move the moldings back; and by removing the leveler and applying in its place a polishing-pad such as shown in Figs. 4 and 5 of the drawings the surface of the molding, after it has been stained, can be polished in a simple manner.

It will be noticed that the leveler J takes the place of the pumice-stone generally used to smooth down the preparation, and by combining this leveler with the hand-screw *q* the surface can be rendered perfectly smooth and even. It is also of great advantage to have the box H, containing the preparation, vertically adjustable, so that the same can be accommodated to different positions of the leveler and to different thicknesses of moldings.

This machine combines every device requisite to manufacture moldings and frames, from beginning to end, and by its use much time and labor are saved.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The hand-screw *q*, applied in combination with the leveler J and belt I, substantially in the manner and for the purpose set forth.

2. The tubular attachment *l'* to the discharge-spout *j* of the box containing the preparation, in combination with adjusting-plugs *l'*, constructed and operating substantially as and for the purpose set forth.

3. The vertically-adjustable box H, applied independently of the leveler J and acting in conjunction with the same, substantially as and for the purpose described.

4. The splitter L, in combination with the belt I and leveler J, applied and operating substantially as and for the purpose specified.

5. A machine combining a saw, a molding-cutter, a leveler and splitter, and a polisher, all constructed and operating substantially as and for the purpose described.

GUSTAVE HENZE.

Witnesses:
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E. HAUFF.