

C. ALBERTSON, I. E. & J. HOBSON.
Stave-Machines.

No. 153,996.

Patented Aug. 11, 1874.

Fig. 1.

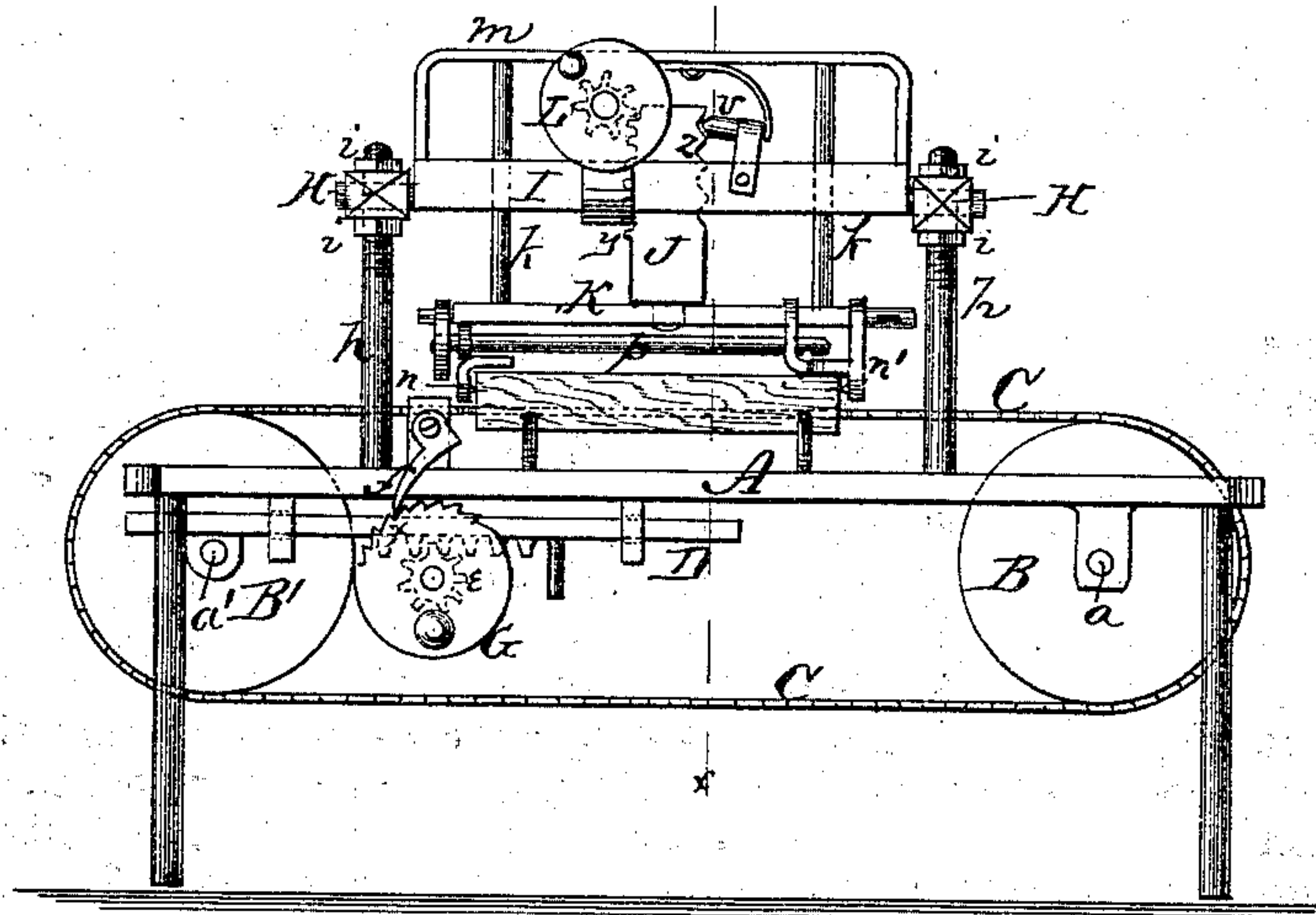


Fig. 2.

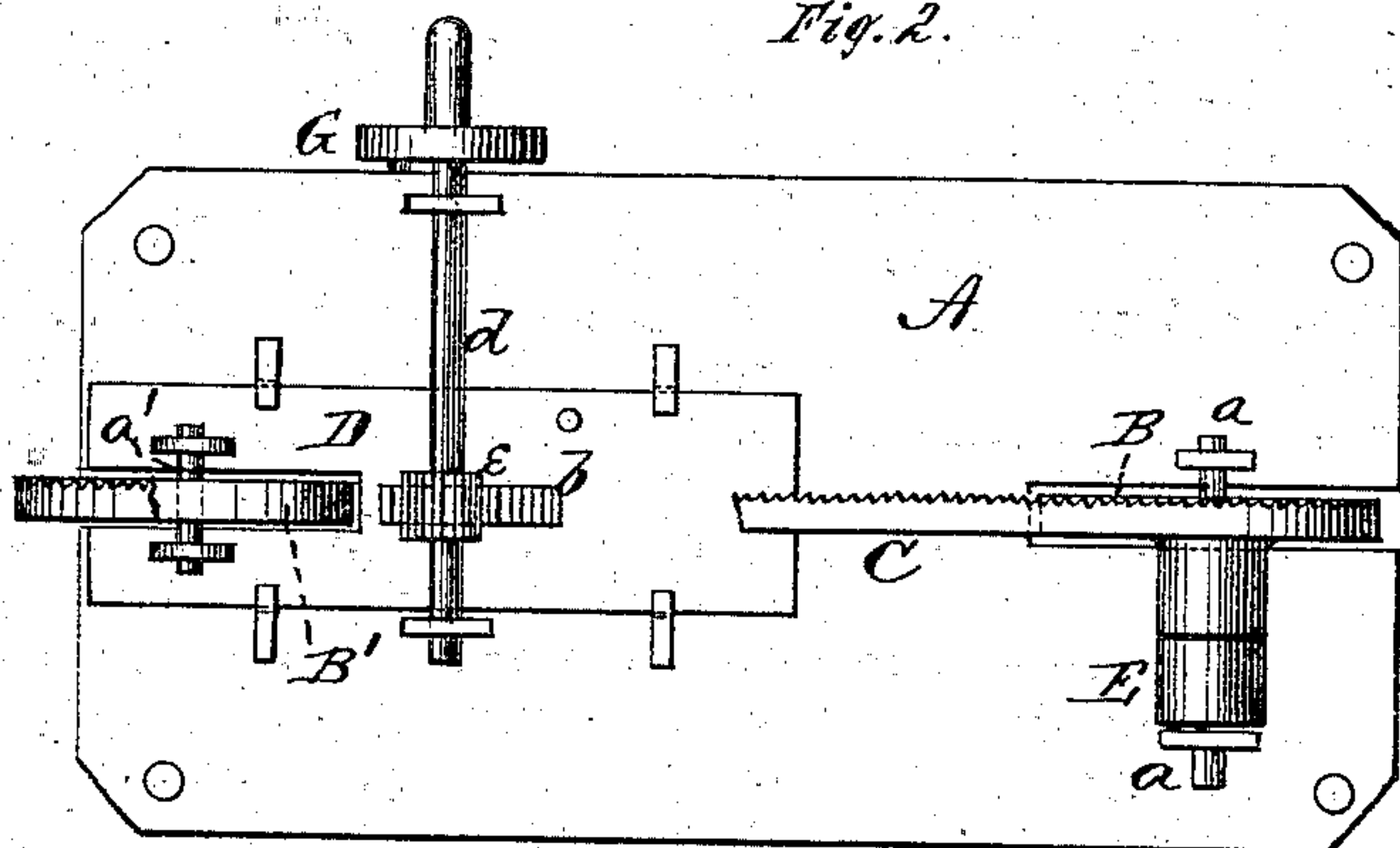
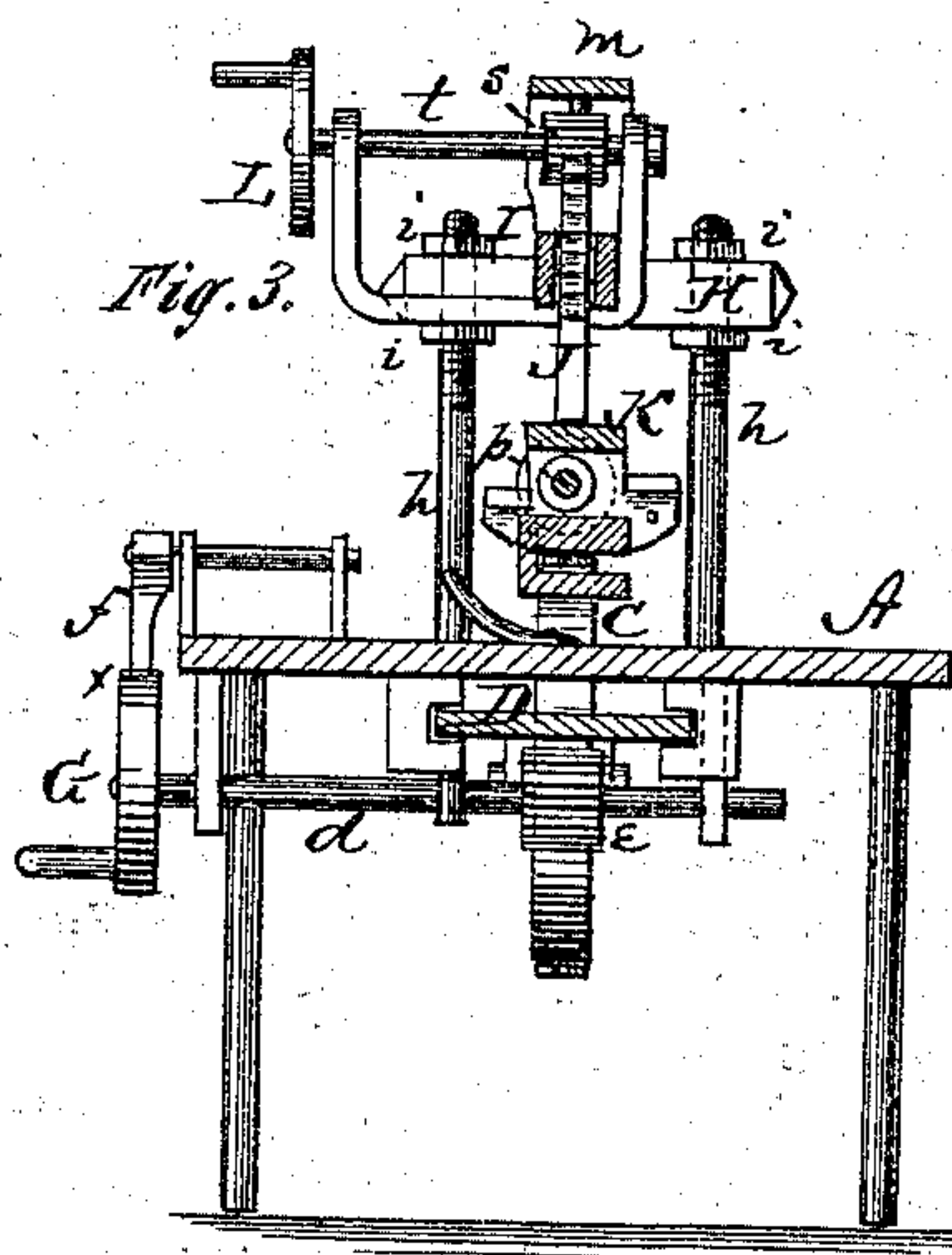


Fig. 3.



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UNITED STATES PATENT OFFICE.

CALVIN ALBERTSON, IRA E. HOBSON, AND JOHN HOBSON, OF DALTON, IND.

IMPROVEMENT IN STAVE-MACHINES.

Specification forming part of Letters Patent No. 153,996, dated August 11, 1874; application filed February 26, 1874.

To all whom it may concern:

Be it known that we, CALVIN ALBERTSON, IRA E. HOBSON, and JOHN HOBSON, of Dalton, in the county of Wayne and State of Indiana, have invented certain new and useful Improvements in Stave-Machines; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, which form a part of this specification.

The nature of our invention consists in the construction and arrangement of a machine for sawing staves by means of a band-saw, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a front elevation of our machine. Fig. 2 is a bottom view thereof; and Fig. 3 is a transverse vertical section of the same, taken through the line *x x*, Fig. 1.

A represents the table of the machine, and B B' are the two wheels over which the saw C passes, said saw being of the kind usually known as band-saws. The wheel B is attached to a shaft, *a*, mounted in suitable stationary bearings on the under side of the table A, and upon said shaft *a* is also attached a pulley, E, to which the power is applied for running the saw. The wheel B' is secured on a shaft, *a'*, which is mounted in suitable bearings upon the under side of a slide, D, said slide being placed in suitable guides on the under side of the table A. By this means the wheel B' may be adjusted out or in, as required, to compensate for the contraction and expansion of the band-saw, and thus keep the same always at the proper tension. Upon the under side of the slide D is a rack-bar, *b*, into which takes a pinion, *e*, on a shaft, *d*. This shaft is placed in suitable bearings on the under side of the table A, and has upon its front end a crank-wheel, G, by means of which the shaft is turned to move the slide D and adjust the wheel B'. Upon the edge of the wheel G are formed ratchet-teeth *x*, into which takes a

pawl, *f*, for holding the wheel G, and through it the wheel B', at the point to which it has been set. From the top of the table A rise four posts, *h h*, arranged in pairs, two and two, and each pair connected at their upper ends by a cross-bar, H. In the cross-bars H H the journals of a head-block, I, have their bearings, and said cross-bars H are adjustable up and down upon the posts *h* by means of nuts *i*, above and below the same, screwed upon the posts, whereby the head-block is adjusted for any size of stave and circle. Through a vertical slot in the head-block I passes a slide, J, to the lower end of which is attached a bar, K, running below and parallel with the head-block, and which has near each end a rod, *k*, passing upward through the head-block and through a frame, *m*, attached to the upper side thereof, for the purpose of guiding and staying the bar K. At one end of the bar K is permanently attached a clamp, *n*, and upon the other end is placed a movable clamp, *n'*, which is moved by means of a screw-shaft, *p*, as shown in Fig. 1. Between these clamps the stave-block is held from which the staves are to be cut. Upon one edge of the slide J are formed cogs *y*, meshing with a pinion, *s*, upon a shaft, *t*, which is held in suitable bearings attached to the head-block I, and provided at its front end with a crank or wheel, L, for turning it. By these means the stave-block is raised or lowered, as required, and it is held at the required points by means of a spring-pawl, *v*, taking into teeth *z*, formed in the opposite edge of the slide J. The saw C works longitudinally with the stave-block, and when the latter has been set by the means just described the head-block is rocked on its journals, allowing the saw to cut off the stave. The head-block, rocking as described, causes the stave-block to describe a part of the circle, making the stave concave on one side and convex on the other. This circle is increased or diminished by the up-and-down adjustment of the head-block, as above set forth.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination of the head-block I, car-

rying the devices for holding the stave-block, the adjustable bars or boxes H H, in which the head-block rocks, and the posts *h h*, all substantially as and for the purposes herein set forth.

2. The movable bar K, provided with the guide-rods *k k*, stationary clamp *n*, adjustable clamp *n'*, and screw-rod *p*, substantially as and for the purposes herein set forth.

3. The combination, with the rocking head-block I and the movable clamp-bar K, of the slide J, provided with cogs *y* and ratchet-

teeth *z*, the pinion *s*, shaft *t*, and the spring-pawl *v*, all substantially as and for the purposes herein set forth.

In testimony that we claim the foregoing as our own, we affix our signatures in presence of two witnesses.

CALVIN ALBERTSON.

IRA E. HOBSON.

JOHN HOBSON.

Witnesses:

SAMUEL W. BEESON,

JESSE CANADAY.