H. D. MENTZEL.

Tag-Machine.

No. 165,109. Patented June 29, 1875.

FIG-I

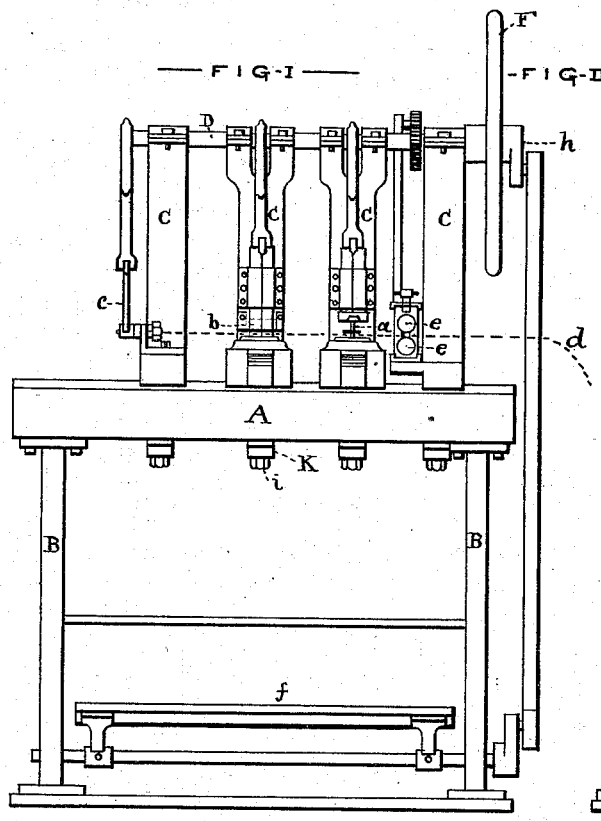


FIG-II

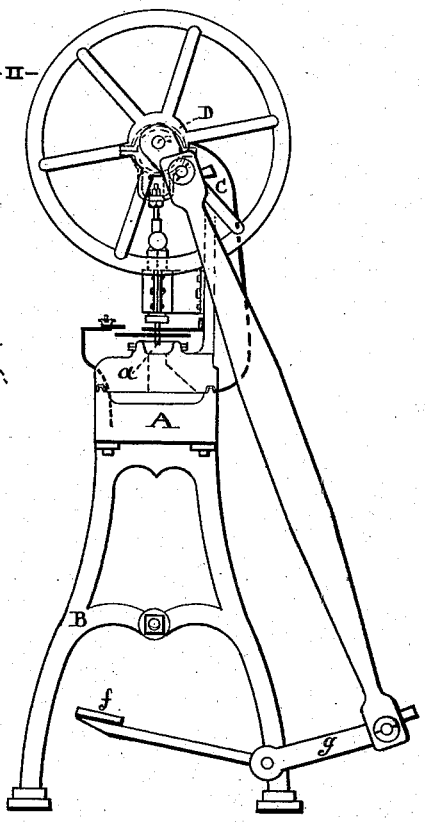


FIG-III

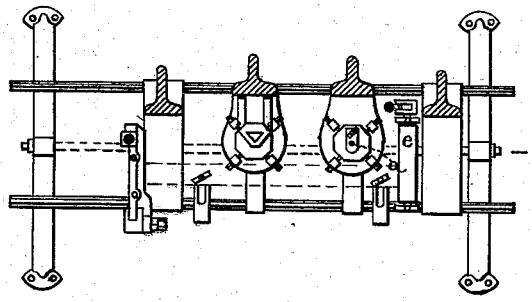
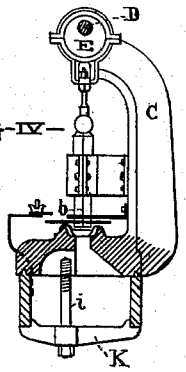


FIG-IV



WITNESSES.

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UNITED STATES PATENT OFFICE.

HENRY D. MENTZEL, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN TAG-MACHINES.

Specification forming part of Letters Patent No. **165,109**, dated June 29, 1875; application filed March 23, 1875.

To all whom it may concer:

Be it known that I, HENRY D. MENTZEL, of the city of Baltimore and State of Maryland, have invented certain new and useful Improvements in Tag-Machines, of which the following is a specification; and I do hereby declare that in the same is contained a full, clear, and exact description of my said invention, reference being had to the accompanying drawing and to the letters of reference marked thereon.

My invention relates to that class of tag-machines in which the tags are made from a strip of paper of a width equal to the length of the tag, and which strip is fed, by means of feed mechanism having an intermittent movement, to a series of cutters, each of which is constructed of a different shape, and adapted to cut a different portion of the tag, as hereinafter described.

My invention consists in constructing the stands or frames which support the driving-shaft to be interchangeable as regards their position upon the bed of the machine, and movable longitudinally, of the same to allow of the varying of the width and general shape of the tags, as hereinafter set forth.

In the description of the details of a machine incorporating my invention, which follows, due reference must be had to the accompanying drawing, forming a part of this specification, and in which—

Figure 1 is a front elevation of the machine, Fig. 2 an end view of the same, and Fig. 3 a sectional plan. Fig. 4 is a detached view, partly in section, of a portion of my improved tag-machine.

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

A represents the bed of the machine, supported upon suitable legs B, bolted to the under side thereof. C C are stands or frames, the upper ends of which are adapted to receive the horizontal driving-shaft D. The two inner stands are forked at their upper ends to admit of the rotation of the eccentrics E, which are connected by means of eccentric straps and rods to the cutters *a* and *b*. The shaft D is grooved its entire length, and the eccentrics fitted with keys, which rest within the groove, to give to the eccentrics and shaft a conjoined rotary motion, and permit the said eccentrics, which are confined between the forked portions of the stands, to be moved longitudinally with the stands as their positions are altered to suit the width of the tags. The cutter *a* is of the form of a punch, and cuts a circular perforation in the paper strip fed thereto by means hereinafter described. The cutter *b* has a triangular cutting-face, and at each downward stroke cuts a V-shaped notch in the paper strip aforesaid. The cutter *c* is driven from the end of the shaft D, and shears the paper strip centrally of the V-shaped notch, allowing it to fall as a completed tag. The paper strip, which in the drawing is represented by a dotted line and marked *d*, is fed to the cutters by means of rollers *e*, having an intermittent rotary movement transmitted thereto by means of a system of gearing which actuates a ratchet and ratchet-wheel connected therewith. The machine, as shown in the drawing, is adapted to be operated by foot-power, a treadle, *f*, being pivoted to the legs B and connected to a crank, *g*, from which motion is transmitted to a corresponding crank, *h*, secured to the shaft D. A balance-wheel, F, equalizes the motion of the different parts and prevents sudden acceleration or diminution in the speed thereof. The stands C, as hereinbefore alluded to, are capable of being moved longitudinally of the bed, and with this view are grooved at their lower ends to fit over the upper edges of the bed. The frames when placed in their desired positions are secured by means of a bolt, *i*, and bar, K.

From the foregoing, it will be seen that, although the width of the tag is primarily regulated by the distance which the paper is moved at each revolution of the shaft D, and which distance may be varied by a change in the relative position of the several parts of the feeding mechanism, the locations of the cutters have to correspond to form a perfect tag, and that this change of location is easily accomplished in view of the fastenings of the stands, as above described.

The stands with their attachments being interchangeable, the stand to which the gearing and other portions of the feeding mechanism

are connected can be placed next to the one having the shearing-cutter attachment, thus causing the paper to be drawn longitudinally of the machine, instead of being fed as is shown in the drawing. This arrangement is of importance when very thin paper is used.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

The longitudinally-grooved shaft D, carrying the punch, cutter-shear, and intermittent feed-actuating mechanism, undergrooved stands C, bed A, having the raised edges fitting the grooved stands, and stand-securing devices K and *i*, all combined and operating substantially as and for the purposes herein specified.

In testimony whereof I have hereunto subscribed my name this 15th day of February, A. D., 1875.

HENRY D. MENTZEL.

Witnesses:

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E. H. HOWARD.