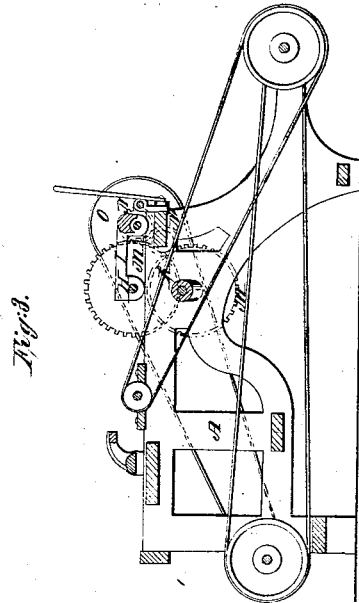


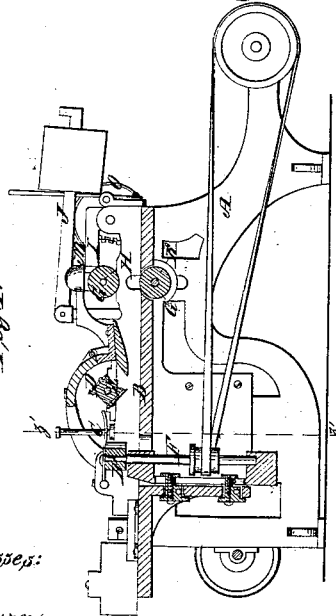
*H. B. Smith,*  
*Wood Molding Machine.*

*N<sup>o</sup> 50,637.*

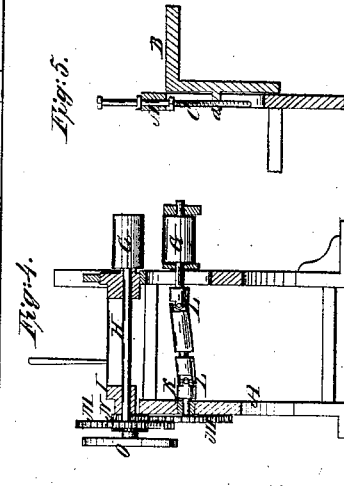
*Patented Oct. 24, 1865.*



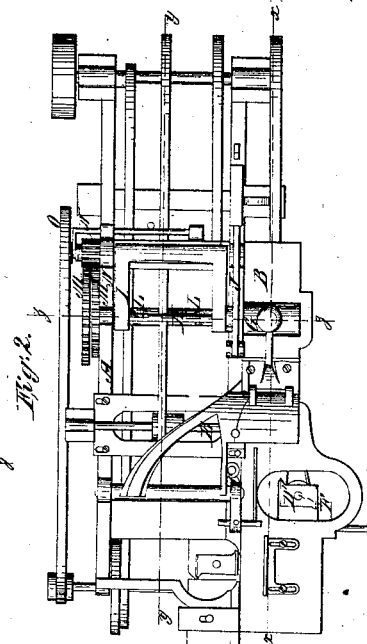
*Fig. 3.*



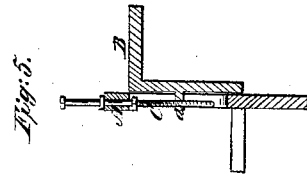
*Fig. 1.*



*Fig. 4.*



*Fig. 2.*



*Fig. 5.*

*Witnesses:*

*W. Drurn  
Jas. Busch*

*Inventor.*

*H. B. Smith  
Byllman & Co  
Atty*

# UNITED STATES PATENT OFFICE.

H. B. SMITH, OF LOWELL, MASSACHUSETTS.

## IMPROVEMENT IN PLANING-MACHINES.

Specification forming part of Letters Patent No. 50,637, dated October 24, 1865.

*To all whom it may concern:*

Be it known that I, H. B. SMITH, of Lowell, in the county of Middlesex and State of Massachusetts, have invented a new and Improved Machine for Cutting Moldings, Planing Boards, &c.; 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 side sectional view of my invention, taken in the line *xx*, Fig. 2; Fig. 2, a plan or top view of the same; Fig. 3, a side sectional view of the same, taken in the line *yy*, Fig. 2; Fig. 4, a transverse vertical section of the same, taken in the line *zz*, Fig. 2; Fig. 5, a vertical section of a portion of the same, taken in the line *z'z'*, Fig. 1.

Similar letters of reference indicate like parts.

This invention relates to a new and useful improvement in the feed mechanism of machines for cutting moldings—those in which pressure-rollers are employed for feeding the stuff to its work.

The invention consists in the employment or use of universal joints applied to the shaft of the lower feed-roller, in connection with a swinging frame in which the shaft of the upper feed-roller is placed, and with gearing for operating said feed-rollers, all being arranged as hereinafter fully shown and described, whereby the bed in which one of the cutter-shafts is fitted may be adjusted higher or lower, to suit the thickness of the molding to be cut, without at all affecting the operation of the feed-rollers, the latter performing their function equally as well whether thick or thin moldings are being cut, and without requiring any special adjustment to compensate for the variations of the thickness of the moldings.

A represents the framing of the machine, which may be constructed in any proper manner to support the working parts; and B is an adjustable or rising-and-falling bed-piece, which is attached to one side of the framing A in such a manner that it may be adjusted higher or lower as desired. This may be performed by means of a screw, C, fitted vertically in the

framing A, and passing through a nut, *a*, attached to the bed-piece, as shown in Fig. 5.

D represents a cutter-head, which is placed at one end of a horizontal shaft, E, on the framing A, and D' is a cutter-head placed on the upper end of a vertical shaft, F, in the bed-piece. This arrangement is old, and forms no part of my invention.

The cutters operate in the usual manner, cutting the molding in the desired form, the stick or stuff being fed along on the bed-piece B, underneath the cutter-head D, and by the side of the cutter-head D' by means of feed-rollers G G', placed one over the other, as shown in Figs. 1 and 4. The upper feed-roller, G, is at one end of a horizontal shaft, H, which has its bearings in a swinging frame, I, fitted on a shaft, *b*, on the framing A, said frame I allowing the roller G to rise and fall in the arc of a circle of which the shaft *b* is the center. The lower roller, G', has its bearings in the bed-piece B, said roller working in a slot or opening in the bed-piece, so that its upper edge will be a trifle above the upper surface of B and bear or press upon the under side of the stick or molding, the upper roller, G, bearing or pressing upon its upper surface with a pressure due to its weight, combined with that of the frame I and a loaded bar, J, which is shown in Figs. 1 and 2. The lower roller, G', is driven by and placed upon a shaft, K, which is provided with two universal joints, L L, as shown clearly in Fig. 4. These universal joints admit of the bed-piece B being adjusted higher or lower to suit the thickness of the molding being cut without affecting the shaft K or the gearing by which it is rotated. This gearing is composed of two toothed wheels, M M', and two pinions, N N', a wheel being on each of the feed-roller shafts H K, the wheel M of the upper roller-shaft having the pinion N gearing into it and the wheel M' of the lower roller-shaft having the pinion N' gearing into it, the former being applied to the pinion N by means of a pulley, O, which may be thrown out of gear with the pinion N when it is not designed to have the feed-rollers operate. The pinion N is placed loosely on the shaft *b* of the frame I, and consequently it will be seen that the wheel M will always be in gear with it, how-

ever much the frame I may rise, while the end of the shaft K, on which the lower roller, G', is fitted, has its bearing in the framing A, and is permanent, as well as pinion N', and hence these parts cannot change their position relatively with each other; neither can the pinions N N'.

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

The arrangement and combination of the universally-jointed shaft K L, feed-roller G, swinging frame I, and gearing M M N N, substantially as and for the purposes set forth.

H. B. SMITH.

Witnesses:

M. M. LIVINGSTON,  
C. L. TOPLIFF.