

J. W. Killam, Wood Molding Machine.

No. 19,702.

Patented Mar. 29, 1858.

Fig. 2.

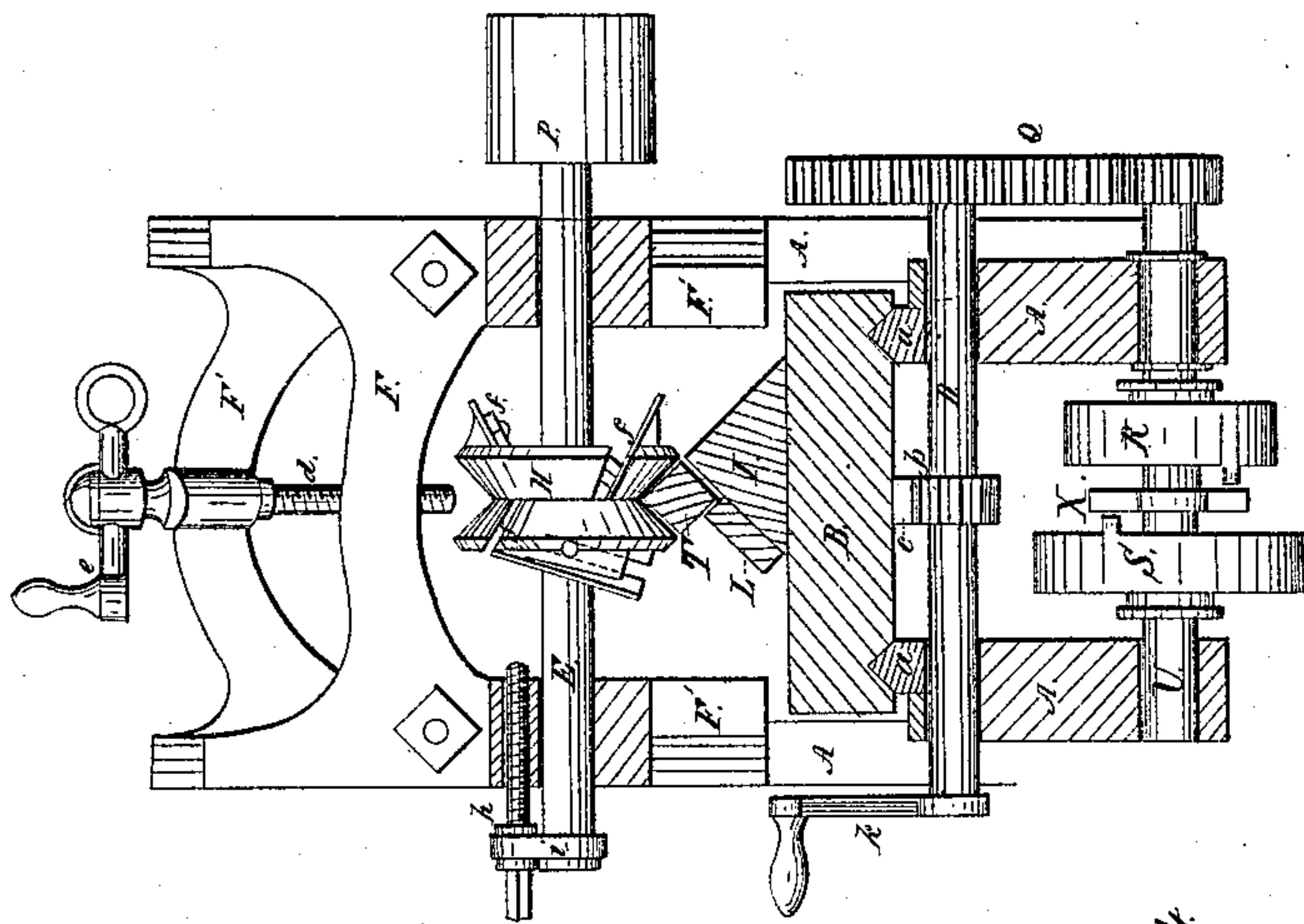


Fig. 3.

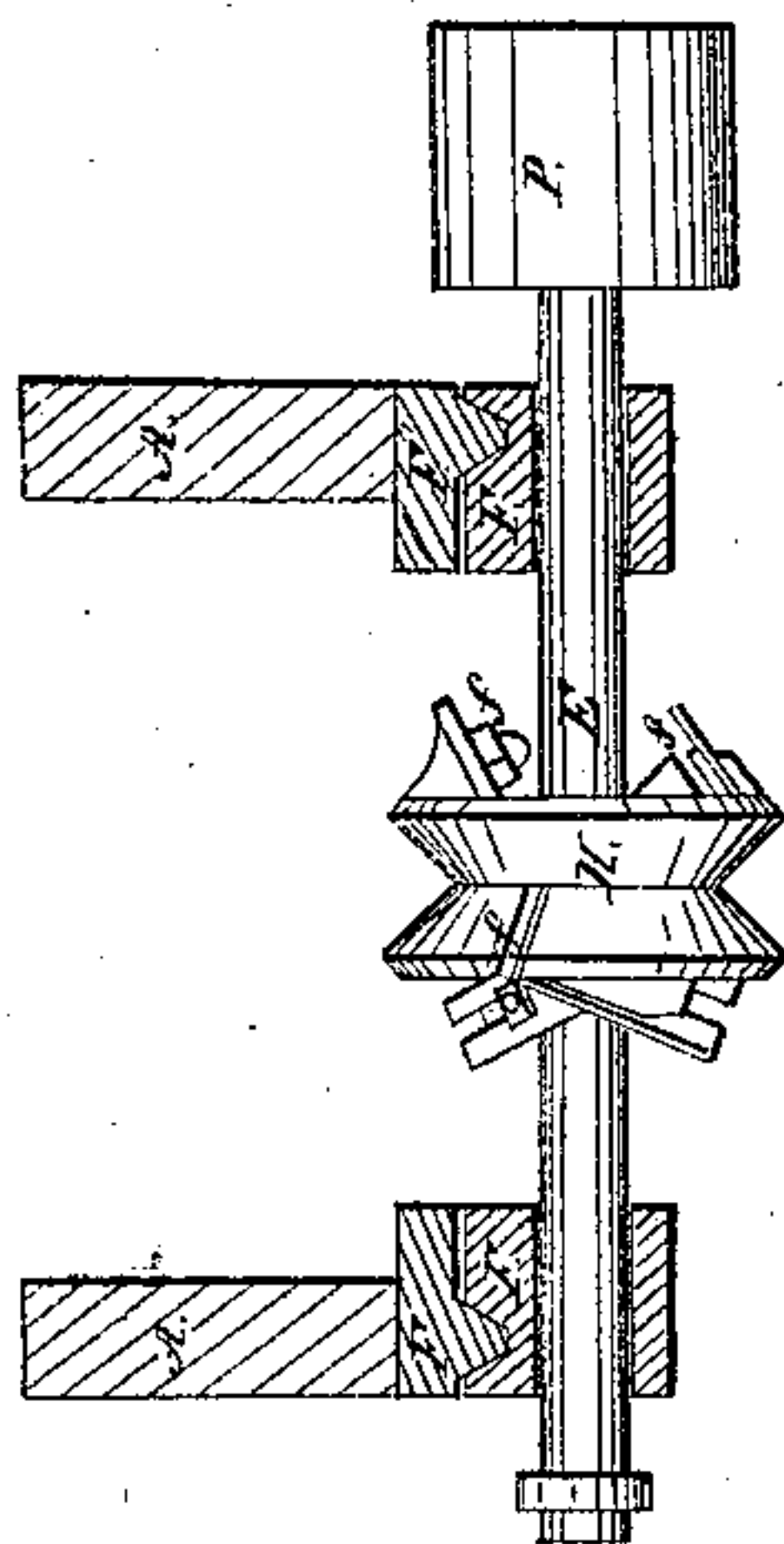


Fig. 4.

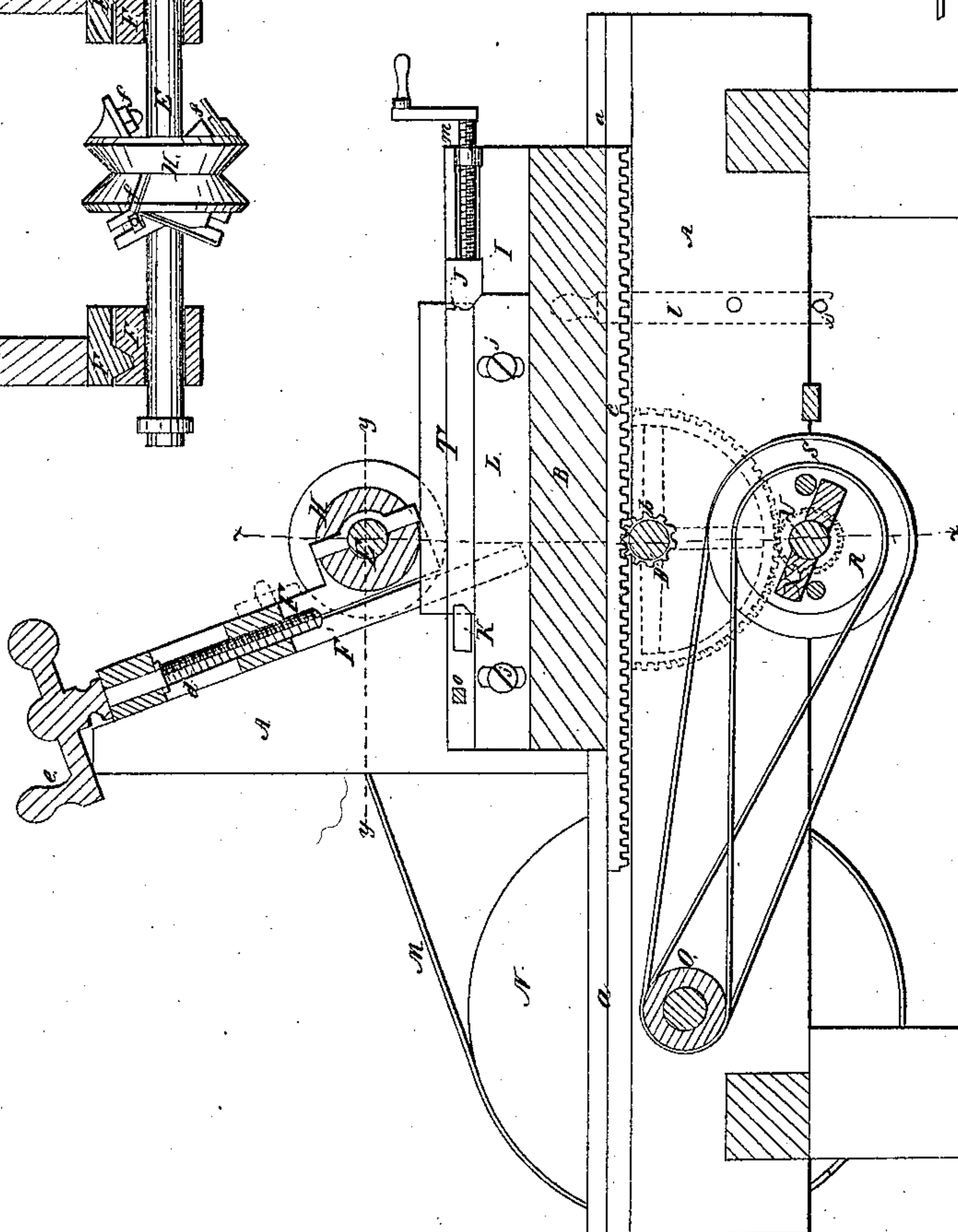


Fig. 4.



UNITED STATES PATENT OFFICE.

JOSEPH W. KILLAM, OF EAST WILTON, NEW HAMPSHIRE.

IMPROVED METHOD OF CLAMPING POLYGONAL PIECES IN PLANING-MACHINES.

Specification forming part of Letters Patent No. **19,702**, dated March 23, 1858.

To all whom it may concern:

Be it known that I, JOSEPH W. KILLAM, of East Wilton, in the county of Hillsborough and State of New Hampshire, have invented a new and Improved Machine for Planing Two Sides of Angular Sticks of Timber at One Operation; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a longitudinal vertical section of my improvement, the plane of section being through the center. Fig. 2 is a transverse vertical section of same, X X, Fig. 1, showing the plane of section. Fig. 3 is a horizontal section of same, y y, Fig. 1, showing the plane of section. Fig. 4 is a vertical section of an improved dog for holding the timber to be planed.

Similar letters of reference indicate corresponding parts in the several figures.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A represents a rectangular frame made in any proper manner and of wood or any other suitable material to support the working parts. On the top of the longitudinal side pieces of the frame A are secured the slides or tracks *a*, which may be constructed of cast-iron or other suitable material and made of any proper form, on which the carriage B is made to traverse in a longitudinal direction with a back and forward feed-motion, as required, by means of the rack C, secured on the underside of the carriage B, and the pinion *b*, which is made fast on the transverse shaft D.

E is a transverse shaft which works in bearings formed in the vertical slide F, which is fitted on the vertical guide-pieces F', the manner of fitting being clearly shown in Fig. 3. The slide F is adjusted or raised and lowered by the screw *d*, which is operated by the crank *e*, as shown in Figs. 1 and 2. The shaft E may also be moved longitudinally in its bearings by means of a screw *h*, which passes through an arm *i*, attached to one end of the shaft. (See Fig. 2.)

The shaft E has a hub or head H hung permanently upon it. This hub or head has a grooved periphery of V form, as the machine

represented in the drawings is intended for planing four-sided or rectangular sticks of timber. Cutters *f* are attached to the outer sides of the hub or head, and their cutting-edges pass through slots or openings, so as to slightly project beyond the beveled surfaces of the periphery of the hub or head. The hub or head is clearly shown in Figs. 2 and 3.

I represents a triangular piece of wood fastened on the carriage B, to which the dogs J and K are attached for the purpose of holding the piece of timber T to be planed. L is a sliding piece, which is adjusted by the means of the screws and slots *j* for the purpose of accommodating different-sized sticks. The dog J is forced against the end of the stick T by means of the screw *m*. The dog K, which is shown in vertical section at Fig. 4, has a hook or claw *n*, which catches in the holes *o* in an iron plate on the face of the piece I, which holes are made at such distances apart as to accommodate any length of timber to be planed.

The hub or head H is driven by a belt M, which passes around a pulley N at one end of the driving-shaft O and around the pulley P on one end of the shaft E. The pinion *b*, which drives the carriage B, is operated by the gear-wheels Q, which are operated by the loose pulleys R and S on the shaft U, said pulleys being thrown in and out of gear with the shaft U by a clutch X. (Shown in Figs. 1 and 2.)

k is a crank on one end of the shaft D for the purpose of running back the carriage B by hand when required.

l is a handle placed on the side of the machine for the purpose of moving the loose pulleys R and S in and out of gear with the clutch X for the purpose of operating the feed-motion of the carriage B.

Operation: The stick to be planed is put upon the carriage in the corner groove formed by the triangular piece I and the sliding piece L and made fast by means of the dogs J and K, and the hub or head H is adjusted to the proper height by turning the screw *d*, and also adjusted laterally by turning the screw *h*, so as to have the cutters *f* operate on either or both of the upper sides of the stick, as required. If it is required to plane more than two sides of a four-sided stick when two sides are planed, it may be loosened from the car-

riage and turned over and the other two sides planed.

By the above improvements it will be seen that two sides of any four-sided stick of timber may be planed straight and out of wind at one operation and at any angle with each other that the cutters *f* may be set; also, that it is not essential that the sides be equal in breadth, because the hub or head *H* may be moved laterally, the shaft *E* being adjusted by turning the screw *h*. By this arrangement two opposite sides of the stick may be much broader than the others and still be planed, provided the cutters have sufficient breadth.

In case sticks the sides of which are at any other than right angles with each other are

to be planed it is only necessary to have the cutter-head *H* and the groove formed by the triangular piece *I* and the sliding piece *L* to correspond to the required angle, and they may be made to embrace more than two sides, if required.

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

The triangular piece *I* and the sliding piece *L* and the dog *K*, in combination with each other, for the purposes described.

JOSEPH W. KILLAM.

Witnesses:

LEVI A. PIERCE,

R. EMELINE HUNTLEY.