

S. S. GRANNIS.
Head-Blocks for Saw-Mills.

No. 152,840.

Patented July 7, 1874.

FIG. 1.

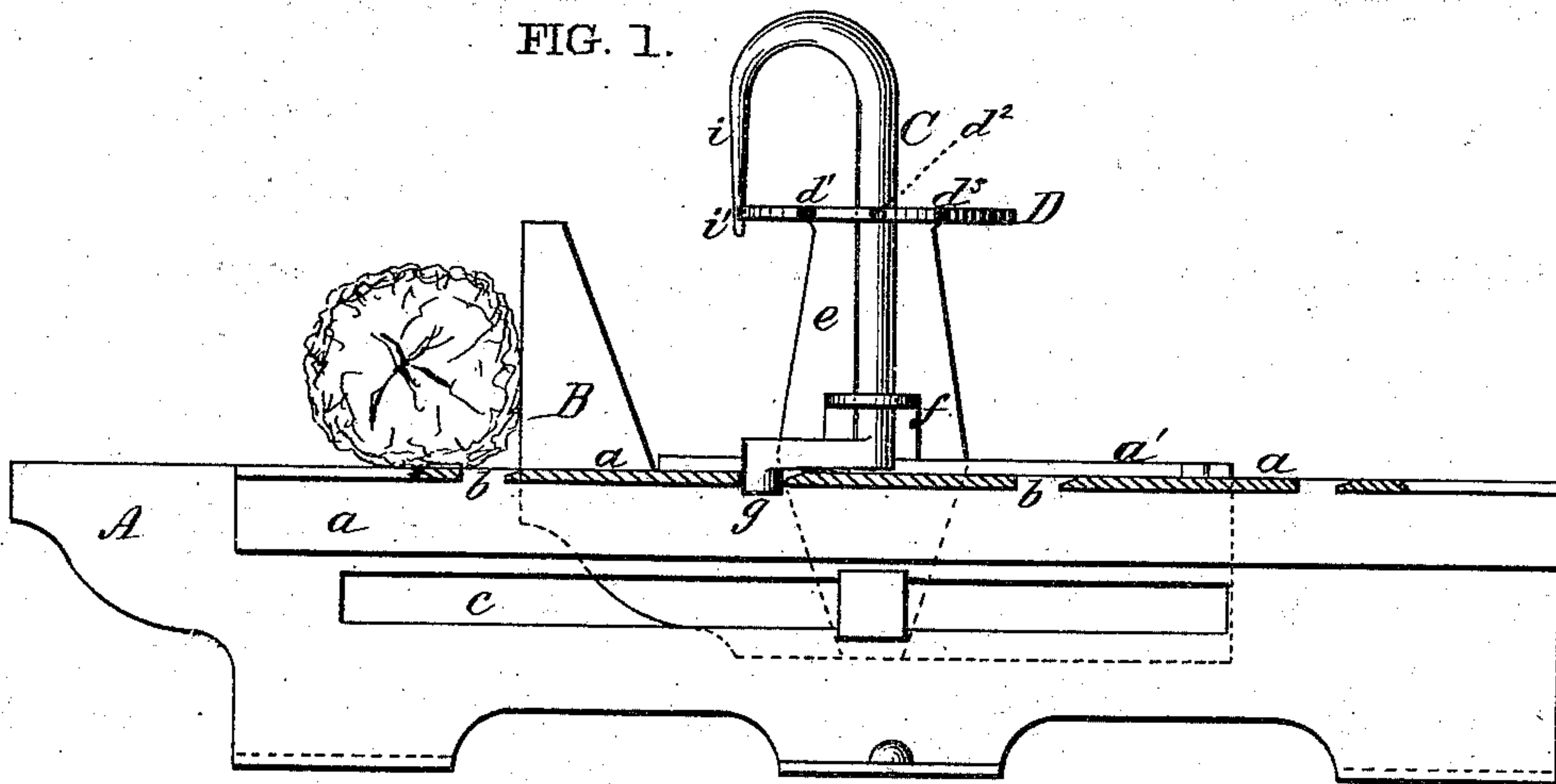


FIG. 2.

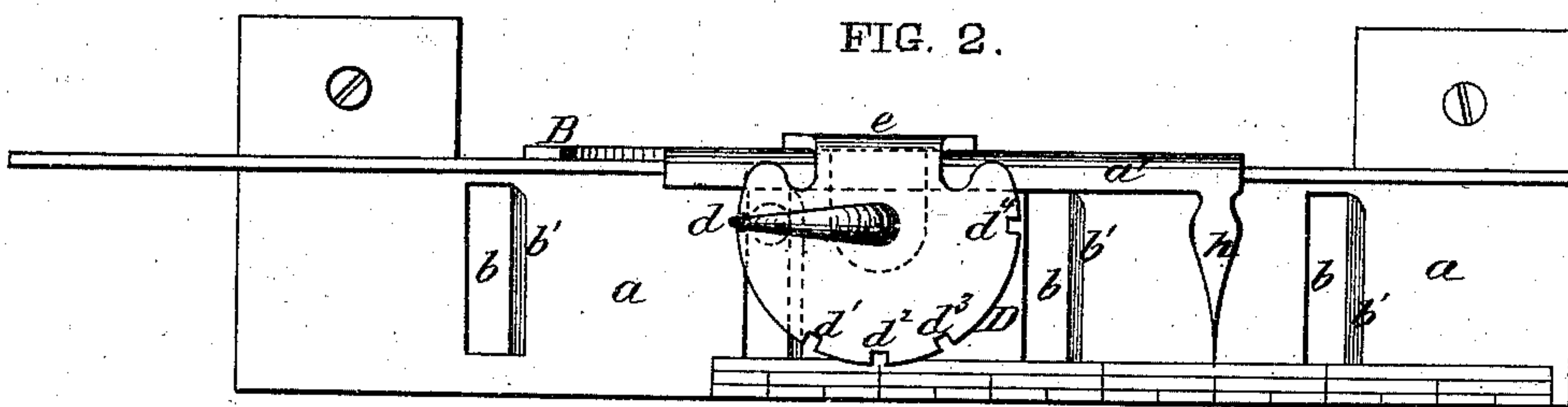
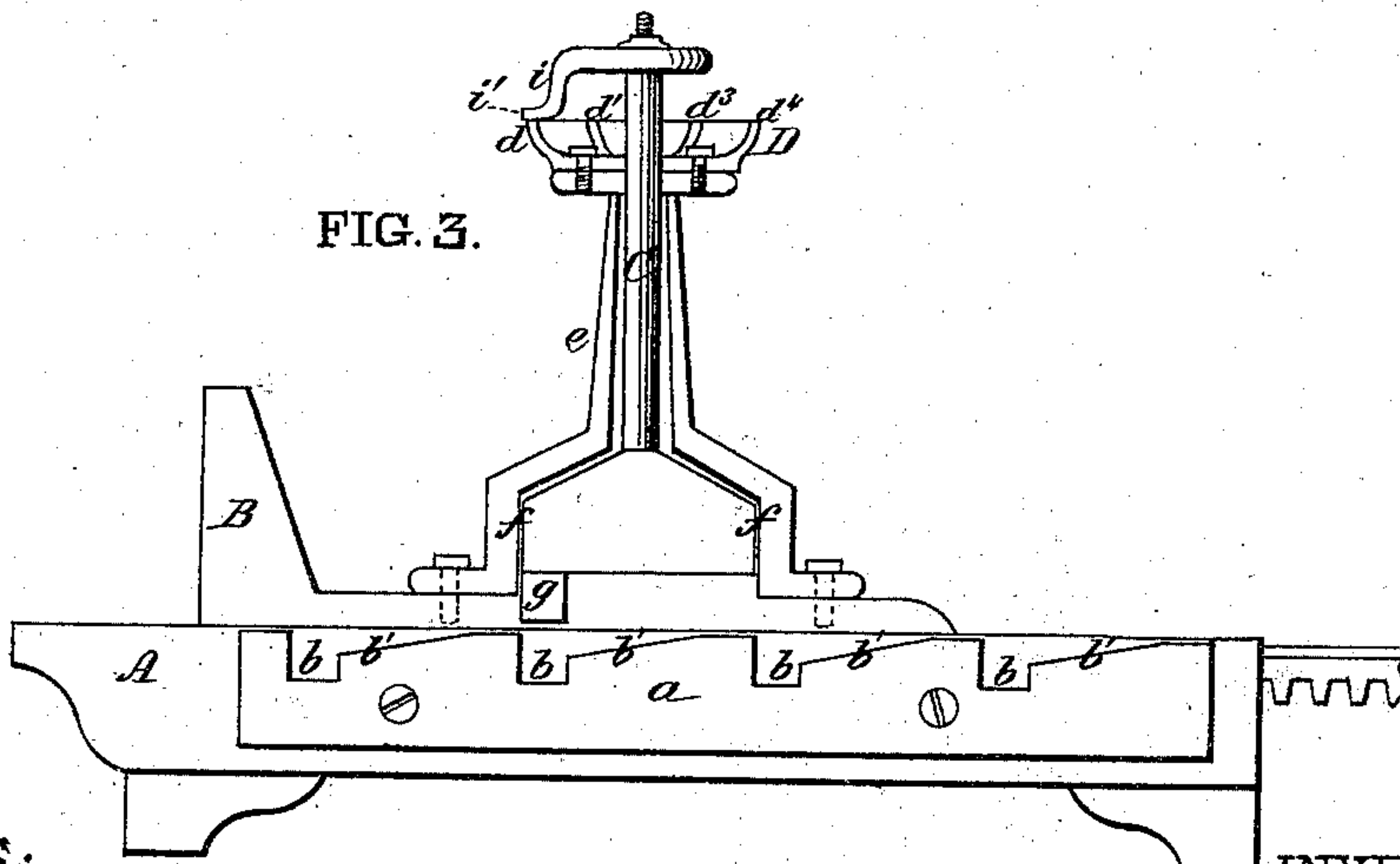


FIG. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

SIDNEY S. GRANNIS, OF RED WING, MINNESOTA.

IMPROVEMENT IN HEAD-BLOCKS FOR SAW-MILLS.

Specification forming part of Letters Patent No. 152,840, dated July 7, 1874; application filed May 9, 1874.

To all whom it may concern:

Be it known that I, SIDNEY S. GRANNIS, of Red Wing, in the county of Goodhue and State of Minnesota, have invented certain new and useful Improvements in Head-Blocks for Saw-Mills; 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 which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention consists in such construction of head-blocks for saw-mills that the thickness of the lumber to be sawed out of the logs may be regulated and varied by an adjustable and movable knee, to which a gage-rod is attached, the handle of which fits into and is held in place by notches in a rack or disk, the lower part of said gage-rod fitting into openings in a fixed plate of the head-block. A pointer on the knee denotes the thickness of the lumber desired in inches and fractions of inches.

In the accompanying drawings, Figure 1 represents a front elevation of the setting device, partly in section. Fig. 2 is a plan view of the same, and Fig. 3 is a modification of the same.

In the drawings, A represents the head-block, to which the rack-plate *a*, provided with a number of perforations or notches, *b*, is firmly secured. The movable knee B is held in a slot, *c*, in the head-block, in which it slides; and its upper side is provided with a lip, *a'*, projecting over the head-block, and guiding it thereon; or it may be secured in place in any other way. To the knee B is secured a standard, *e*, having at its upper end a semicircular rack, D, provided with notches *d d' d'' d''' d''''*. In this rack the upper end of the gage-rod C loosely rotates centrally, and is stepped below in a step or guide, *f*, in which said rod is capable of vertical adjustment. This rod is provided at its upper end with a downwardly-bent point or handle, *i*, which is held in position in one of the notches of the rack D; and at the lower end said rod is cranked, and provided with a pin, *g*, which drops into one of the perforations or notches *b* in the rack-plate *a*, and thereby the knee is firmly held in any desired position. A pointer, *h*, attached to

the knee and projecting over the flat part of the rack-plate, indicates the thickness it is desired to saw the lumber, a scale being arranged on said plate for that purpose.

Instead of the perforated rack-plate *a*, I can use a flat rack; and the shaft may be provided with a handle; and various other modifications would suggest themselves without departing from my invention.

The operation is as follows: The log being in place, the handle or upper end of the upright rod is raised and turned to any of the notches *d d'* that will give the desired thickness of lumber. When the knee slides or is fed along by any of the well-known methods, as the rack and pinion, the cam, or the screw, the handle of the upright rod is dropped into the notch *d*, and the lower cranked end will slide down the incline and drop into one of the perforations *b* in the rack-plate *a*, and the rod and knee are thus stopped and firmly held in place. The knee is then moved forward again, when the stop-pin *g* will drop into the next notch, and will be again held firmly, the knee having advanced one and one-fourth inch—one inch for the board, and one-fourth for the saw-kerf.

If it is desired to saw the lumber one and one-fourth thick, the handle is dropped into the notch *d'*; if one and one-half, into the notch *d''*; if one and three-fourths, into the notch *d'''*; or if two inches thick, into the notch *d''''*; and thus the lumber may be varied any number of inches or fractions of inches in thickness.

The principal advantage in this device is, that the knee is stopped always precisely at the desired point, and fastened there, and any amount of wear or looseness of gearing or bearings cannot change it, besides its extreme simplicity, durability, and ease and accuracy of operation.

In adjusting the cranked holding-stem C, it has both a perpendicular and horizontal turning movement; and when the handle *i* is raised so that its point *i'* is within one of the notches of the plate D, then the stop-pin *g* will rest upon and slide over the rack-plate *a* until the said pin passes over the opening *b*, into which it will drop and hold the knee; but the handle *i* and notched plate D form the gage for any

thickness of lumber, while the crank-pin, carried by the same handle-rod, and projecting therefrom in the same radial line, forms the stop by interlocking with the racked plate of the head-block. When the knee is moved forward, the crank-pin *g* slides down the incline *b'* and drops into one of the notches *b*; and this incline is important, as it prevents the knee from moving past the notch. These parts are made very strong.

I claim—

1. In saw-mill head-blocks, the combination of the handle *i*, gage-plate *D*, stop-pin *g*, and fixed rack *a*, substantially as described, whereby the thickness of the lumber may be varied, and the knee firmly held by the device which determines the set.

2. The combination of the handle *i* and its

rods *C*, constructed as described, with the semicircular gage-plate *D*, provided with notches *d d¹ d² d³ d⁴* in the arc of the circle described by said handle-rod, as and for the purpose set forth.

3. The combination of the handle-rod *i C g* and gage-plate *D*, having notches *d d¹ d² d³ d⁴*, with the fixed rack *a*, head-block *A*, and knee *B*, constructed substantially as and for the purpose herein set forth.

In testimony that I claim the foregoing as my own I have affixed my signature in presence of two witnesses.

SIDNEY S. GRANNIS.

Witnesses:

F. JOSS,

W. H. PUTNAM.