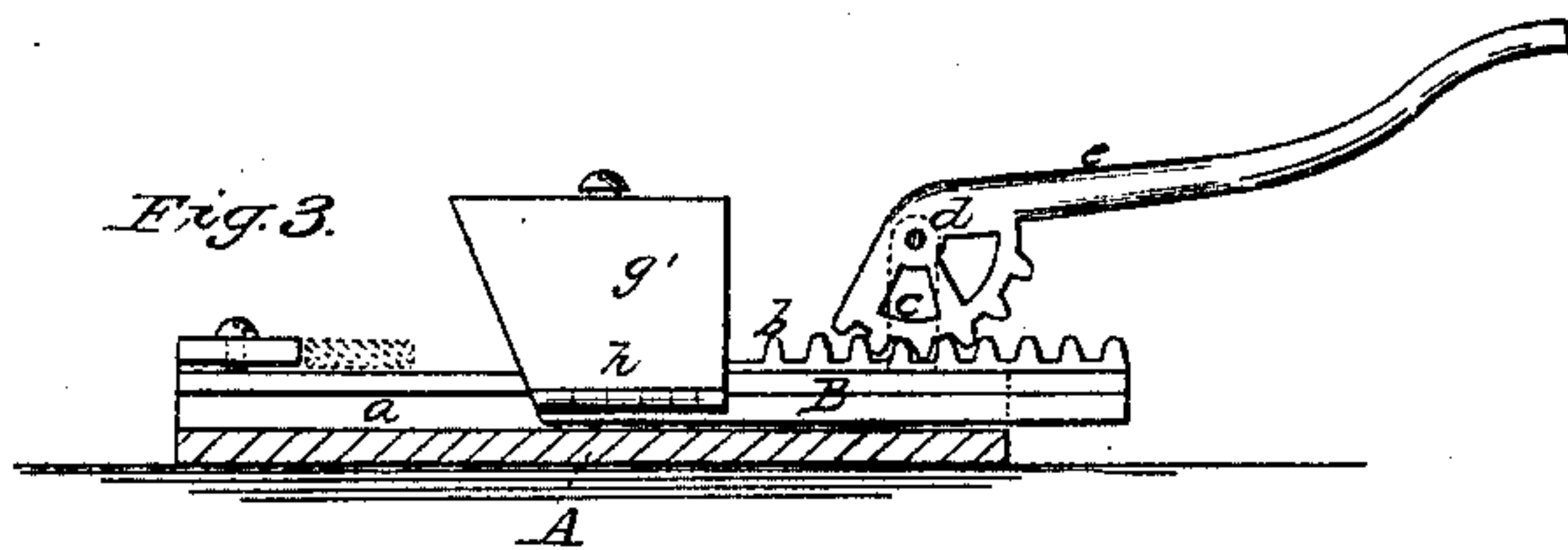
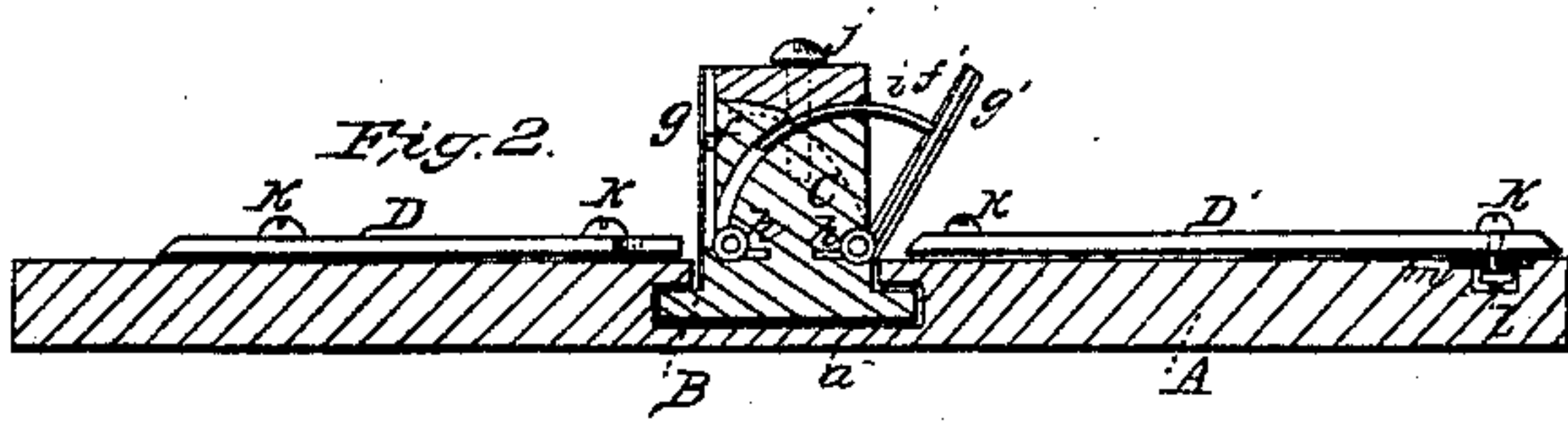
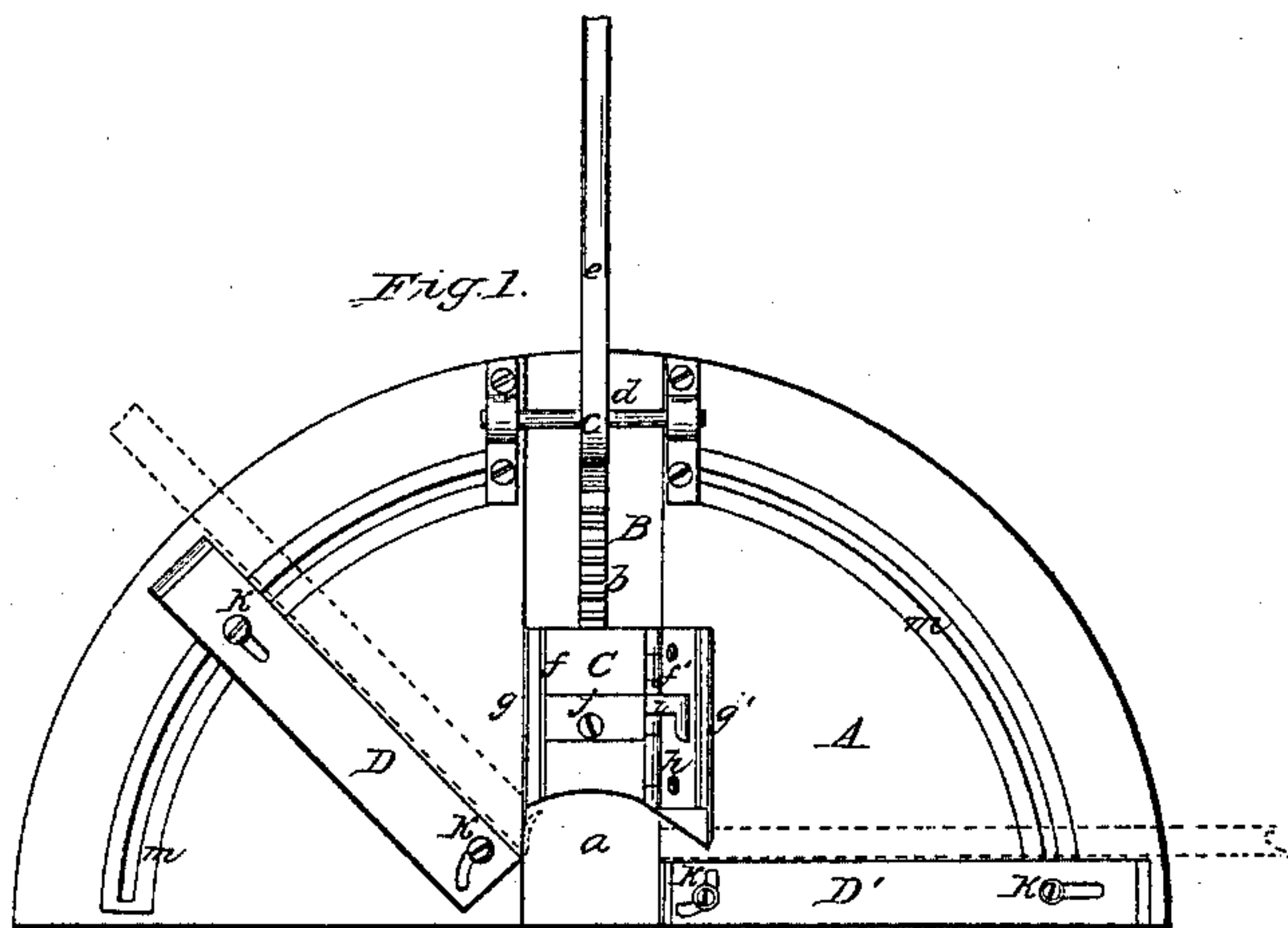


F. A. Howard,
Mitering Machine.

N^o 57,325.

Patented Aug. 21, 1866.



Witnesses.
Geo. A. Service
Robt. H. H. H. H. H.

Inventor.
F. A. Howard
Per *Wm. H. H. H.*
Attorney

UNITED STATES PATENT OFFICE.

FRANK A. HOWARD, OF BELFAST, MAINE.

IMPROVEMENT IN MITERING-MACHINES.

Specification forming part of Letters Patent No. 57,325, dated August 21, 1866.

To all whom it may concern:

Be it known that I, FRANK A. HOWARD, of Belfast, Waldo county, State of Maine, have invented a new and Improved Mitering-Machine; 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 represents a plan or top view of this invention. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is a transverse vertical section of the same.

Similar letters of reference indicate like parts.

This invention consists in a mitering-machine which is composed of a transversely-sliding head provided with one or more hinged adjustable cutters, in combination with rests which are adjustable in segmental slots in such a manner that for the purpose of mitering edgewise the rests can be adjusted to any desired angle, and for the purpose of mitering flatwise the knife or knives are brought in the desired inclination, and any required angle can be given to a strip of wood or molding.

A represents the bed of my machine, which may be made of wood or any other suitable material. This bed is formed in the shape of a semicircle, and it is provided with a radial groove, *a*, which divides the same in two equal parts, and which forms the guide for the carriage B. To the upper surface of this carriage is secured a toothed rack, *b*, and a segment, *c*, gears into this rack, as shown particularly in Fig. 3 of the drawings. Said segment is mounted on a shaft, *d*, and an oscillating motion is imparted to it by a hand-lever, *e*. By raising the hand-lever *e* the carriage is moved out, and by depressing said hand-lever the carriage is made to move in toward the center of the bed.

From the inner end of the carriage B rises the head C, which is provided with two side wings, *f f'*, to which the cutters or knives *g g'* are secured. Said wings are connected to the cutter-head by means of hinges *h*, so that they can be brought in an upright or in an inclined position, and they are provided with curved arms *i*, which extend in correspondingly-curved slots in the head, and which can be secured in any desired position by a screw-clamp, *j*; or, if

requisite, a separate set-screw may be applied to the curved arm of each wing.

The knives themselves are made of blades of sheet-steel, which are fastened to the wings *f f'* by screws or rivets, and they may be provided with two or more cutting-edges, each of which can be brought in working position whenever it may be desired.

The moldings or strips of wood to be acted on by the cutters or knives *g g'* are placed on the bed A, and they abut against rests D D'. These rests are secured to the bed, each by two set-screws, *k*, one of which screws into a nut, *l*, fitted into a dovetailed segmental slot, *m*. (See Fig. 2.) By releasing said set-screws the rest can be moved to any desired angle with the cutter-head, from ninety degrees down to five degrees or less, and if the rests have been adjusted at the desired angle the edges or ends of the moldings or pieces of wood can be cut off with the greatest ease and facility.

For the purpose of mitering moldings or other articles edgewise, the rests and knives are adjusted in the position given to the rest D and knife *g* in Figs. 1 and 2 of the drawings, and by adjusting the rest the end or edge of the molding or other article can be cut to any desired angle. For mitering flatwise, the rests and knives have to be adjusted in the position given to the rest D' and knife *g'* in Figs. 1 and 2, said rest being secured at an angle of ninety degrees toward the cutter-head, and the knife being brought in the desired inclination by the hinged wing *f'* and screw-clamp *j*.

The power of this machine may, of course, be increased to any desired extent by increasing the length of the hand-lever, and pieces of wood of almost any size can be beveled off to any desired angle with little trouble or loss of time.

What I claim as new, and desire to secure by Letters Patent, is—

The reciprocating head C, with its adjustable knives or cutters *g g'*, in combination with adjustable rests D D', constructed and operating substantially as and for the purpose described.

FRANK A. HOWARD.

Witnesses:

B. B. GLIDDEN,
ALFRED PATTERSON.