J. SEARS.

Variety Molding-Machine.

No. 166,817. Patented Aug. 17, 1875.

Fig. 1.

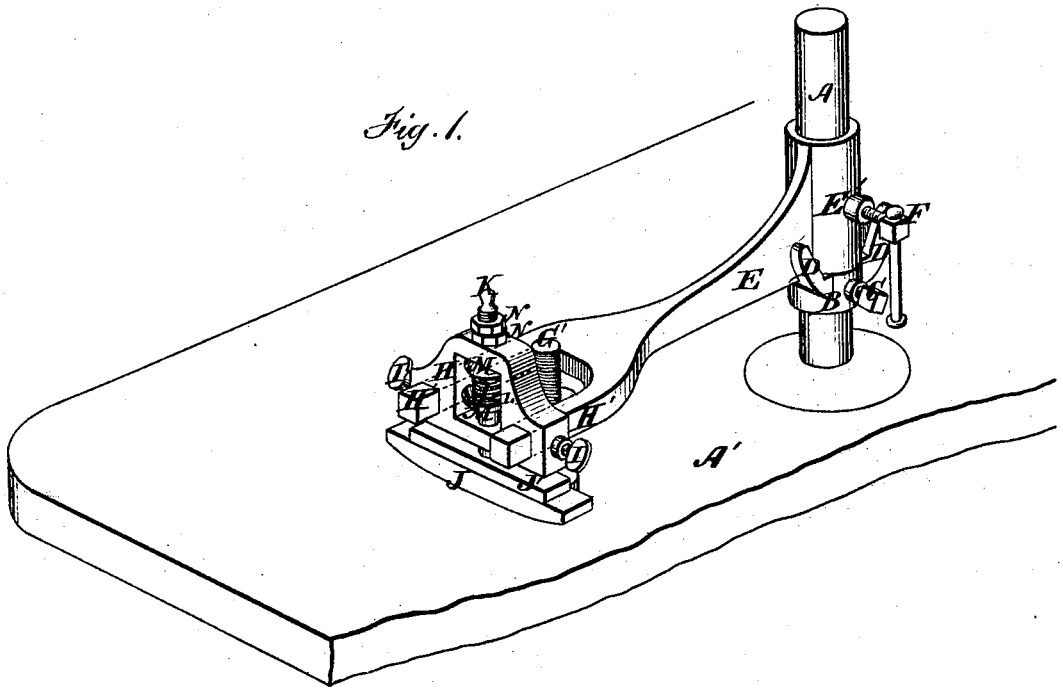


Fig. 2.

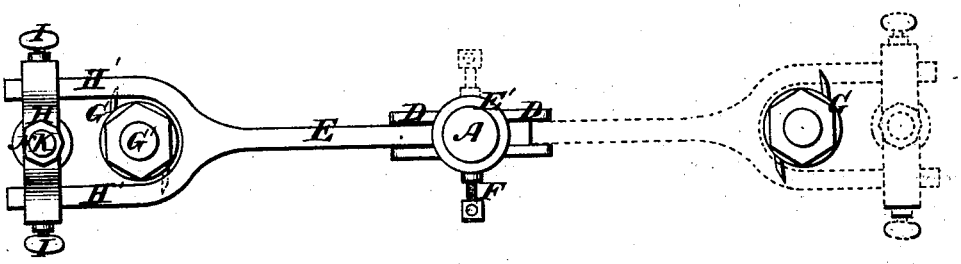
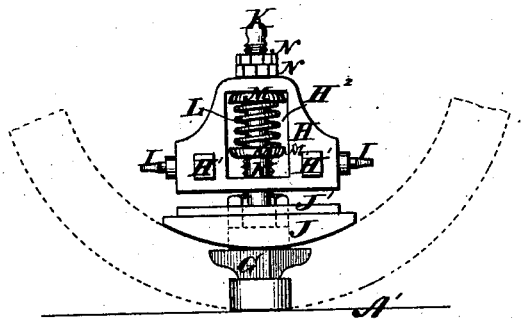


Fig. 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

JAMES SEARS, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN VARIETY-MOLDING MACHINES.

Specification forming part of Letters Patent No. **166,817**, dated August 17, 1875; application filed December 15, 1874.

To all whom it may concern:

Be it known that I, JAMES SEARS, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Variety-Molding Machines, of which the following is a specification:

Figure 1 is a perspective view of my invention; Fig. 2, a top-plan view, and Fig. 3 an end elevation.

This invention consists, primarily, in an arm pivoted so as to swing in a horizontal plane over the bed of a variety-molding machine, between the right and left hand cutters, its pivotal point being equidistant from them, said arm being so arranged, and having such radius, as to cause its outer end to project over and beyond the cutters. The outer end of the arm is provided with a suitable cross-head and spring-pressure block adapted to press downward on the stock, and, at the same time, constitute a guard to prevent the operator's fingers from coming in contact with the knives. My invention also consists in various details of construction, all of which I will now proceed to describe, and point out in the claims.

In the drawing, A represents a vertical cylindrical standard, firmly affixed to the bed or table A′ of a variety-molding machine, at a point equidistant from the right and left hand cutters G G. B is an adjustable collar located on the standard A, and held at any desired point by a set-screw, C. The collar B is provided with projections or yokes D, adapted to hold the swinging arm E. The latter projects from a collar, E′, located on the standard A above, and resting on the collar B, the arm E being adapted to swing horizontally, and to be adjusted vertically in the same manner as the collar B, being confined by a set-screw, F. The arm E is of such length as to project beyond the cutters G, as shown in Figs. 1 and 2, and is bifurcated at its outer end. An adjustable cross-head, H, is located on the bifurcations H^1, so as to slide thereon horizontally, being held by set-screws I I. The cross-head H carries the spring-pressure block J, which is adapted to press downward on the stock being molded, and hold it with a yielding pressure. The block J, made preferably of wood, is attached to a bracket, J′, located on the lower end of a vertical rod, K, which passes up through the cross-head, within which it is surrounded by a spiral spring, L, confined between two collars, M, in a recess, H^2, in the cross-head. The upper end of the rod K is threaded and provided with lock-nuts N N, by means of which the tension of the spring L may be adjusted. When in operation the arm E is swung into proper position with relation to one of the cutters G—that is, with its bifurcated end projecting over the cutter-spindle G′, the end of the latter usually projecting upward between the bifurcations, as shown in Fig. 1. The arm is held in this position by the yoke D on the side nearest the operating cutter, each yoke being so arranged as to project in the direction of the adjacent cutter, one yoke being provided for each cutter, and each yoke holding the arm in the proper position for operation in connection with the corresponding cutter, as shown in Fig. 2. When in the position shown the cross-head H and pressure-block J act as a guard to prevent the operator's fingers from coming in contact with the cutters, while at the same time the pressure-block holds the stock down to the table. It will thus be seen that the arm, with its attachments interposed between the cutters and the hands of the operator, has a twofold purpose, rendering it impossible for the workman to touch the cutters without making a particular effort to do so, and preventing the stock from trembling. To shift the arm with its attachments from one cutter to the other, as from the right to the left hand cutter, it is only necessary to loosen the screw F, raise the arm E on its standard until it swings clear of the yoke D, by which it was last confined, and swing it around until it can drop into the other yoke, in which position it will occupy the same relation to the second cutter as that already described to the first, as shown by dotted lines in Fig. 2. It will be readily seen that as all the parts are adjustable—the arm E and collar B vertically, and the cross-head and pressure-block horizontally—the device can readily accommodate itself to stock of varying thickness and cutters of different sizes. The pressure block or shoe J is beveled somewhat at its ends on its under side, so as to allow the stock to be pushed under it readily. It is detachable from the bracket J′, and

may be replaced by another block having a greater or less degree of convexity, so as to admit of the introduction of a piece of curved stock. By this means I am enabled to form moldings or "sunk members" on the faces of stock having any degree of curvature, as shown in Fig. 3.

I do not desire to limit myself to the precise construction of the cross-head and pressure-block, as other equivalent devices may be employed in combination with the swinging arm without departing from the spirit of my invention. Neither do I limit myself to the joint use of a guard and pressure-block in connection with the swinging arm, as either may be used independently; but

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a variety-molding or other wood-working machine, an arm or bar pivoted at a point equidistant from the right and left hand cutters, in such manner as to swing horizontally, carrying on its swinging end suitable devices for holding down the stock and protecting the workman's hands from the cutters, and adapted to be held so as to operate interchangeably with said cutters, substantially as described, for the purpose specified.

2. The vertical standard A, located at a point equidistant from the cutters, and having the adjustable collar B, provided with yokes D, in combination with the horizontally-swinging vertically-adjustable arm E, having suitable attachments on its swinging end, for holding the stock and protecting the workman's hands, and the right and left hand cutters G G, all arranged and operating substantially as and for the purpose specified.

3. The horizontally-adjustable cross-head H, having the spring pressure-block J, in combination with the swinging arm E, substantially as and for the purpose specified.

4. The pressure-block J, having the vertical rod K, lock-nuts N, collars M, and spring L, in combination with the cross-head H, substantially as and for the purpose specified.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES SEARS.

Witnesses:
ALBERT F. LAUTEN,
C. F. BROWN.