

W. M. FERRY.  
Saw-Mill Dogs.

No. 158,693.

Patented Jan. 12, 1875.

Fig. 1.

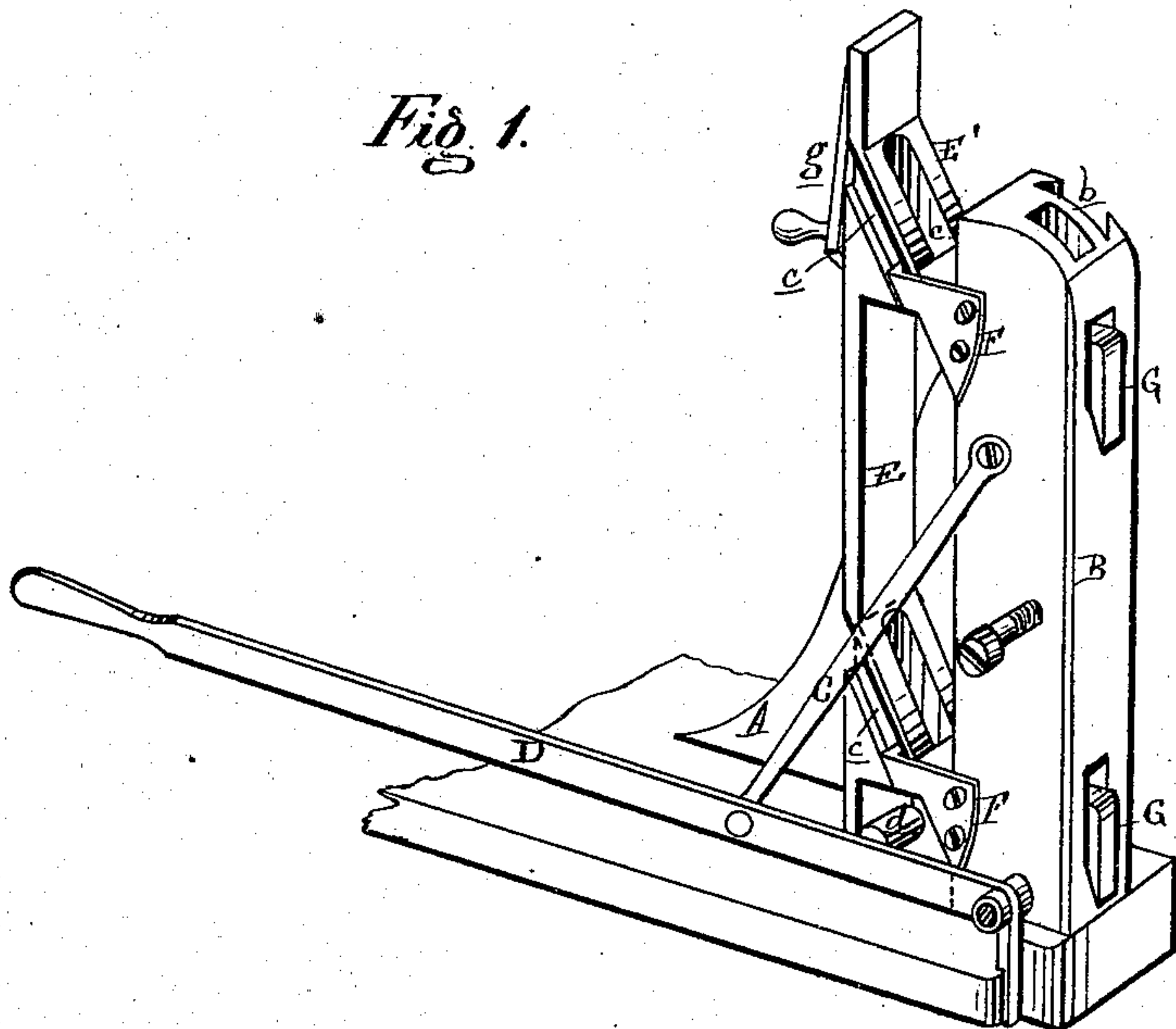


Fig. 3.

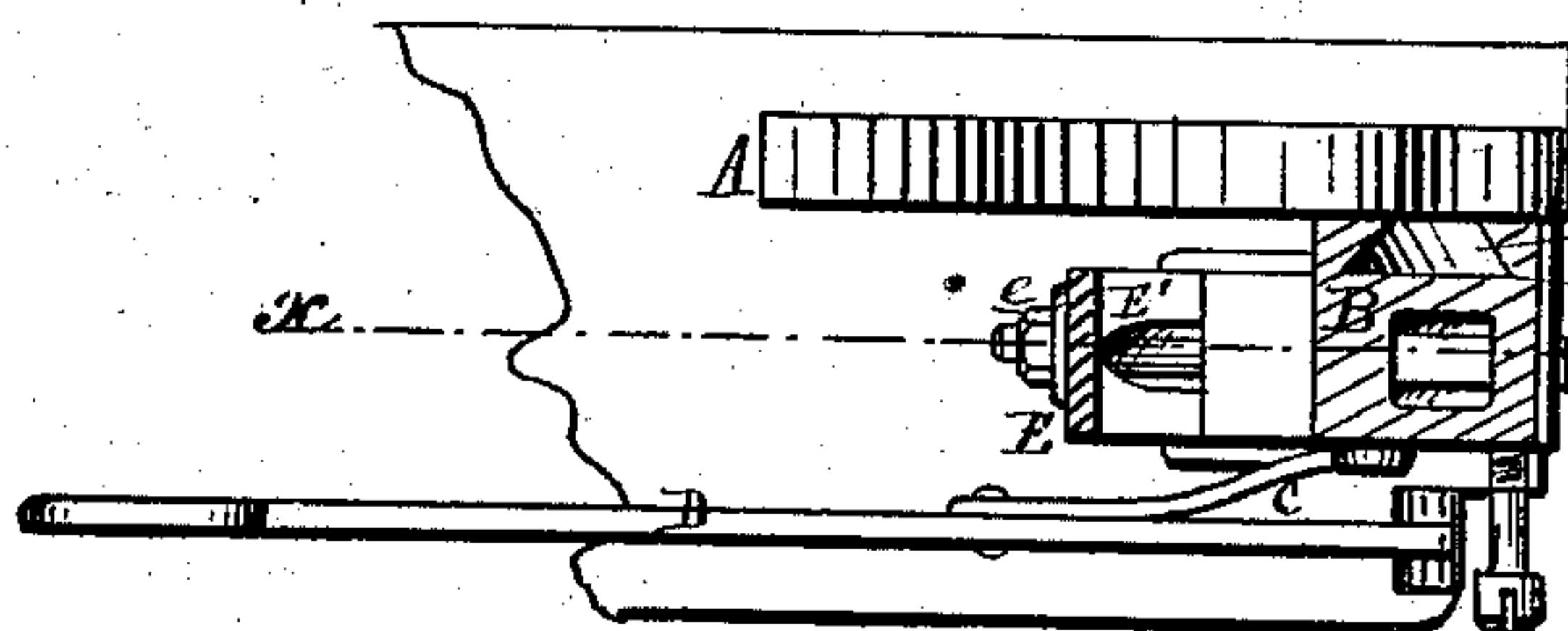
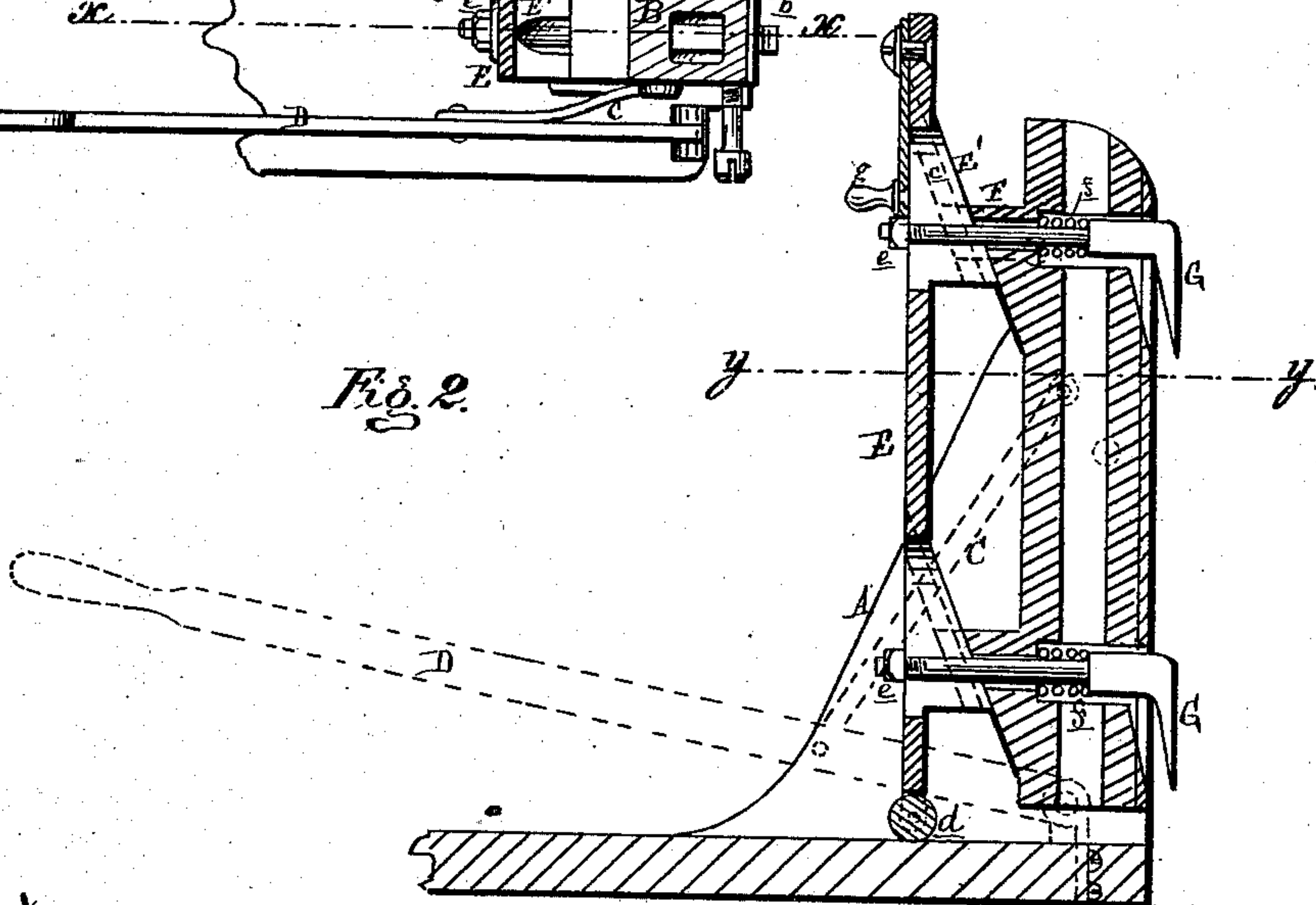


Fig. 2.



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Fig. 4.

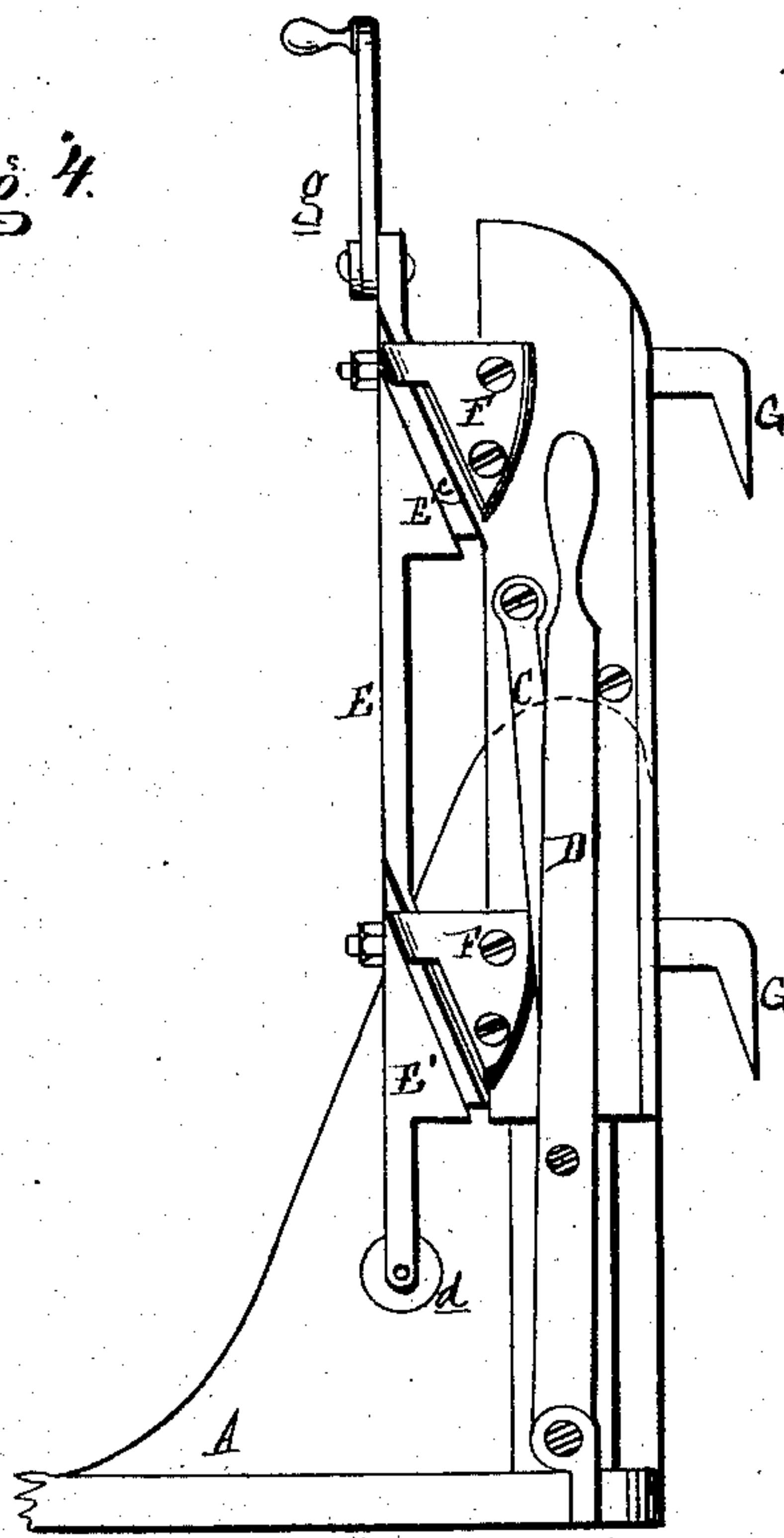
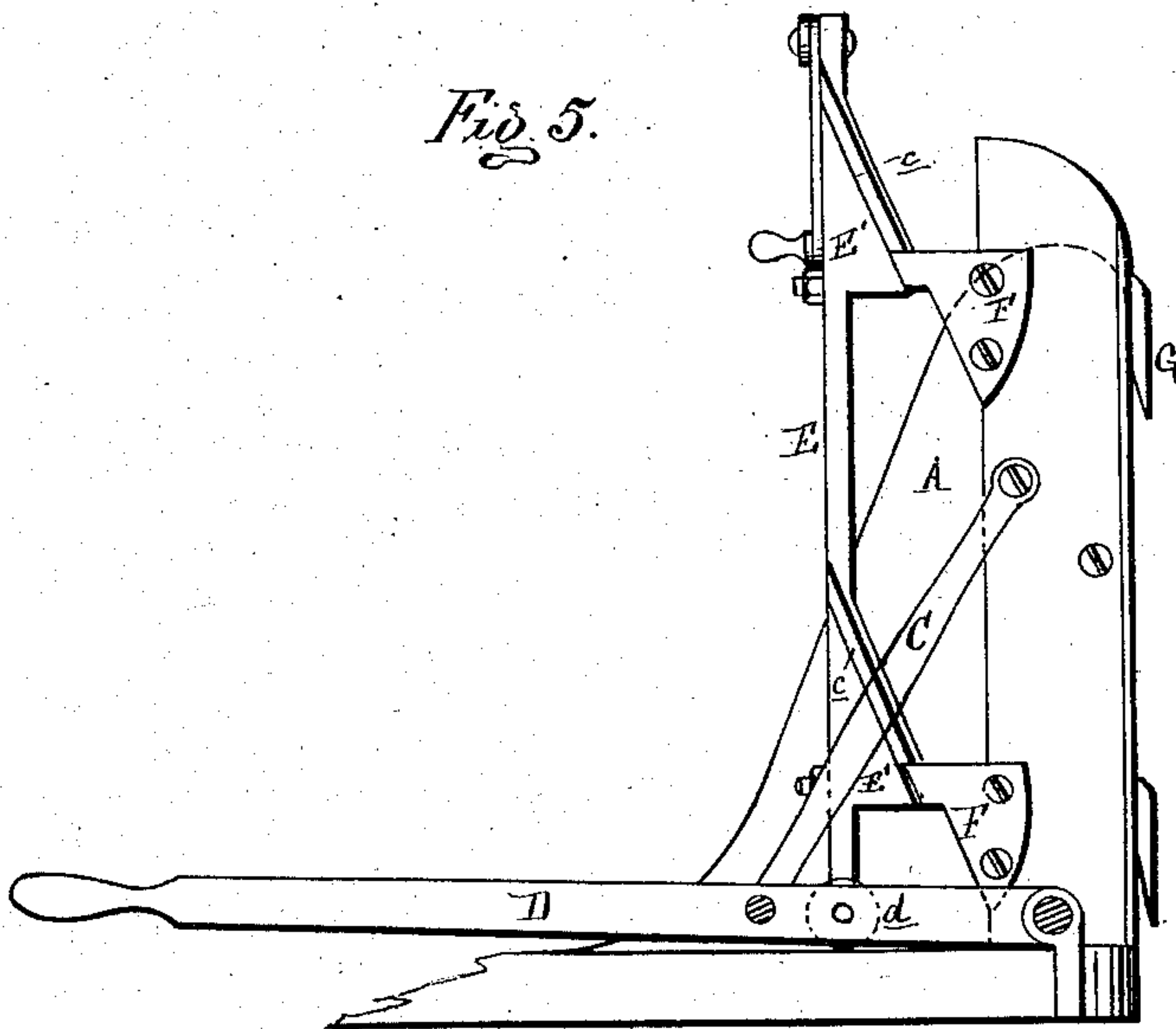


Fig. 5.



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# UNITED STATES PATENT OFFICE.

WILLIAM M. FERRY, OF GRAND HAVEN, MICHIGAN.

## IMPROVEMENT IN SAW-MILL DOGS.

Specification forming part of Letters Patent No. **158,693**, dated January 12, 1875; application filed June 17, 1874.

*To all whom it may concern:*

Be it known that I, WILLIAM M. FERRY, of Grand Haven, in the county of Ottawa and State of Michigan, have invented certain new and useful Improvements in Saw-Mill Dogs, of which the following is a specification:

The nature of my invention relates to an improvement in the dogs that are attached to the knee of a saw-carriage for securing the log while it is being sawed, its object being to provide a set of dogs that can be made to project three inches from the face of the standard for grasping round logs, or five-eighths of an inch for dogging into cants from which lumber is to be cut, the operating mechanism being so arranged as to retract the dogs into the standard whenever the dog-lever is dropped.

Figure 1, Sheet 1, is a perspective view of the device, showing the dogging-lever down. Fig. 2 is a vertical section at *xx* in Fig. 3, which is a cross-section at *yy*. Fig. 4, Sheet 2, is a side elevation, showing the dogs fully extended or protruded for dogging logs. Fig. 5 is a similar elevation, showing the dogs protruded the proper distance for dogging cants.

In the drawing, A represents one of the knees of a saw-mill carriage, the upright part of which has a dovetailed rib, *a*, on one side, which is received in a dovetail-way, *b*, in the side of a dog-bar, B, which has a vertical movement thereon, being raised by a link, C, pivoted to its side at one end and to a lever, D, at its other end, the front end of said lever being pivoted to the front of the knee. E is a plate, parallel with and behind the dog-bar, to which it is loosely secured by two cheek-pieces, F, at top and bottom, which project into and engage with diagonal grooves *c* in the sides of two triangular blocks, E', secured to the face of said plate or making part thereof. The plate E is longer than the dog-bar, and has a roller, *d*, journaled in its slotted lower end to support it in its lateral movement on the horizontal portion of the knee. G G are hook-headed dogs, whose shanks are horizontally inserted through dog-bar, plate E, and blocks E', the two latter being vertically slotted to permit of their vertical movement, the ends of said shanks being screw-threaded to receive a nut, *e*, behind the plate.

*f* is a spring spirally coiled about the shank of each dog in a recess in the dog-bar for throwing out the dog whenever free to do so.

The dog-bar being raised by the lever the plate E will not rise, but will be moved bodily toward it, causing the dogs to protrude. When, however, the shank of either dog comes to the end of the slot in said plate the latter will then be lifted with the dog-bar. The slots I prefer to make of such length as will allow the dogs to protrude about three inches for dogging round logs, as in Fig. 4. As this protrusion would be much too great when dogging a cant I suspend a pendulum-stop, *g*, at the top of the plate E, which will arrest the upper dog's shank whenever the dogs have protruded about five-eighths of an inch, so that the cant may be sawed down to inch boards without the dogs interfering with the saw, the last board being released by an upward movement of the lever, which is then let drop, when the dropping of the dog-bar by its gravity forces the retraction of the dogs into the dog-bar, leaving no projection to catch upon the saw in gigging back.

Any device other than the pendulum *g* may be employed to arrest the protrusion of the dogs, but I prefer the pendulum, for the reason that it automatically arrests the protrusion at the proper distance for dogging for inch lumber, and thus prevents accidents and destruction of the saw, which frequently occur from too great protrusion of the dogs into the path of the saw. To compel the protrusion of the dogs far enough to engage with a round log, this pendulum must be pushed aside to permit the shank of the upper dog to pass up to the top of the slot in the plate. When a log or cant is dogged it may be forcibly drawn against the knees by depressing the lever.

In the descent of the dog-bar and plate E the latter is first arrested by the knee, when it moves bodily away from the dog-bar through the action of the inclined grooves, and the cheek-pieces engaging therewith in the continued descent of the dog-bar. Without the roller at its bottom the plate E would bind at its lower end upon the horizontal face of the knee, and have a tendency to stand still thereon. Where the dog-bar is made of metal,

which is preferable to wood, the cheek-pieces may be substituted by inclined lips projecting back from the sides of the dog-bar to engage with the inclined grooves *c*, the latter being either on the inner or outer sides of the triangular blocks *E'*.

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

1. The dog-bar *B*, dogs *G*, springs *f*, roller *d*, plate *E*, and a lever, *D*, when the parts are constructed and combined to operate substantially as shown and described.

2. In combination with the plate *E* and dogs

*G* the pendulum-stop *g*, substantially as and for the purposes set forth.

3. The slotted plate *E* and its diagonally-grooved blocks *E'* in combination with the cheek-pieces *F*, dog-bar *B*, dogs *G*, spring *f*, roller *d*, stop *g*, and a lever, *D*, constructed and operating substantially as herein shown and described.

WM. M. FERRY.

Witnesses:

H. F. EBERTS,

CHARLES J. HUNT.