

No. 886,177.

PATENTED APR. 28, 1908.

B. F. BOBO.
STOP MOTION FOR LOOMS.
APPLICATION FILED JAN. 2, 1908.

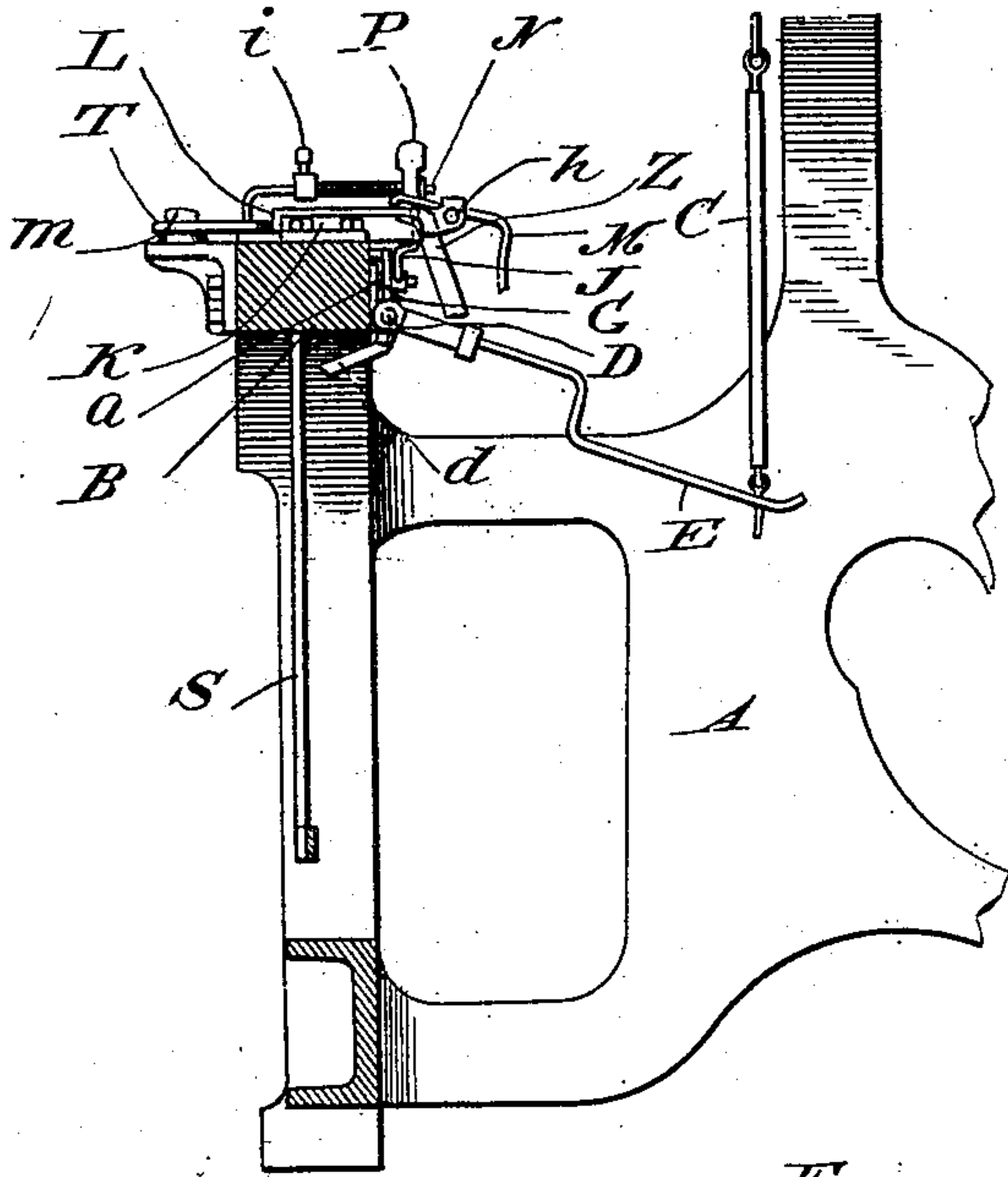


Fig. 1.

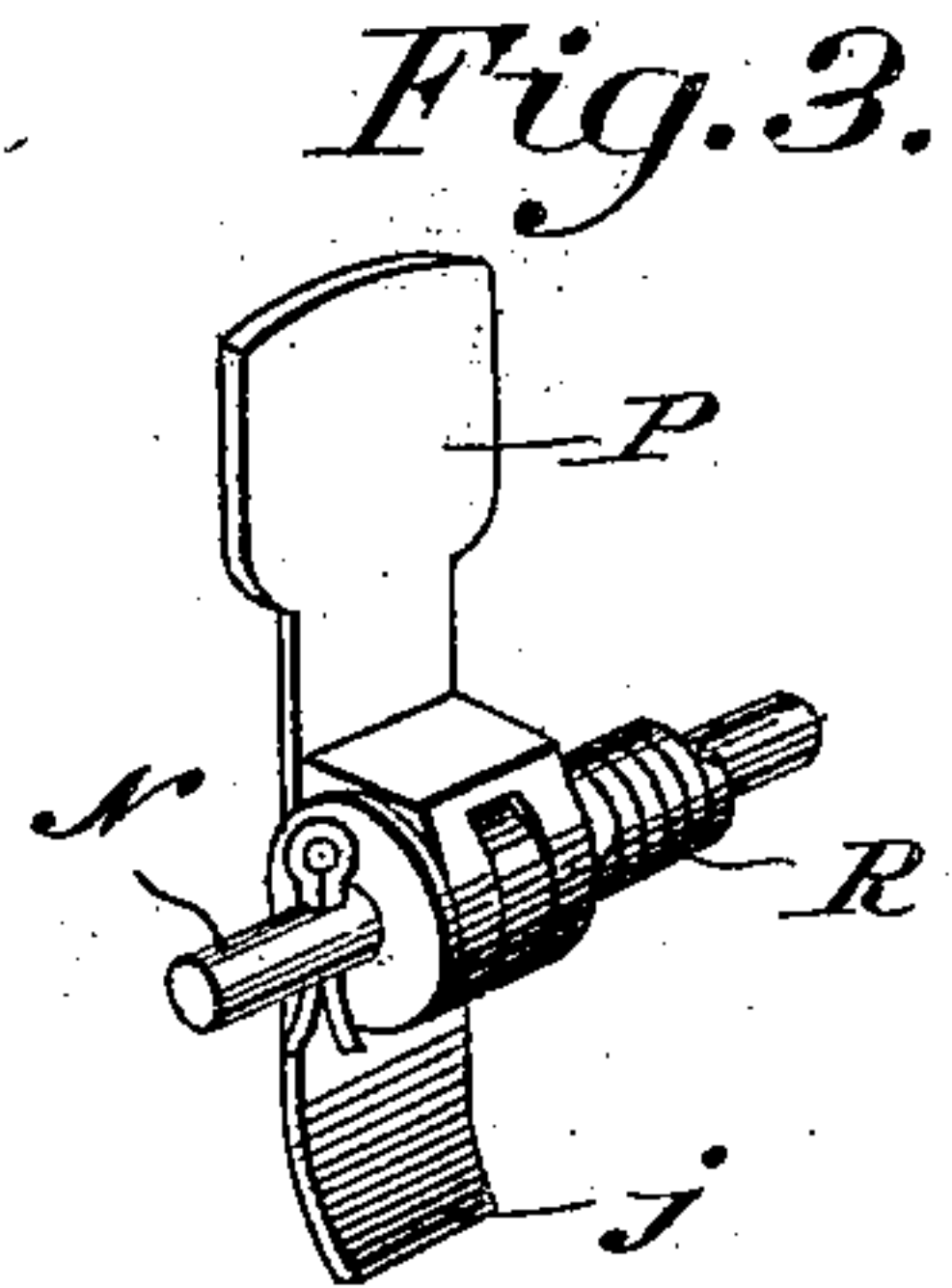


Fig. 3.

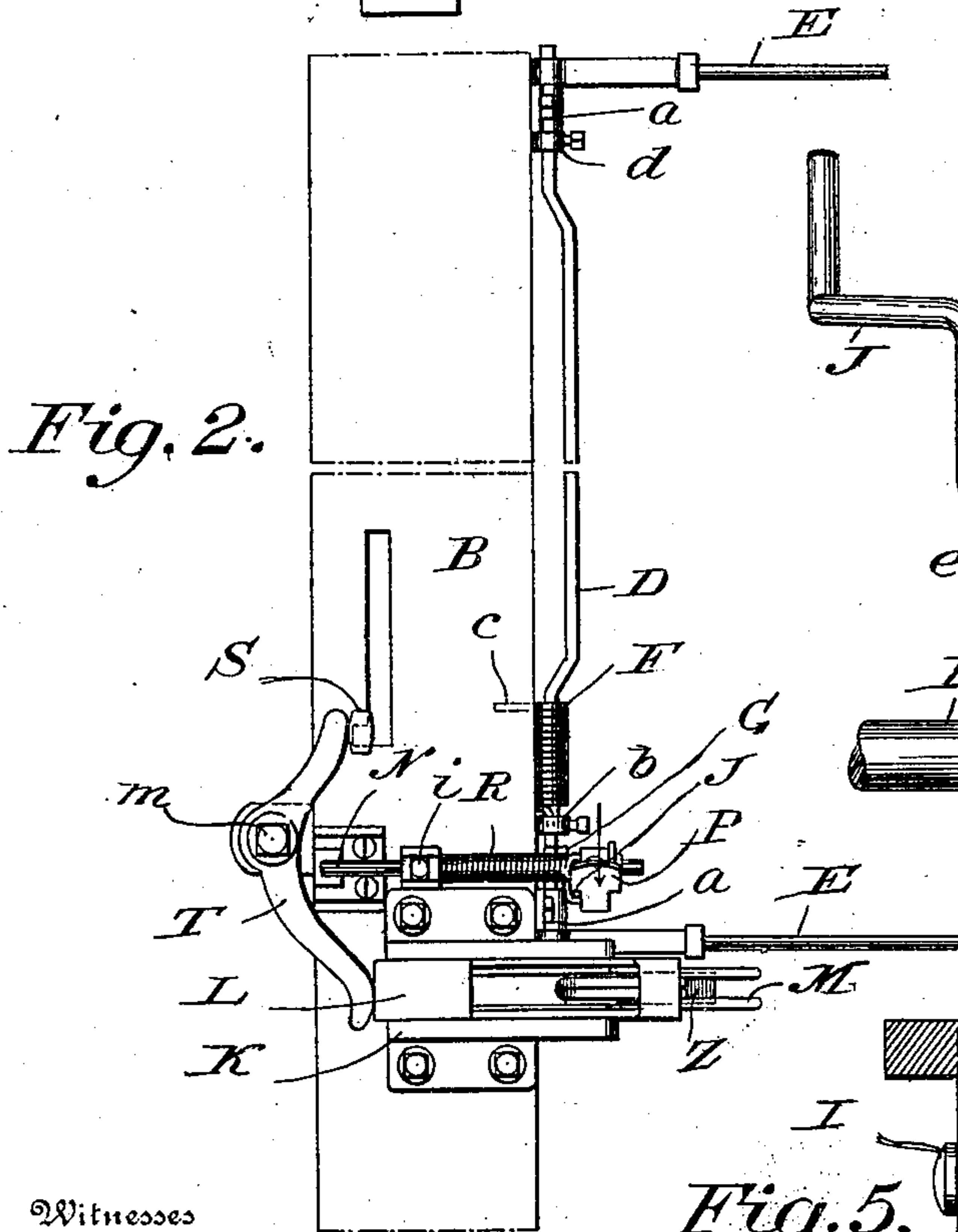


Fig. 2.

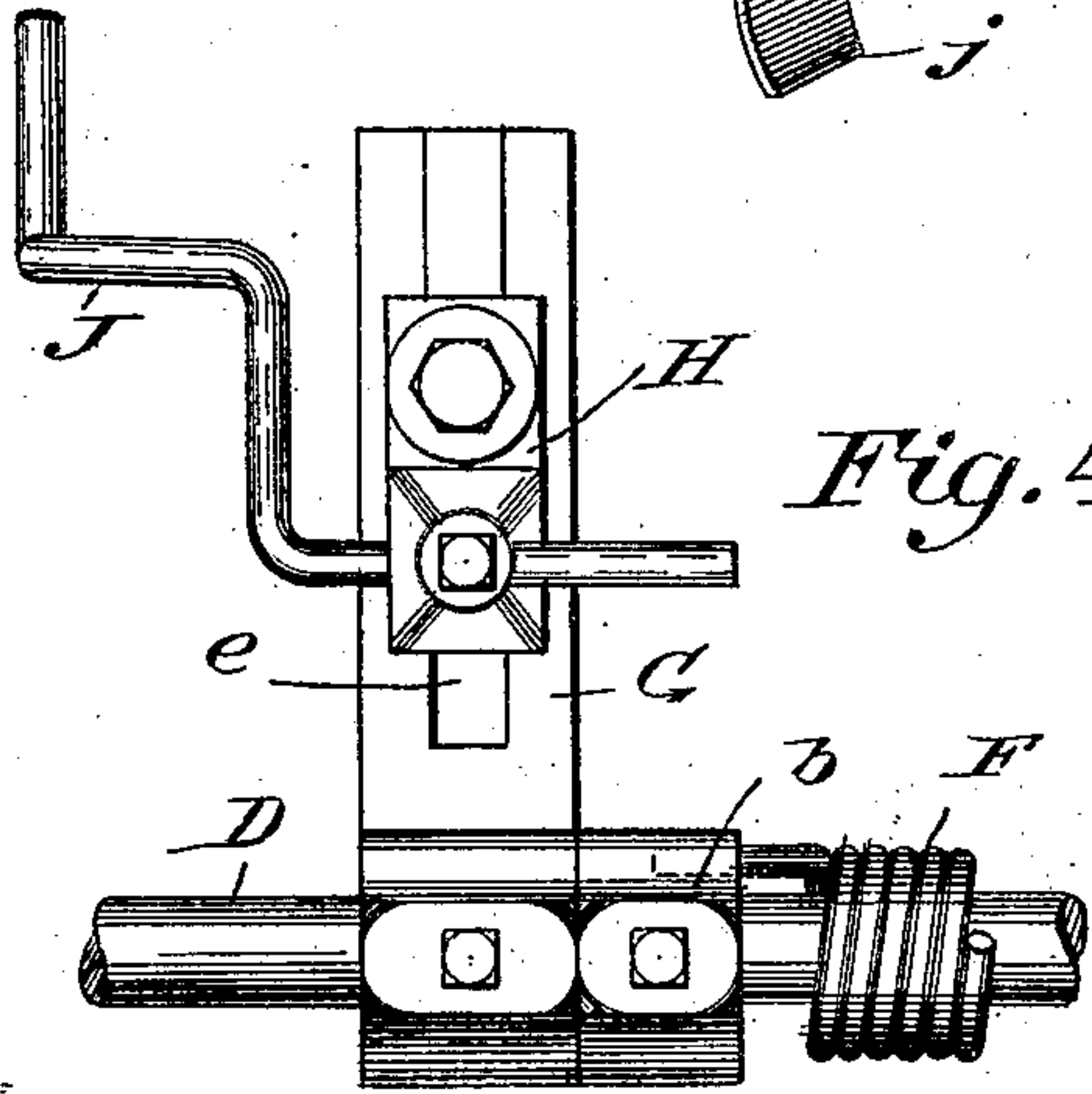


Fig. 4.

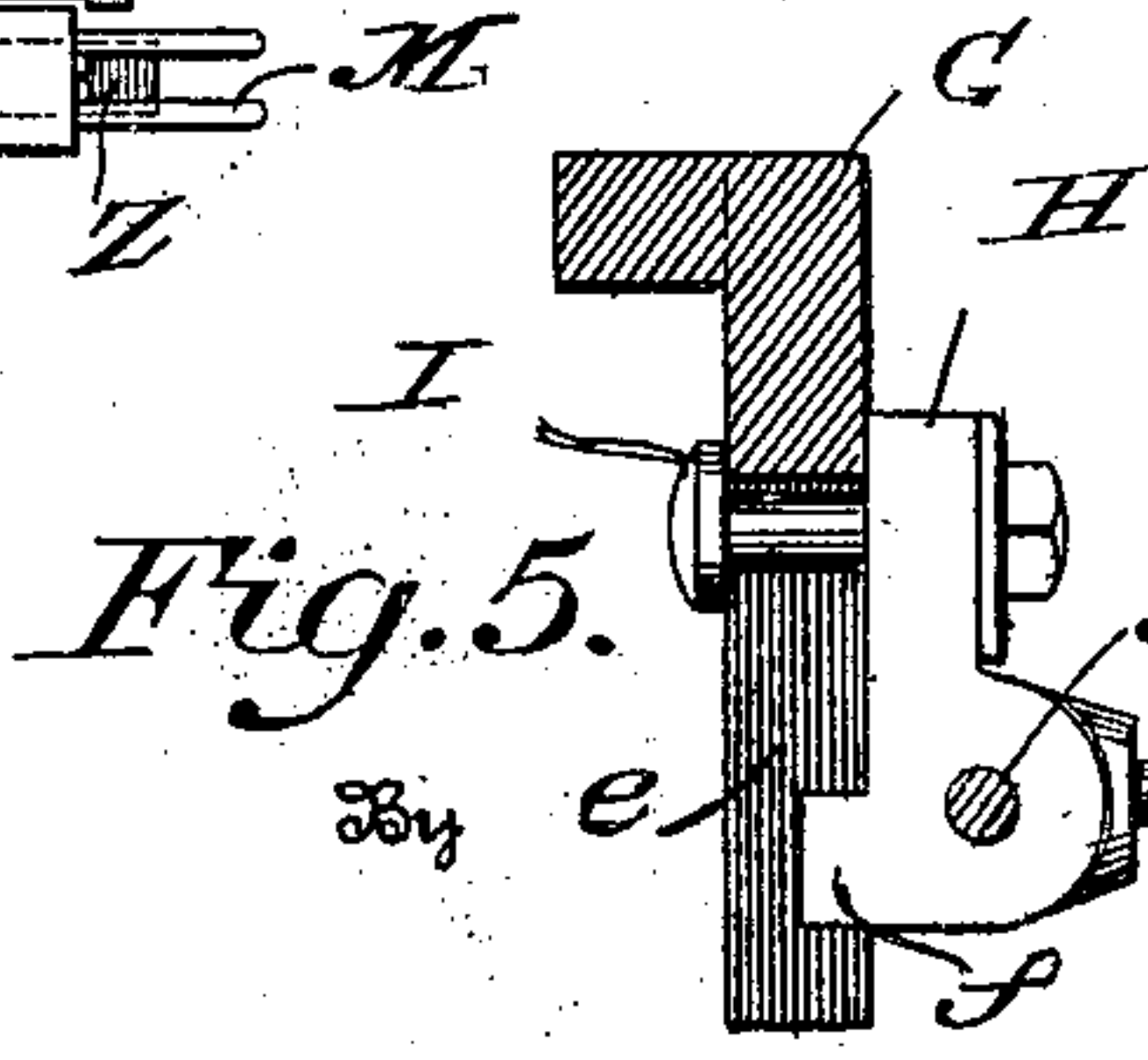


Fig. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

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STOP-MOTION FOR LOOMS.

No. 886,177.

Specification of Letters Patent.

Patented April 28, 1908.

Application filed January 2, 1908. Serial No. 409,065.

To all whom it may concern:

Be it known that I, BURL F. BOBO, citizen of the United States, residing at Laurens, in the county of Laurens and State of South Carolina, have invented new and useful Improvements in Stop-Motion for Looms, of which the following is a specification.

My invention pertains to looms, and contemplates the provision of a simple and reliable means for operating the stop-motion of a loom, through the medium of the sliding portion of the filling-fork slide when a break occurs in one of the straps of the harness.

The invention will be fully understood from the following description and claims when the same are read in connection with the drawings, accompanying and forming part of this invention, in which:

Figure 1 is a vertical section of so much of a loom as is necessary to illustrate a practical embodiment of my invention. Fig. 2 is an enlarged, broken plan view showing the breast-beam of the loom and my improvements thereon. Fig. 3 is an enlarged perspective view of the spring-actuated, swinging-piece for depressing the tail of the filling-fork and causing the loom to stop when the harness falls. Fig. 4 is an enlarged detail view showing the device for engaging the lower arm of the swinging-piece and normally holding said swinging-piece against movement under the action of its spring. Fig. 5 is a detail section illustrative of the manner in which the finger of the said device is adjustably fixed relative to the arm by which it is carried.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which:

A is the frame of the loom; B, the breast-beam, and C, the harness, all of which may be of the conventional construction or of any other construction compatible with the purpose of my invention.

Mounted in suitable bearings *a* on the breast-beam B is a rock-shaft D having arms E disposed under the harness C, Fig. 1; and surrounding the said rock-shaft D and connected at *b* thereto and having an arm *c* arranged against the under side of the breast-beam B is a coiled spring F which has for its office to normally hold the arms E in the position shown. When the arms E are depressed by the dropping of the harness thereon, as hereinafter described, a short arm *d*

on the shaft D serves to bring up against the beam B and thereby limit the rocking movement of the shaft against the action of the spring F.

In addition to the elements named, the rock-shaft D is equipped with the device shown in Figs. 1 and 4. The said device comprises an arm G fixed to and extending upward from the shaft D and having a vertical slot *e*, a block H arranged on the face of said arm and having a portion *f* extending into the slot *e*, whereby the block is held against turning on the arm, and bolt I extending through the slot *e* and adjustably connecting the block H to the arm G, and a finger J, preferably shaped as shown, secured by a set screw *g* in the block H.

Fixed on the breast-beam B is a guide K for a fork-slide L in which is fulcrumed at *h* a filling-fork M, for a purpose presently set forth; and also fixed on the beam B is a rod N which is arranged alongside the guide K as shown in Fig. 2. A swinging-piece P is loosely mounted at an intermediate point of its length on the said rod N, and to the said piece is connected one end of a coiled spring R which surrounds the rod and is connected at its opposite end to a collar *i* fixed on the rod.

When the swinging-piece P is retained in the upright position illustrated by the normal arrangement of the finger J at the side of its depending arm *j*, Fig. 1, the spring R is under tension, and consequently when the shaft D is rocked by the depression of the arms E, and the finger J is moved out of engagement with the arm *j* of the swinging-piece, the spring R will operate to throw the swinging-piece in the direction indicated by arrow in Fig. 2 with the result that the upper arm of the swinging-piece will strike and depress the tail of the filling-fork M and thereby stop the loom. For the purpose of effecting such stoppage or outward movement of the fork-slide L any suitable means may be employed, such, for instance, as the shipper S to operate a belt-shipper or analogous device (not shown), notched-holding means, and a knock-off lever T, fulcrumed at *m*, Fig. 2, and arranged to be moved by the slide L on outward movement thereof and to move the shipper S out of the notch of the holding means.

It will be apparent from the foregoing that should a strap of the harness C break, the

harness falling upon the arms E and bearing the same down will rock the shaft D against the action of the spring F, and move the finger J out of engagement with the swinging-piece P, whereupon said swinging-piece P will depress the tail of the filling-fork M so as to enable the ordinary snake-head Z to engage the depending portion of said tail and move the filling-fork and its slide outward and stop the loom in the manner before described.

Having described my invention, what I claim and desire to secure by Letters-Patent, is:

1. In a loom, a filling-fork, means arranged on depression of the tail of said fork to stop the loom, spring-moved means for depressing the tail of the fork, a movable device for normally holding said means against movement, harness, and means arranged when the breakage of a strap causes the harness to fall, to move the said movable device and thereby permit the spring-moved means to move under the action of its spring and depress the tail of the filling-fork.

2. In a loom, the breast-beam, a filling-fork thereon, means arranged on depression of the tail of said fork to stop the loom, harness, a swinging-piece mounted on the breast-beam and arranged when moved to depress the tail of the filling-fork, a spring for so moving the swinging-piece, a rock-shaft mounted on the breast-beam and having an arm disposed under the harness, a spring

connected with said shaft and arranged to yieldingly hold said arm against downward movement, and a finger connected and movable with the rock-shaft and arranged to normally hold the swinging-piece against movement under the action of its spring.

3. In a loom, the breast-beam, a filling-fork thereon, means arranged on depression of the tail of said fork to stop the loom, harness, a rod fixed on the breast-beam and arranged alongside the filling-fork, a swinging-piece loosely mounted at an intermediate point of its length on said rod, a spring surrounding and connected to the rod and also connected to the swinging-piece and arranged when said piece is released to force the upper arm thereof downward against the tail of the filling-fork, a rock-shaft journaled in bearings on the breast-beam and having arms disposed under the harness, a finger carried by and movable with the rock-shaft and normally engaging the lower arm of the swinging-piece to hold the latter against movement, and a spring surrounding and connected with the rock-shaft and having an arm bearing against the breast-beam, for the purpose set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

BURL F. BOBO.

Witnesses:

JNO. H. PETERSON,
H. D. STEWART.