

No. 708,276.

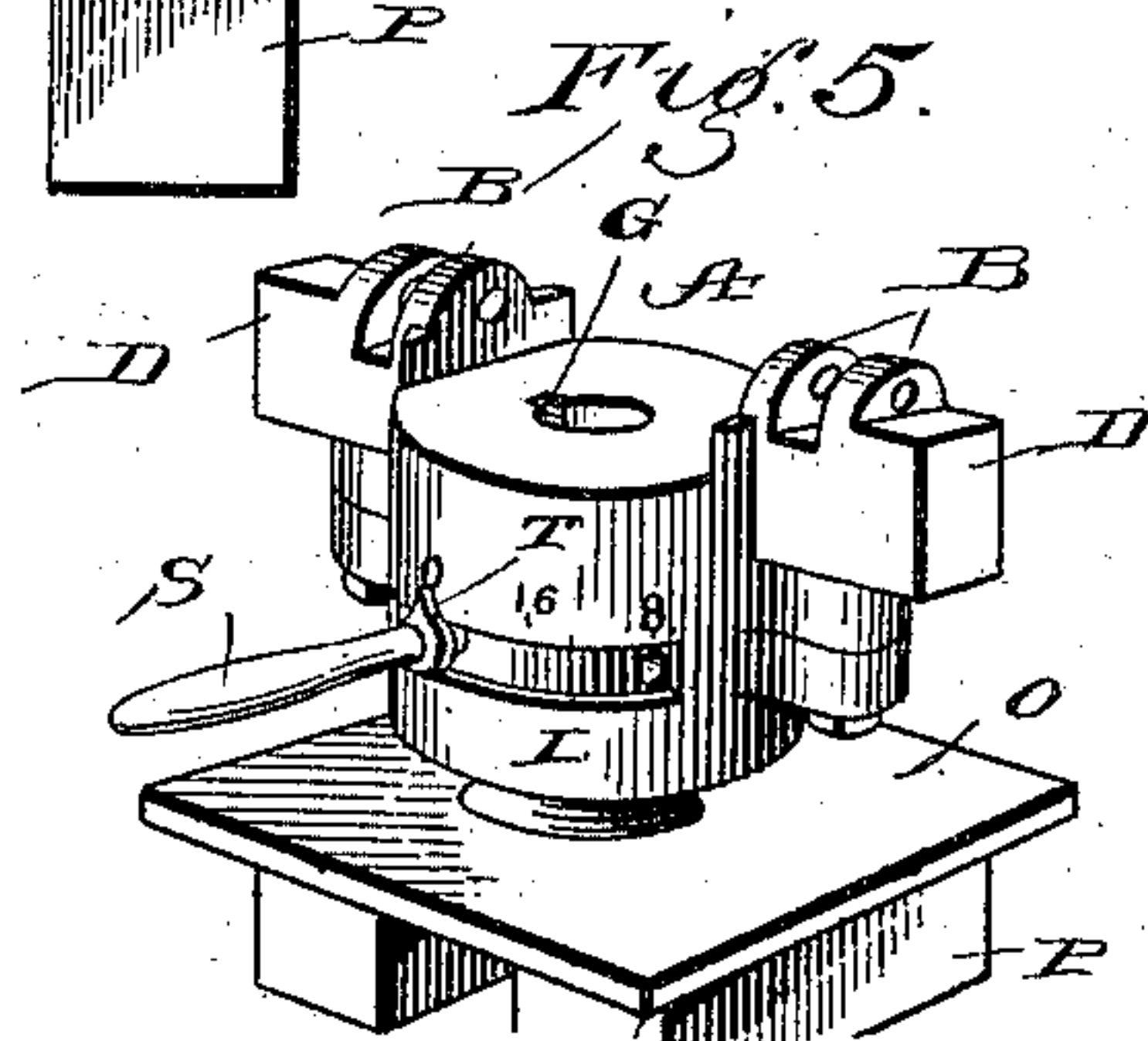
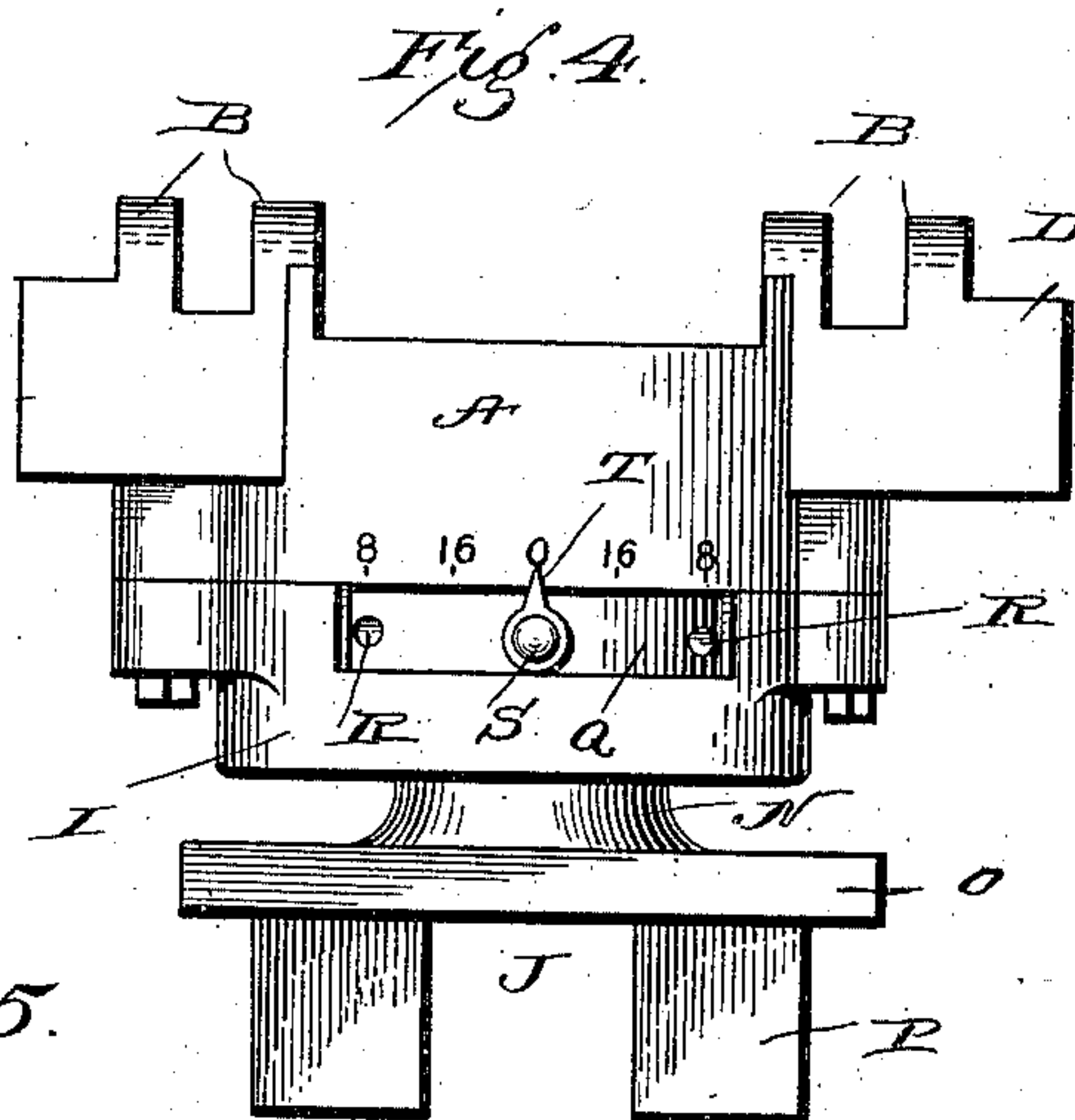
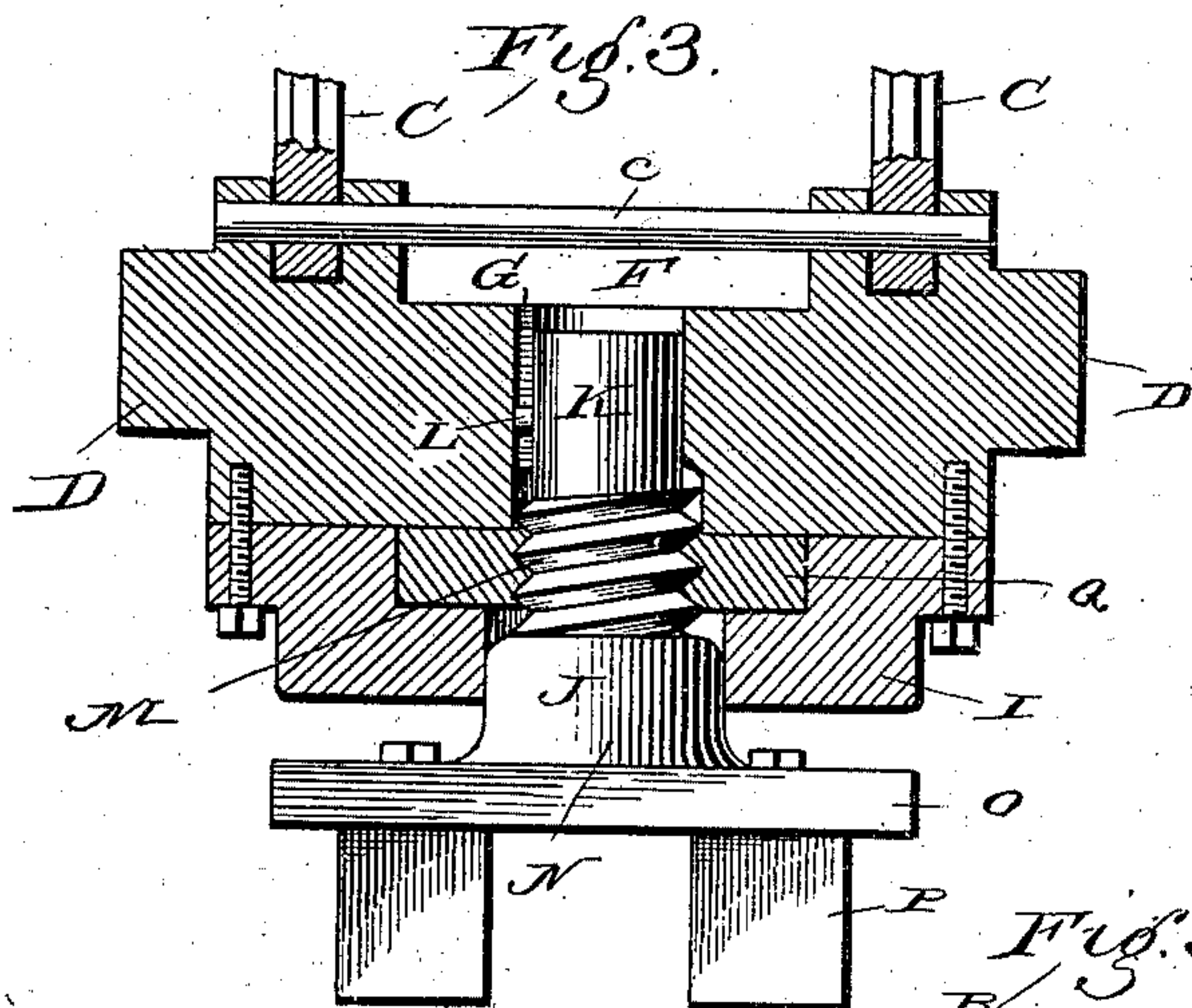
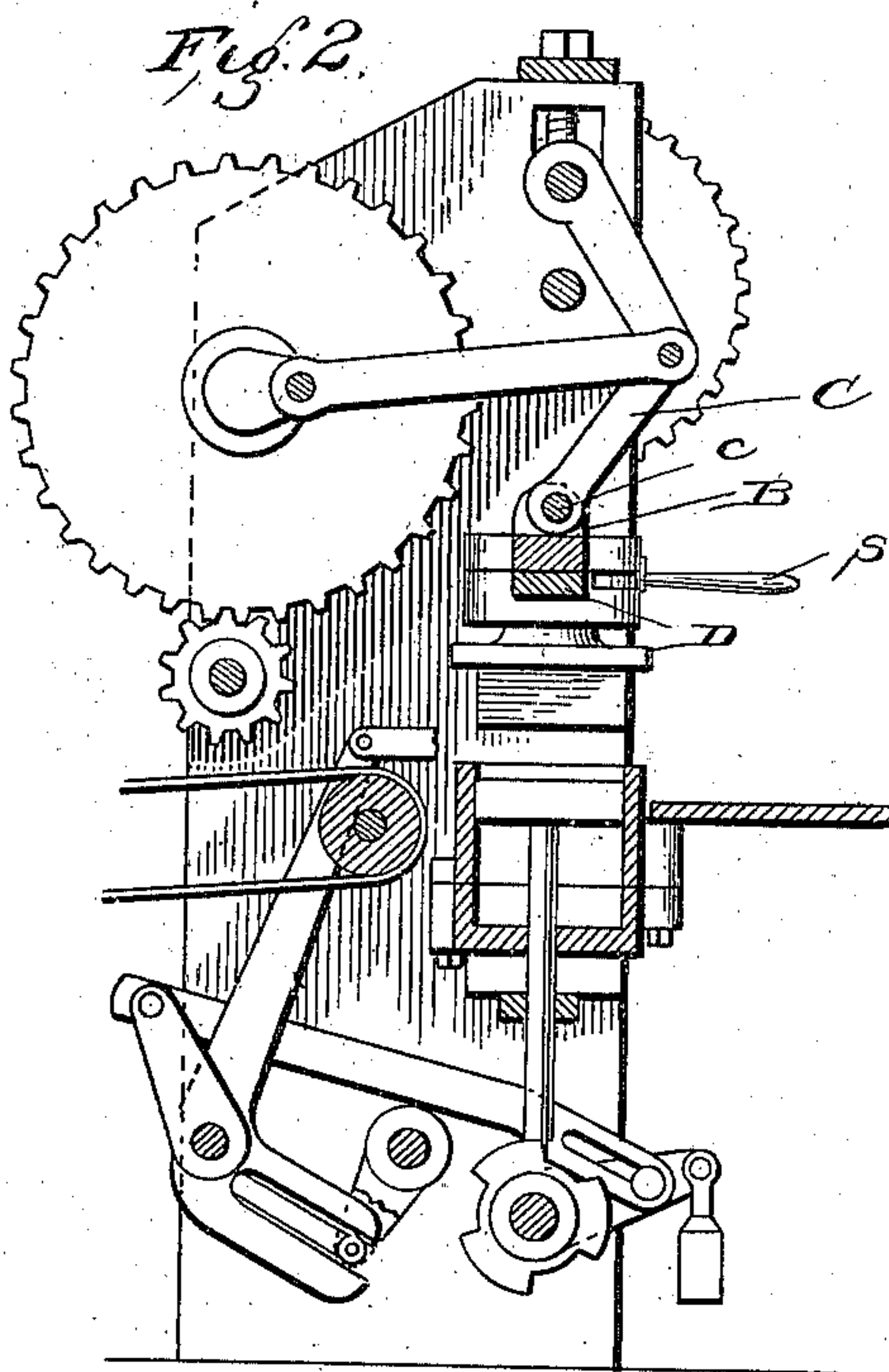
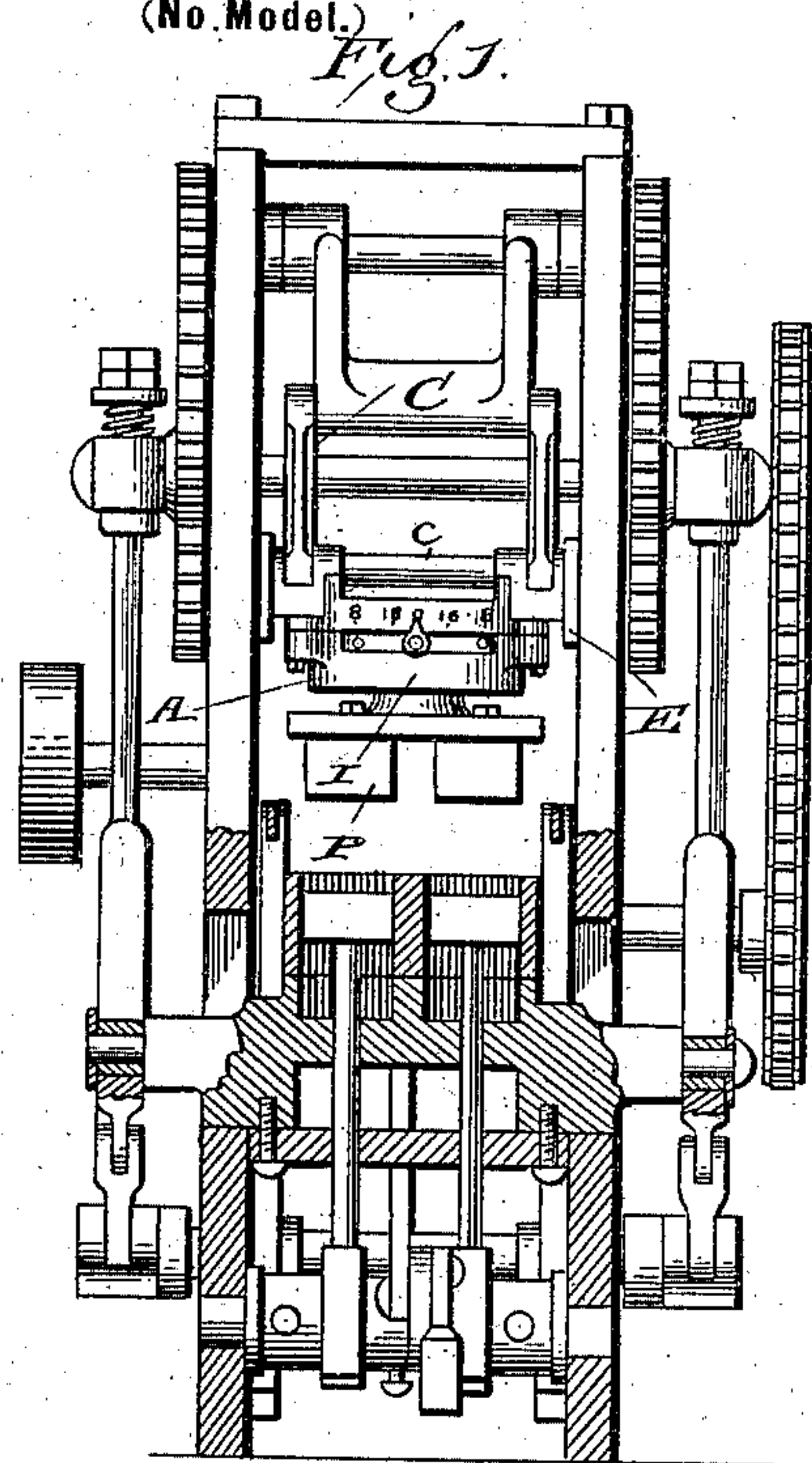
Patented Sept. 2, 1902.

J. WALKER.

PLUNGER ADJUSTING MECHANISM FOR RE-PRESS BRICK MACHINES.

(Application filed Mar. 24, 1902.)

(No Model.)



Witnesses  
*J. C. Shaw*  
*N. M. West*

Inventor  
*Joseph Walker,*  
by *Charles Shaw*  
Attorney



# UNITED STATES PATENT OFFICE.

JOSEPH WALKER, OF ST. ELMO, VIRGINIA, ASSIGNOR OF ONE-HALF TO  
HENRY P. WEST, OF WASHINGTON, DISTRICT OF COLUMBIA.

## PLUNGER-ADJUSTING MECHANISM FOR RE-PRESS BRICK-MACHINES.

SPECIFICATION forming part of Letters Patent No. 708,276, dated September 2, 1902.

Application filed March 24, 1902. Serial No. 99,697. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH WALKER, a citizen of the United States, residing at St. Elmo, in the county of Alexandria and State of Virginia, have invented a new and useful Improvement in Plunger-Adjusting Mechanism for Re-Press Brick-Machines, of which the following is a specification.

This invention relates to adjusting plunger mechanism adapted to be used in connection with re-press brick-machines, and has primarily for its object to provide an article of the kind described wherein the pressure applied upon the bricks can be easily and accurately adjusted while said machine is in motion.

Another object is to provide means to regulate the pressure upon the bricks where a top and bottom pressure is simultaneously used.

Another object of the invention is to provide means to quickly and easily adjust the pressure upon the bricks of uneven sizes, so they will receive the same amount of pressure and compactness, and also adapted to make bricks of different sizes.

A further object of my invention is to provide a device of the kind described that when fed with a brick of larger proportion than the standard size will relieve the strain upon the side springs of the rods connecting the bottom mold-frame with the power-transmitting mechanism common with most re-press brick-machines.

These and other objects not here mentioned are accomplished in connection with my patent dated December 17, 1901, No. 689,148; and my invention therefore consists in an adjustable plunger adapted to be used in re-press brick-machines, constructed and operated substantially as shown and described, and particularly pointed out in the claim.

Figure 1 is a face view of a re-press brick-machine, the lower portion being shown in section, my improved plunger being shown in elevation. Fig. 2 is a longitudinal section of the same, my improvement being shown in side elevation. Fig. 3 is an enlarged section of my improved plunger. Fig. 4 is a front elevation of same, and Fig. 5 is a perspective view of my invention.

In carrying out my invention I employ a cross-head A, provided with upright lugs B,

forming ears in which a pair of toggle-levers C are pivoted by a cross-rod c. Adjoining said lugs B and cast therewith are a pair of lateral lugs D to slide between a pair of guide-ways E, secured upon the inside of the brick-machine for the purpose of guiding the plunger on its upward-and-downward movement.

The cross-head A is provided with a central bore or opening F to receive the smooth end of a threaded plunger. To one side of said bore is a vertical slot G for the purpose of receiving a lug carried by the plunger, thereby preventing any rotary movement of said plunger. Secured to the base of cross-head A by means of bolts H is a plate I, also bored at its center for the purpose of receiving the lower enlarged portion of the plunger.

The plunger J consists of an upper smooth portion K, circular in cross-section and carrying a laterally-extending feather L to move in a vertical way formed in the cross-head A, by which means the plunger is secured from rotation. Formed below the smooth portion is a screw-thread M, the pitch of same being about three-fourths of an inch. This screw-threaded portion is operated upon by a nut, which will hereinafter be more fully described. Adjoining the screw-threaded portion is an enlarged member N, also circular in cross-section and terminating in a flat plate O, all of said parts being made in one piece, and secured to plate N by means of bolts are dies P.

Secured between the members A and I is a round nut Q, carrying a female-screw portion to engage the threads of the plunger. On the outer periphery of said nut Q and equally spaced are sockets R to receive the end of a handle S, said handle carrying an index or pointer T to engage a scale on the outer face of the cross-head A, as clearly shown in Fig. 4 of the drawings.

It is deemed unnecessary to go into details of the re-press brick-machine proper, as it is clearly described in my former patent above referred to; but I have shown my plunger mechanism in connection with same to better illustrate its purposes.

The operation of my invention herein claimed is to adjust the top pressure by means of a screw-threaded plunger which carries the dies. The toggle-levers are adapted to



impart a certain amount of travel to the plunger, so when a brick of above or below the standard size is fed into the machine the necessary amount of pressure is obtained by  
 5 pushing the handle if the brick is too large to the right and if too small to the left of the zero-mark. The handle is then immediately returned to the zero-mark to receive the next brick of standard size. It is obvious that by  
 10 pushing the handle to one side or the other of the zero-mark the plunger is lengthened or shortened to the extent indicated by the scale formed on the cross-head. It will also be noticed that when the handle is pushed to  
 15 the extreme end of the slot (formed in the securing-plate) the plunger has been increased or reduced one-eighth of an inch, according to the direction to which the said handle is pushed, and if a still further increase is de-  
 20 sired it is only necessary to withdraw the handle from its socket and push same into the next socket formed in the nut, occupying the same position to the other end of said slot, thus allowing an increase of a further  
 25 one-eighth of an inch, and so on until the desired length of the plunger is attained.

It is well known that in machines of the kind described a considerable trouble and loss of time is encountered with bricks of uneven  
 30 sizes, and it is customary with machines more generally in use to stop the operation and adjust the bottom mold-box by unscrewing lock-nuts on the side tie-rods, necessarily incur-

ring a considerable amount of extra work and loss of much time, besides running more or less risk of getting the mold-box in an untrue plane. The advantages of my plunger are immediately observed over the kind now generally in use, inasmuch as being in easy reach of the operator and doing away with the ad-  
 40 justing lock-nuts on the side tie-rods. The most important advantage is that I overcome these difficulties with my invention while the machine is in continuous operation.

Having thus fully described my invention, 45 what I claim as new, and desire to secure by Letters Patent, is—

The combination with a reciprocating cross-head having an upper bored casing, of a plunger, having a smooth upper portion feathered  
 50 into said bore and capable of vertical movement therein, said plunger having a screw-threaded middle body, an enlarged smooth lower body adapted to move freely in bore of the lower casing, secured by means of bolts  
 55 to the cross-head, said lower casing having a slot in its front face allowing an adjusting-handle to work therethrough, said handle being secured in sockets of a nut working upon threads of plunger, said nut being clamped  
 60 between the upper and lower casings, substantially as shown and described.

JOSEPH WALKER.

Witnesses:

G. W. BALLOCH,  
 CHAS. E. WEST.