

J. W. GHEEN.
Molding-Machines.

No. 138,015.

Patented April 22, 1873.

Fig. 1.

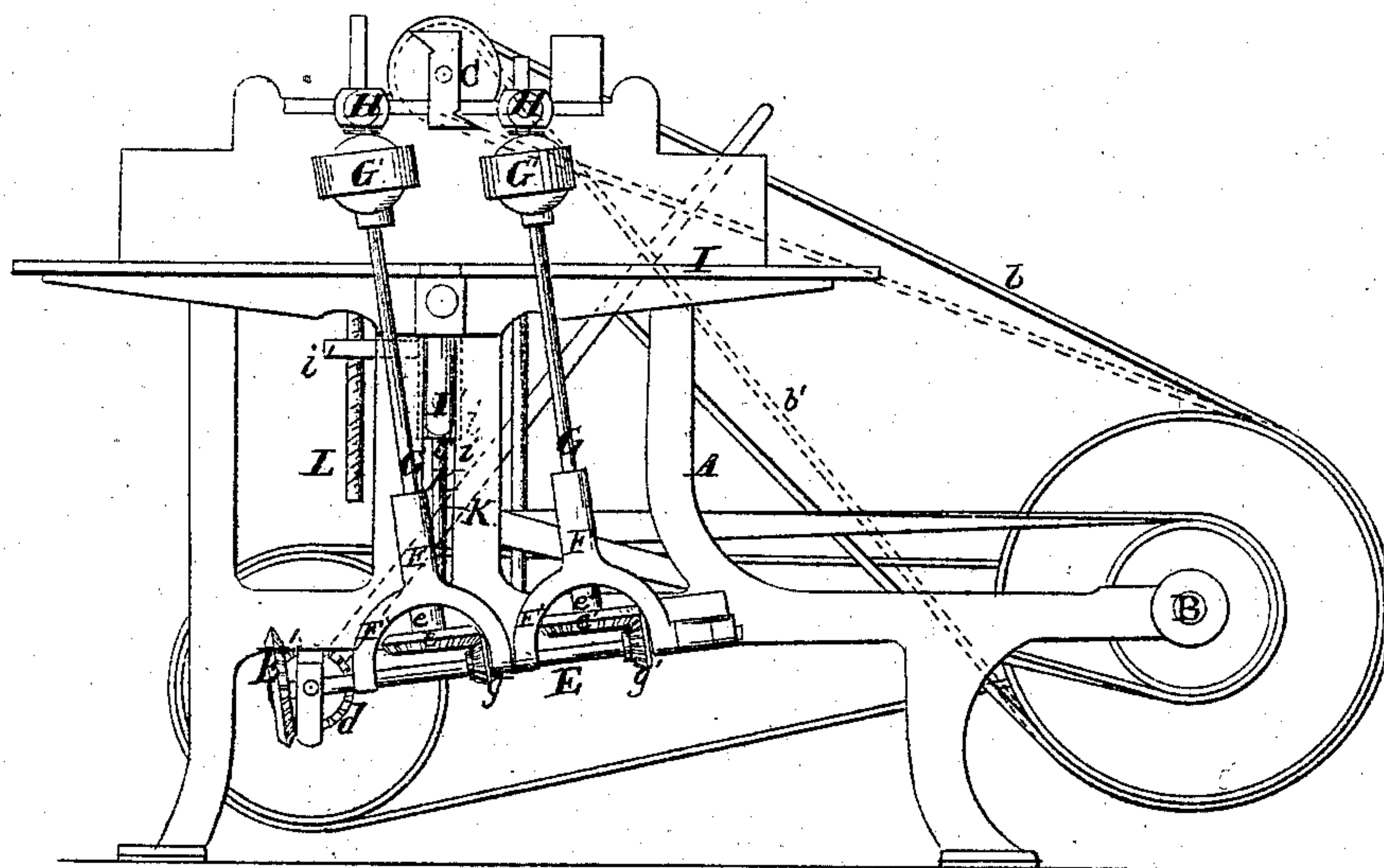
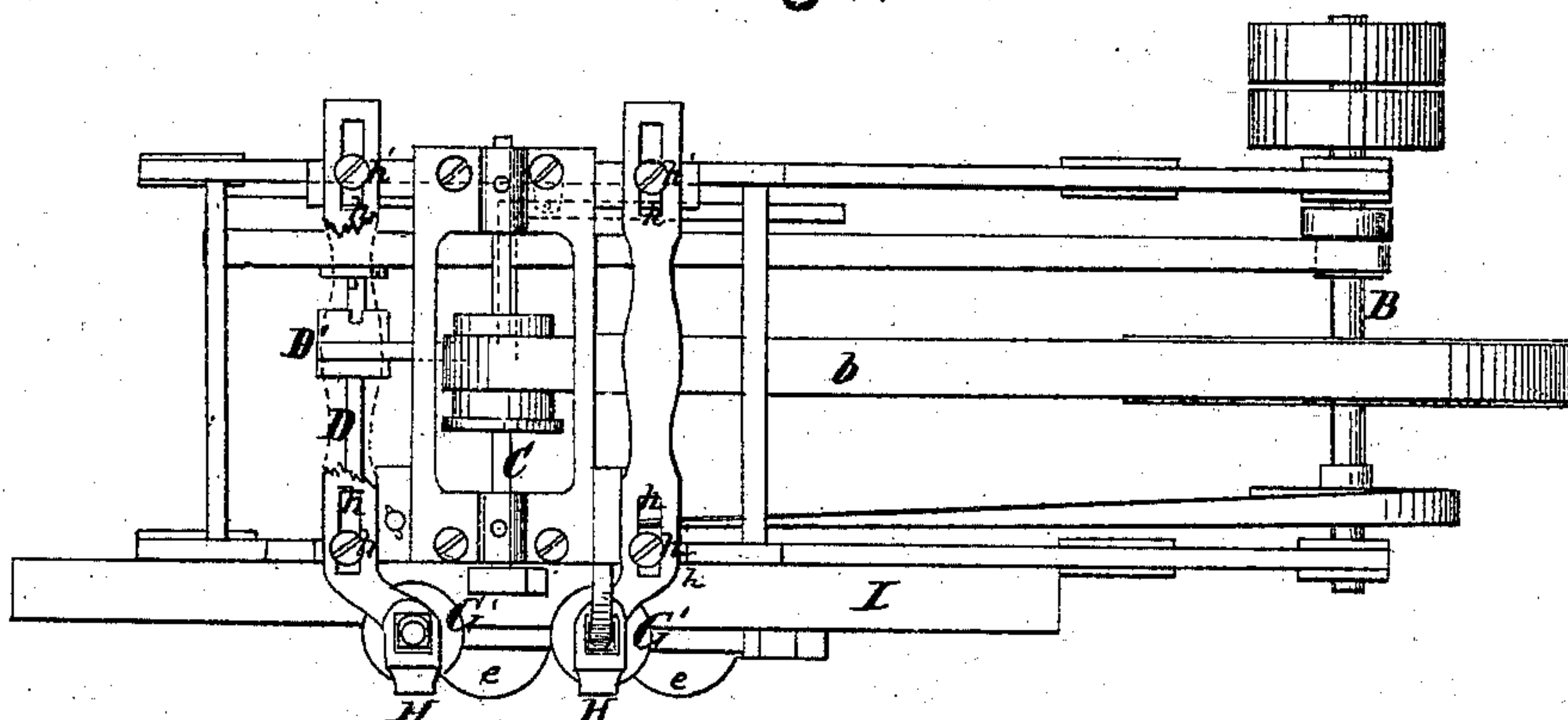


Fig. 2.



WITNESSES.

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN MOLDING-MACHINES.

Specification forming part of Letters Patent No. **138,015**, dated April 22, 1873; application filed May 18, 1872.

To all whom it may concern:

Be it known that I, JOHN W. GHEEN, of Wilmington, in the county of Newcastle and State of Delaware, have invented a new and valuable Improvement in Molding-Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a side elevation of my invention. Fig. 2 is a plan view.

My improvements have reference to the construction and arrangement of the feeding-rollers; also, to a novel method of effecting the adjustment of the table or fence, as herein-after fully set forth.

In the drawing, A represents the frame of the machine made of suitable form and proportions. B is a horizontal shaft, to which power is communicated by any suitable means, a fast and loose pulley being shown for that purpose. From this shaft B motion is communicated by means of suitable bands, as hereinafter described, to the cutter-shaft C and shaft D, by which the feed-rollers are turned, as presently set forth. This shaft D is provided with a sliding clutch, D', which engages with the pulley on the shaft when it is desired to communicate motion to the feeding-rollers. The shaft D is also provided at its end with a beveled cog-wheel, *d*, which meshes with the wheel E' on the shaft E. This shaft E is thrown slightly out of a horizontal position, the forward end being more elevated than the rear end. The shaft E passes through eyes in the arms F' F' of the collars F, in which the roller-shafts G G have their lower bearings. The shaft E is also provided with small beveled cog-wheels, *e e'*, which mesh into the wheels *g g'* on the shafts G G. G' G' are the feeding-rollers, which are constructed of India rubber, so that the wood to be turned will not be bruised in being fed forward. The upper ends of the roller-shafts have their bearings in boxes in slots in the brackets H H mounted on the top of the frame A. These brackets have other long slots *h h*, through which pass the set-screws *h' h'* for the pur-

pose of adjusting the rollers to the thickness of the stuff to be acted upon. I is the table upon which the stuff rests. It is made vertically adjustable by the following means. An arm, I', on which the table rests, is provided with a collar, *i*, which slides on a vertical rod, *k*, placed in the inner part of the frame and rigidly secured there. This collar is also provided with another arm, *i'*, through which passes a screw, L, operated from the upper side of the frame. The rollers are intended to have only a forward motion, and are mounted on shafts slightly inclined forward, so that the rollers not only feed well, but also bind down the stuff and prevent it from springing upward. By this means I am enabled to dispense with the springs which are usually employed to keep the stuff in position.

By means of the described construction of the lower gearing of the roller-shafts it is apparent that the rollers can be easily adjusted to different thicknesses of stuff, for as the collar-arms turn on the shaft E the wheels *e e'* are always in gear with the wheels *g g'*.

The cutter-shaft C is intended to run either backward or forward, which is accomplished by a straight belt, *b*, for the forward motion and a half-twist belt, *b'*, for the reverse motion. Both belts are intended to be kept on the machine at one time, one on the pulleys and the other lying loose on one side. The change is simply made by slipping off one belt and the other on. This reverse motion of the cutter-shaft is very important, as it enables one to work cross-grained or curly stuff without danger of tearing it up.

The cutter, instead of working against the stuff, as is usual, cuts down on it and with it as it passes through. The cutter-head, of course, would be reversed whenever a reverse motion of the shaft is made.

Having thus fully described my invention, what I claim is—

1. The feed-rolls G' G' made with elastic surfaces and mounted upon shafts, arranged as shown and described, to permit a lateral adjustment of the rolls to and from the cutter-head, and a lateral adjustment of the table, as specified.

2. In combination with the collars F hav-

ing arms F' F', the shafts E and G G, slotted bars H H, and wheels *e e'* and *g g'*, so as to permit a vibratory or swivel motion of the shafts G G, for the purpose of accommodating the feed-rollers to different thickness of stuff while retaining the wheels *g g' e e'* in gear.

3. In combination with the table I, the arm

I', collar *i*, rod *k*, arm *i'*, and screw L, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

Witnesses: JOHN W. GHEEN.

E. B. FRAZER,

J. H. FRAZER.