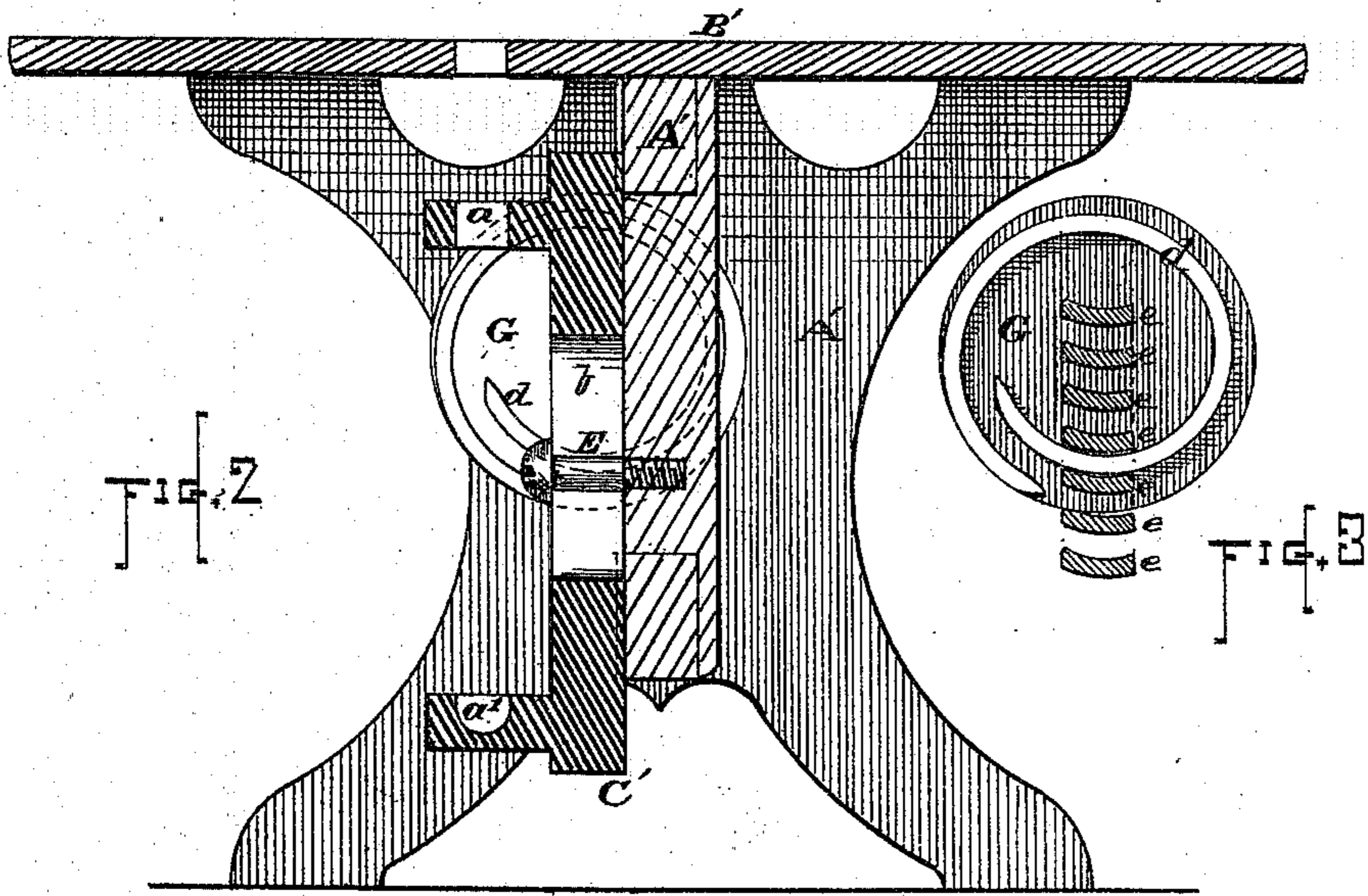
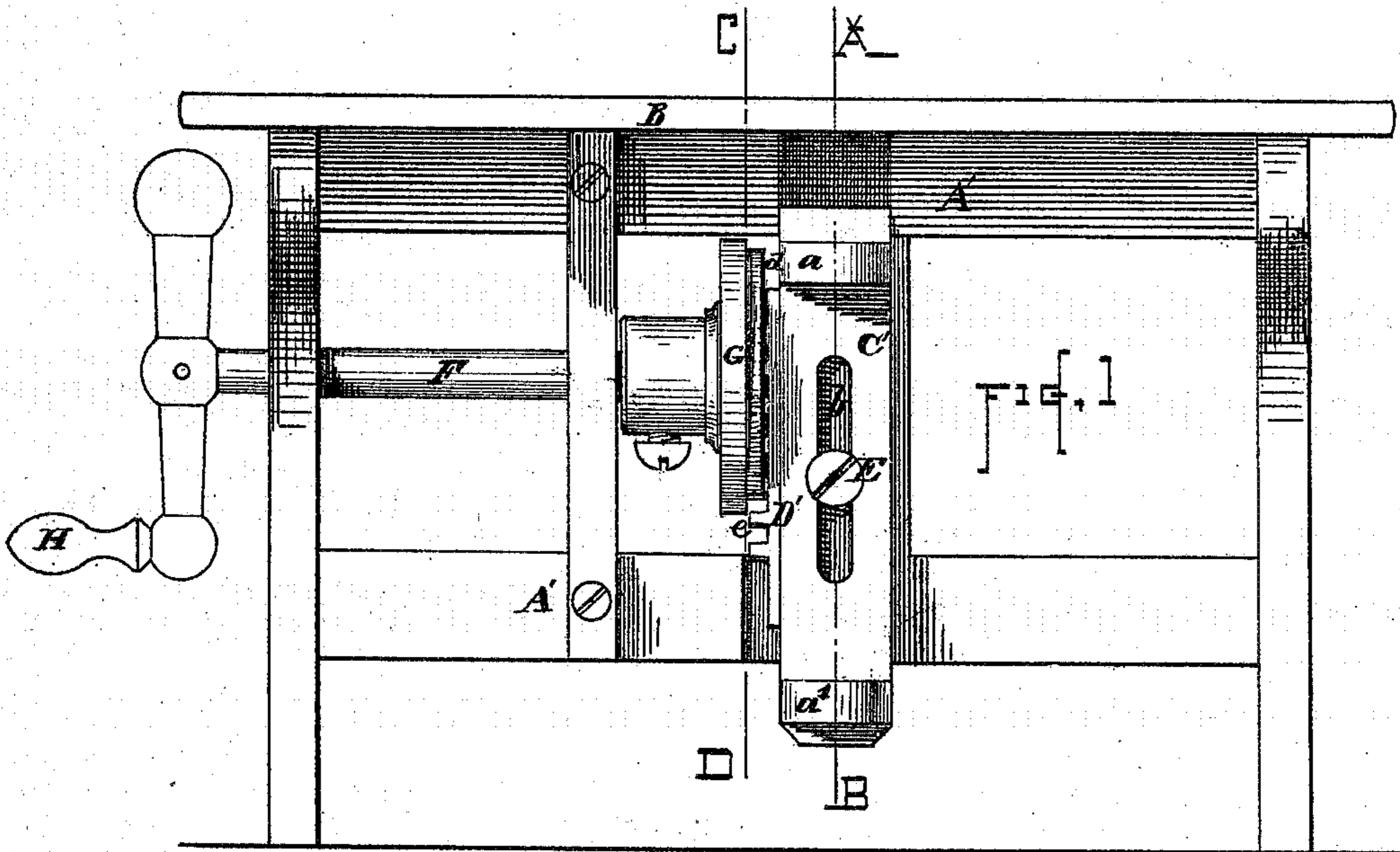


M. W. CLARK.

Improvement in Molding-Machines.

No. 131,666.

Patented Sep. 24, 1872.



Witnesses

Thos. H. Dodge
Chas. H. Burleigh

Inventor

Milton W. Clark

UNITED STATES PATENT OFFICE.

MILTON W. CLARK, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO R.
BALL & CO., OF SAME PLACE.

IMPROVEMENT IN MOLDING-MACHINES.

Specification forming part of Letters Patent No. 131,666, dated September 24, 1872.

To all whom it may concern:

Be it known that I, MILTON W. CLARK, of the city and county of Worcester and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Molding-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing which form a part of this specification, in which—

Figure 1 represents a front view of such parts of an upright molding-machine as are necessary to illustrate my improvement; Fig. 2 represents a vertical section of the same at line A B, Fig. 1, and Fig. 3 represents a vertical section of the raising device at line C D, Fig. 1.

This invention consists in certain improved mechanism for raising and depressing the vertical cutter-head spindles in molding and other similar wood-working machines, whereby the operation can be performed with greater ease and facility, while at the same time a more accurate adjustment of the parts is produced than with the mechanism heretofore in use.

In the drawing, the part marked A' represents the frame; B' indicates the table or bed, and C' indicates the slide which supports the vertical spindle of the cutter-head, which spindle is not shown in the drawing, but is to be arranged in the bearings *a a'* upon the slide C' in the ordinary manner. The slide C' is provided with a rack, D', attached to one of its sides, and is arranged to move up and down between suitable ways or grooves on the frame A'; said slide is slotted through the central part *b*, and has a clamping screw or bolt, E, arranged through the slot *b*, by means of which it can be firmly clamped against the frame. A shaft, F, extends from the exterior of the frame A' to the slide piece C', said shaft being provided at its inner end with a disk, G, upon the face of which is a spiral flange or volute, *d*, that intersects with the teeth *e* of the rack D (see Fig. 3) in such a manner that when the

shaft F and disk are revolved the spiral flange, acting upon the teeth *e*, causes the slide C' to be elevated or depressed, according to the direction in which the shaft F is revolved, thereby elevating or depressing the cutter-head. The outer end of the shaft F is provided with a crank, H, or other suitable device, whereby it can readily be turned when desired. When the cutter-head is properly adjusted it can be retained or held in place by the flange *d* and rack D' resting against each other, since the rack rests upon the flange at the lower part of the disk, in line with the center thereof, and the inclination of the flange is so slight that the disk will not be moved by the weight of the slide and cutter-head. The parts can also, if desired, be more firmly secured in such position by turning up the screw or bolt E, which clamps the slide C' to the frame A'.

It will be observed that with this device the cutter-head-supporting bearings *a a'* can be raised and depressed very easily to a greater or less extent, so that their position can be adjusted to the greatest degree of nicety, consequently the most accurate adjustment of the cutters possible can be obtained with but very little trouble.

By spindles of molding-machines as used in this specification reference is had to vertical spindles which support the cutter-heads in all machines, for either jointing, molding, or planing the edges of boards or other materials.

Having described my improved raising apparatus for upright molding-machines, what I claim as new therein and of my invention, and desire to secure by Letters Patent, is—

The combination, with the bearing-slide C', which supports the vertical cutter-head spindle in a wood-working machine, as specified, of the rack D', spiral-flanged disk G *d*, and shaft F, substantially as and for the purposes set forth.

MILTON W. CLARK.

Witnesses:

THOS. H. DODGE,

CHAS. H. BURLEIGH.