

(No Model.)

T. HARPS.

GUARD FOR CUTTER HEADS.

No. 300,363.

Patented June 17, 1884.

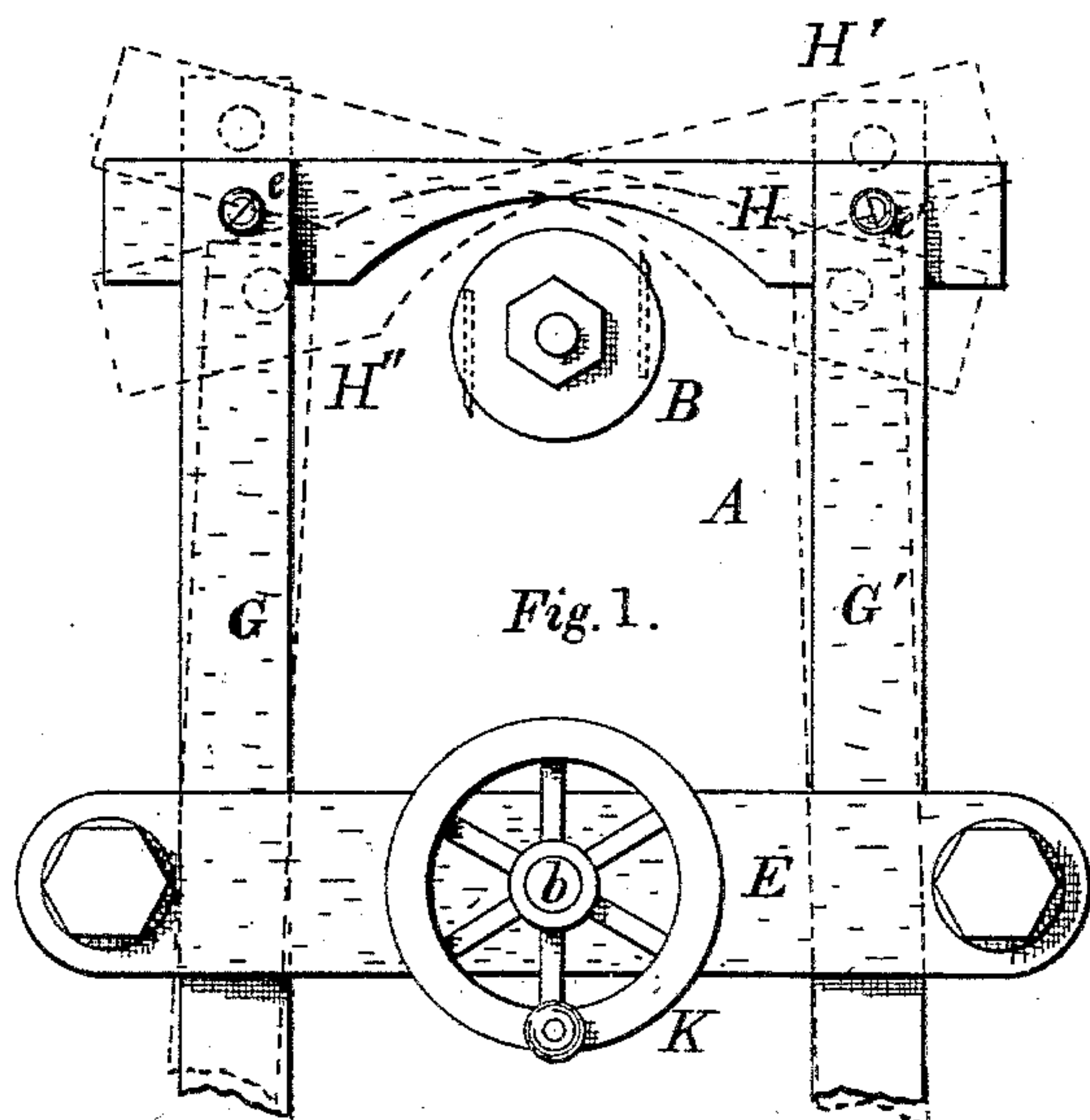


Fig. 1.

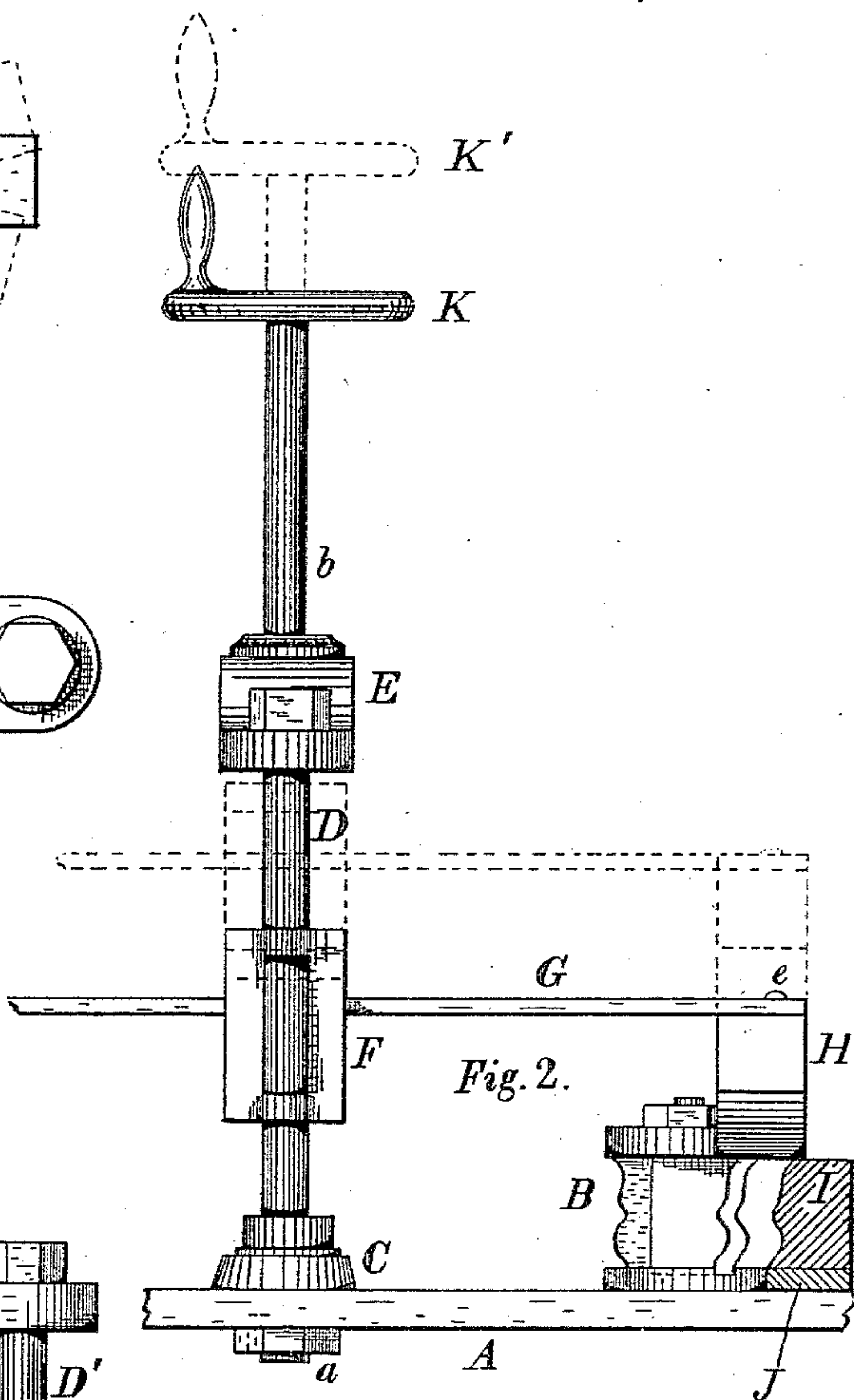


Fig. 2.

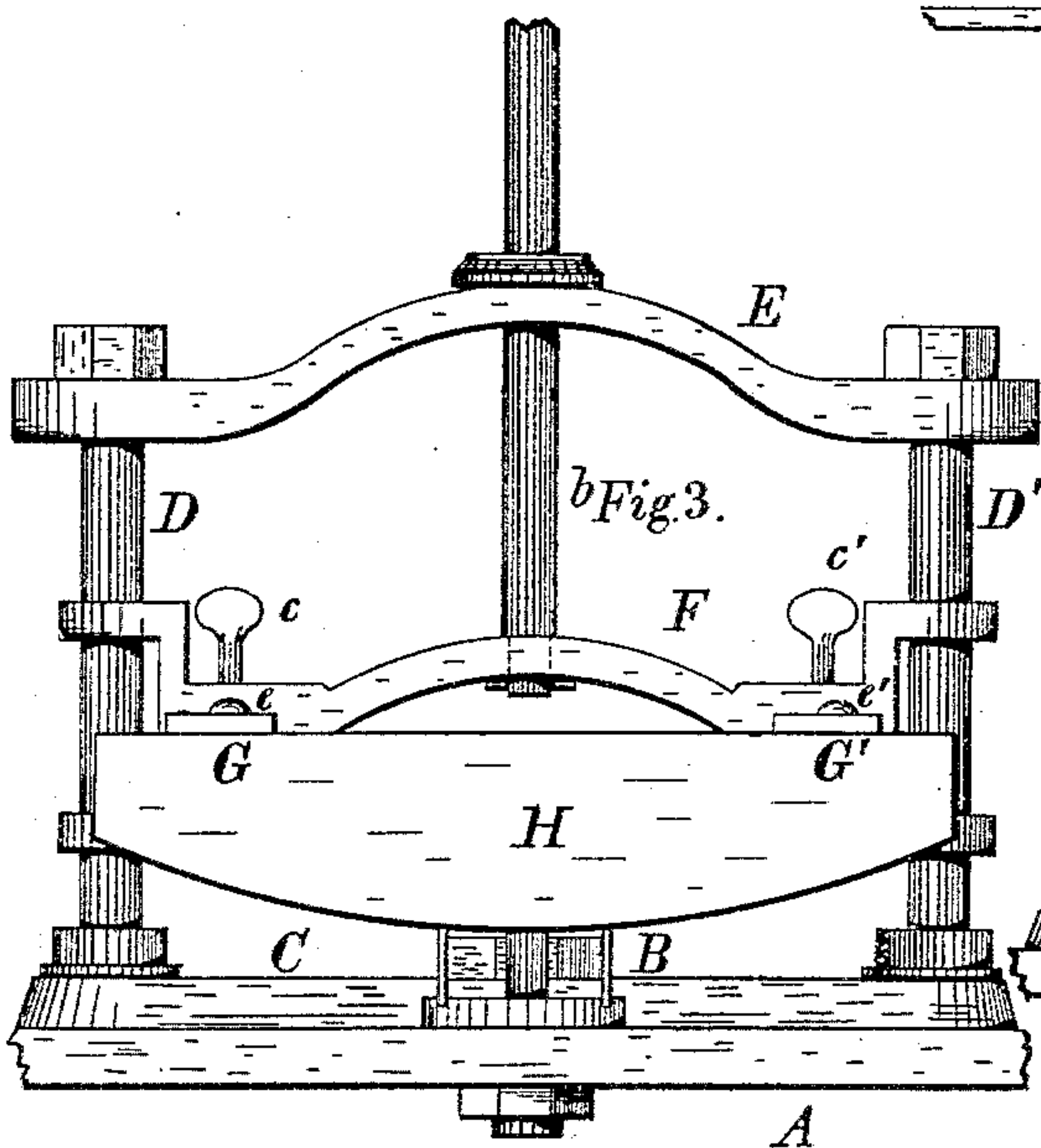


Fig. 3.

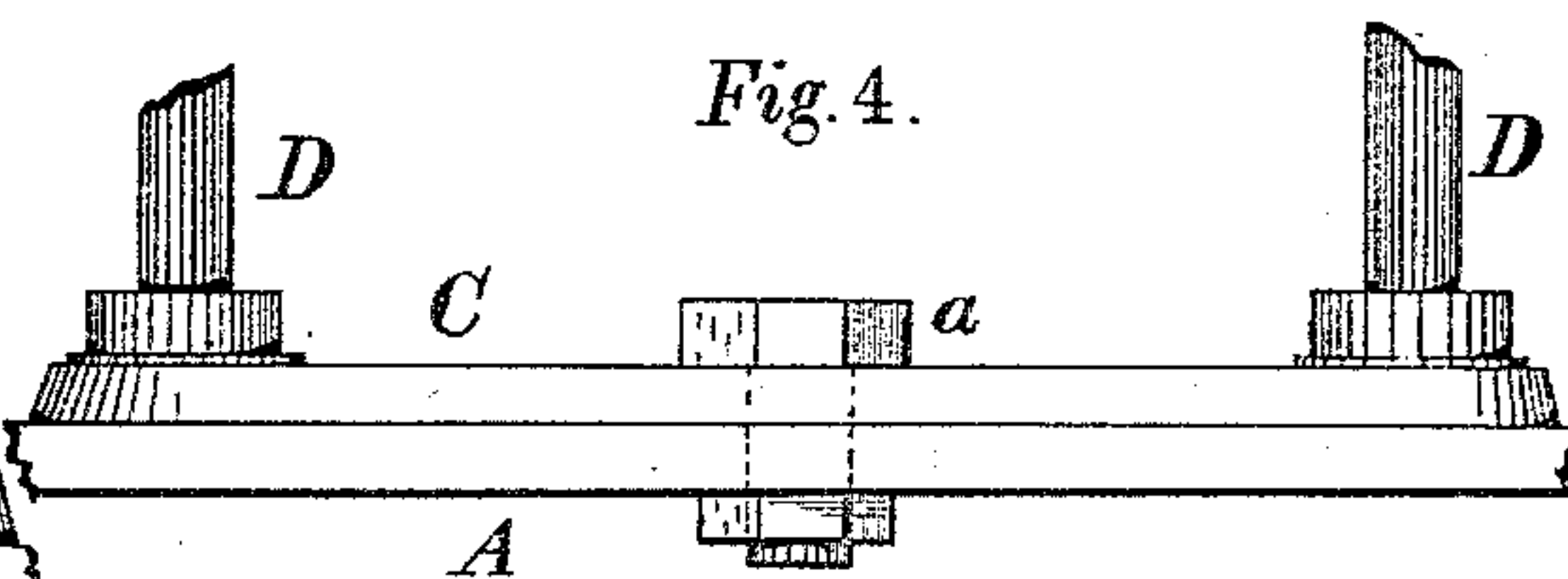


Fig. 4.

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GUARD FOR CUTTER-HEADS.

SPECIFICATION forming part of Letters Patent No. 300,363, dated June 17, 1884.

Application filed June 16, 1882. (No model.)

To all whom it may concern:

Be it known that I, THOMAS HARPS, of Rochester, New York, have invented an Improved Safety Attachment for Molding-Machines, of which the following is a specification, reference being had to the annexed drawings.

In the accompanying drawings, representing my invention, Figure 1 is a plan view. Fig. 2 is a side elevation. Fig. 3 is a front view. Fig. 4 is a detached view of the foot.

In the accompanying drawings, representing my improved safety attachment for molding-machines, A represents the table of the molding-machine; B, the molding-head; C, the base which supports my improved safety attachment on the table; D D', the uprights; E, the cross-bar; F, the sliding cross-piece; G G', the springs, and H the guard. The work is shown at I, Fig. 2, and the form at J in the same figure.

My improvement may be attached to molding-machines or "upright shapers" of any ordinary form, the foot or base C being fastened to the table in suitable position with reference to the head by the bolt *a*, Fig. 4, passing through the table. From the base C the posts or uprights D D' project upward parallel to each other, being connected together at their upper ends by the cross-bar E.

On the upright posts D D' slides the cross-piece F, which is arranged to be moved up and down on the posts by the threaded rod *b*, which screws through a nut in the cross-bar E. The threaded rod *b* is provided at its upper end with a handle or hand-wheel, K, by which it is rotated in either direction to effect the vertical adjustment of the cross-piece F. The guard H is attached to the sliding cross-piece F by means of the springs G G', which pass freely through slots therein, being held or fastened in any desired position by the thumb-screws *c c'*, Fig. 3. The guard is fastened to the outer ends of the springs G G' by the screws or bolts *e e'*. The guard is preferably made of wood, being recessed out on its inner side, as represented in the drawings, and its lower edge, which bears on the work, being curved or rounded, as represented in

the front view, Fig. 1. The vertical position of the guard is adjusted by turning the hand-wheel K, as represented by the dotted lines H H' K' in the side elevation, Fig. 2, so as to adapt the device to any thickness of the work I or form J. As the work and form are passed through beneath the guard H, the springs G G' will yield upward slightly, to compensate for variations in the thickness of different pieces of work of the same kind or for any irregularities in the surface thereof. The friction produced by the guard H on the work serves to steady the latter and hold it in place under the action of the knives on the molding-head, thereby insuring a better quality of work than is usually produced by this class of machines, while the guard effectually prevents accidents to the operator from contact with the knives.

The guard may be shifted into various positions relatively to the cutter, as shown by the dotted lines H' H'', Fig. 1, to suit any particular class of work.

By having a number of holes in the table for the bolt *a* the distance of the foot and standards from the head may also be varied, and the guard arranged in any desired relation to the head.

I am aware that guards of various kinds provided with springs have been heretofore combined with circular saws; but I am not aware that a yielding guard has been employed in connection with a molding-machine, as herein described, being arranged to bear on the work opposite the cutter, and to steady or hold the same in place while passing by the cutter, by the friction produced between the guard and the work or the pattern and the table of the machine.

I have demonstrated by practical experience that an operator can produce double the amount of work by the use of my improvement, in consequence of the fact that the work is steadied by the pressure of the guard during the cutting operation, and the workman is thereby more or less completely relieved from the necessity of bearing down on the work to hold it against the table. Furthermore, by the use of my improvement, some

kinds of work can be done which the operator would hardly dare to undertake without it.

I claim—

- 5 The combination, with a molding cutter-head revolving on a vertical shaft above a suitable work-supporting table, of the yielding guard H, supported between the operator and the head by one or more springs, G, attached to

the table in rear of the head, and having its lower edge constructed to bear on the work opposite the head, and operating to steady the work during the cutting operation, substantially as and for the purposes set forth.

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Witnesses:

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