

No. 749,485.

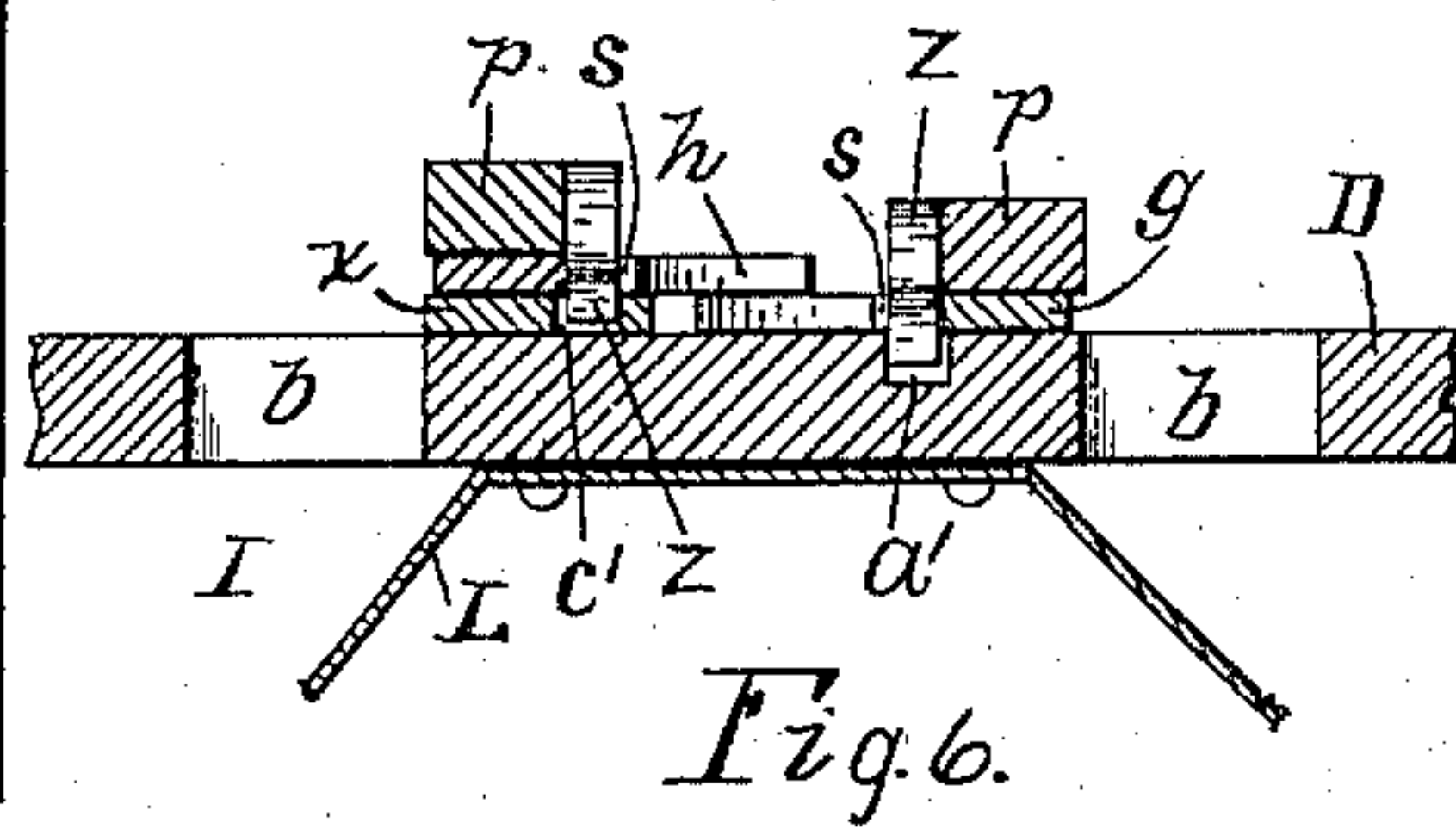
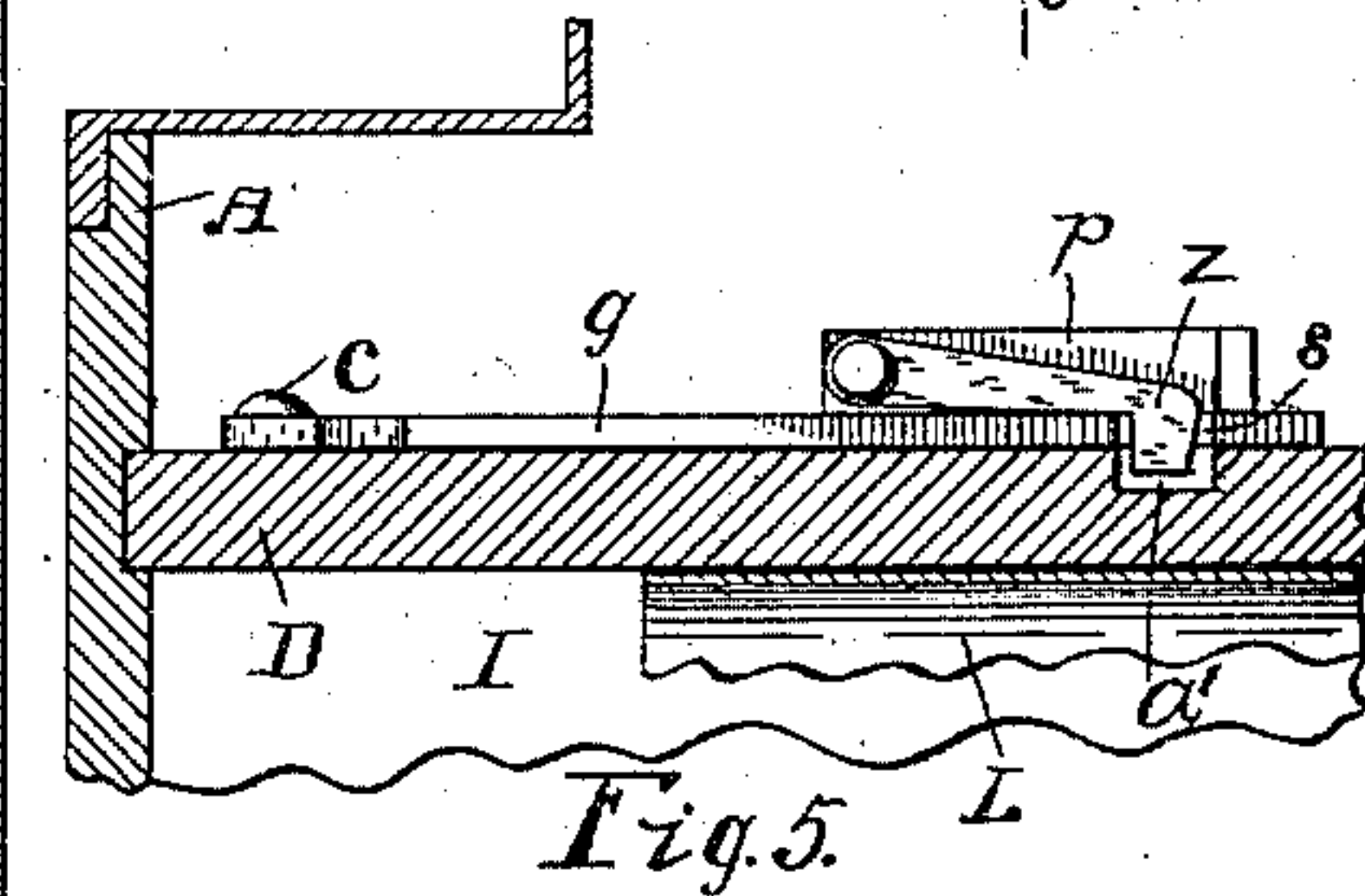
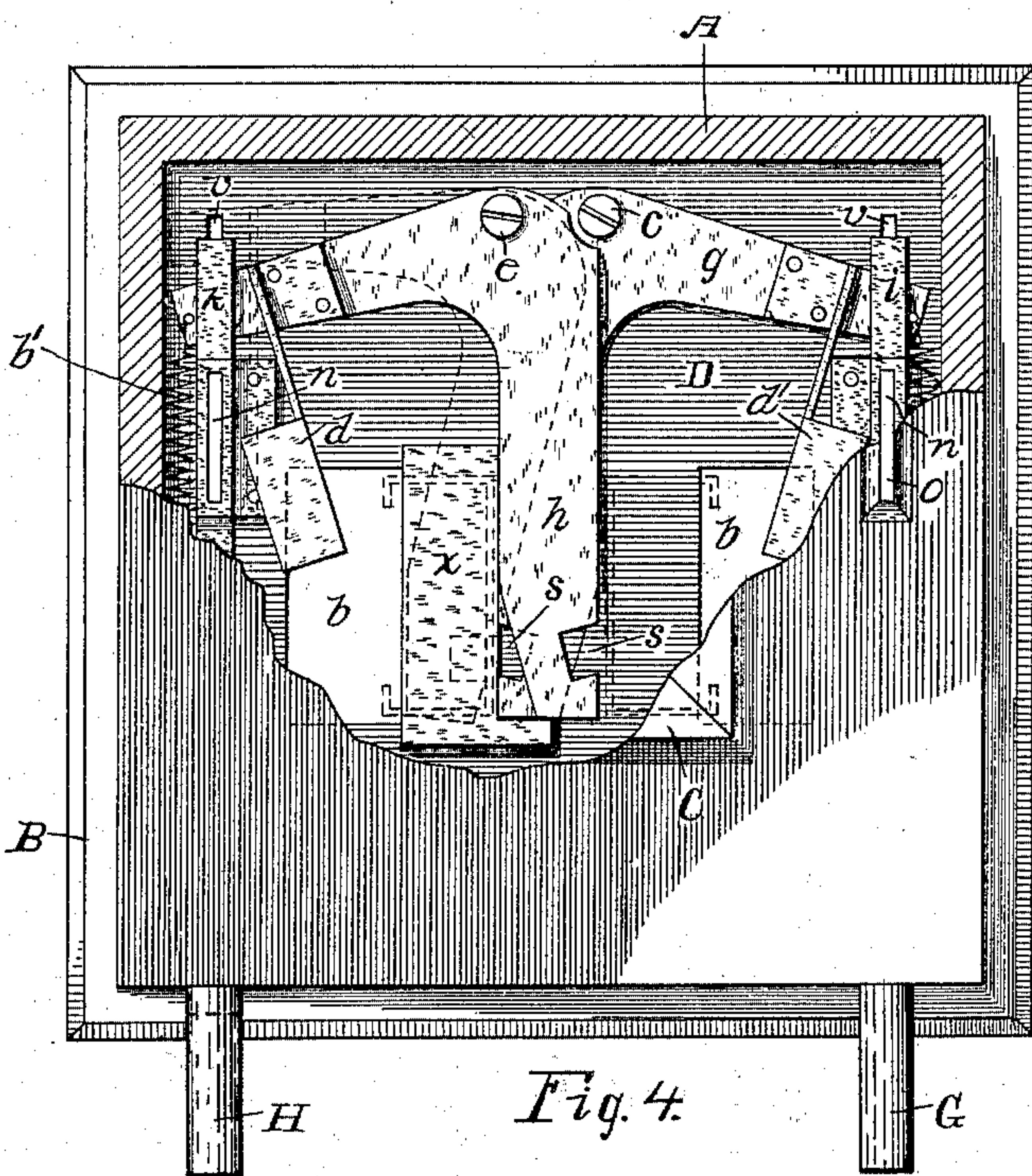
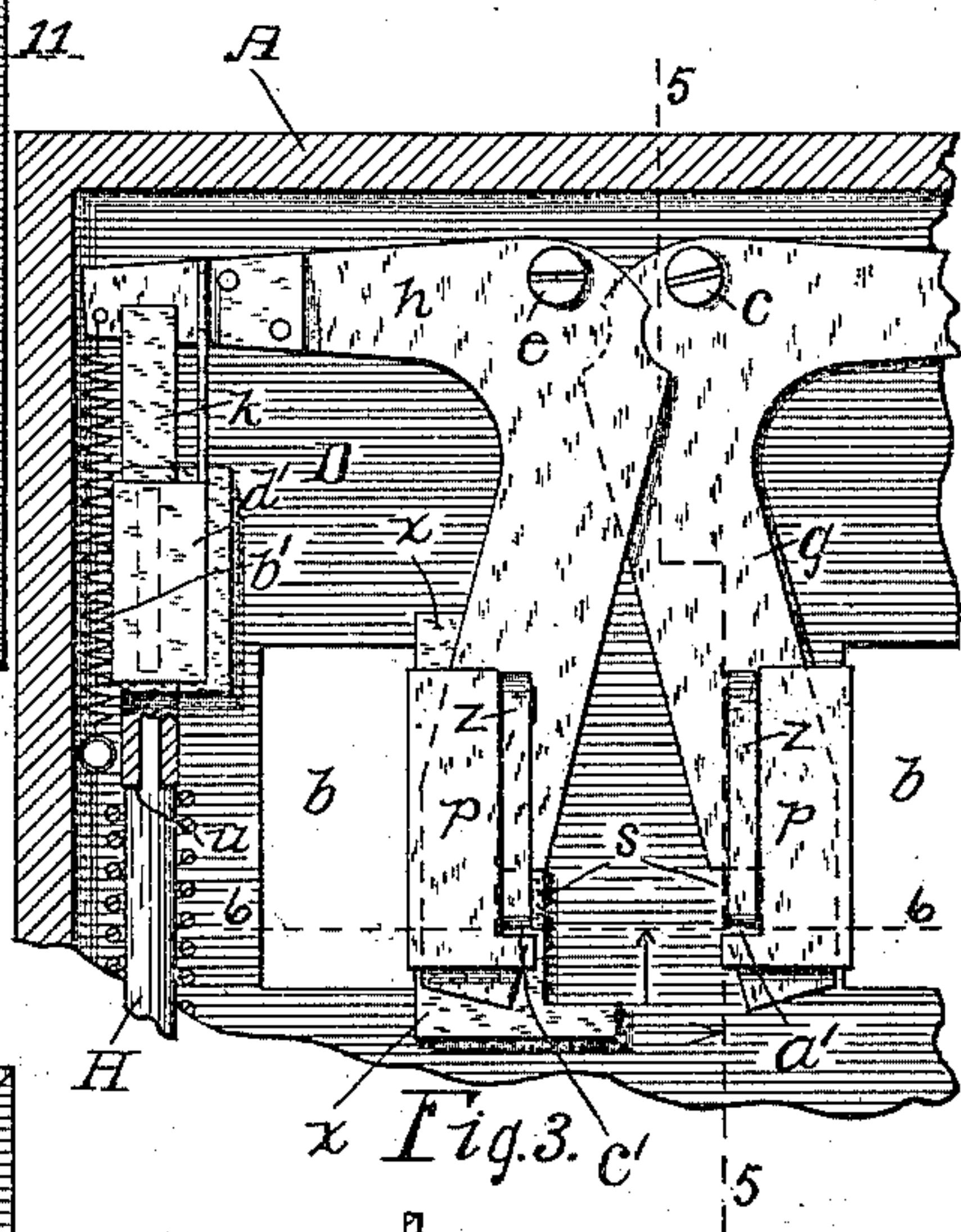
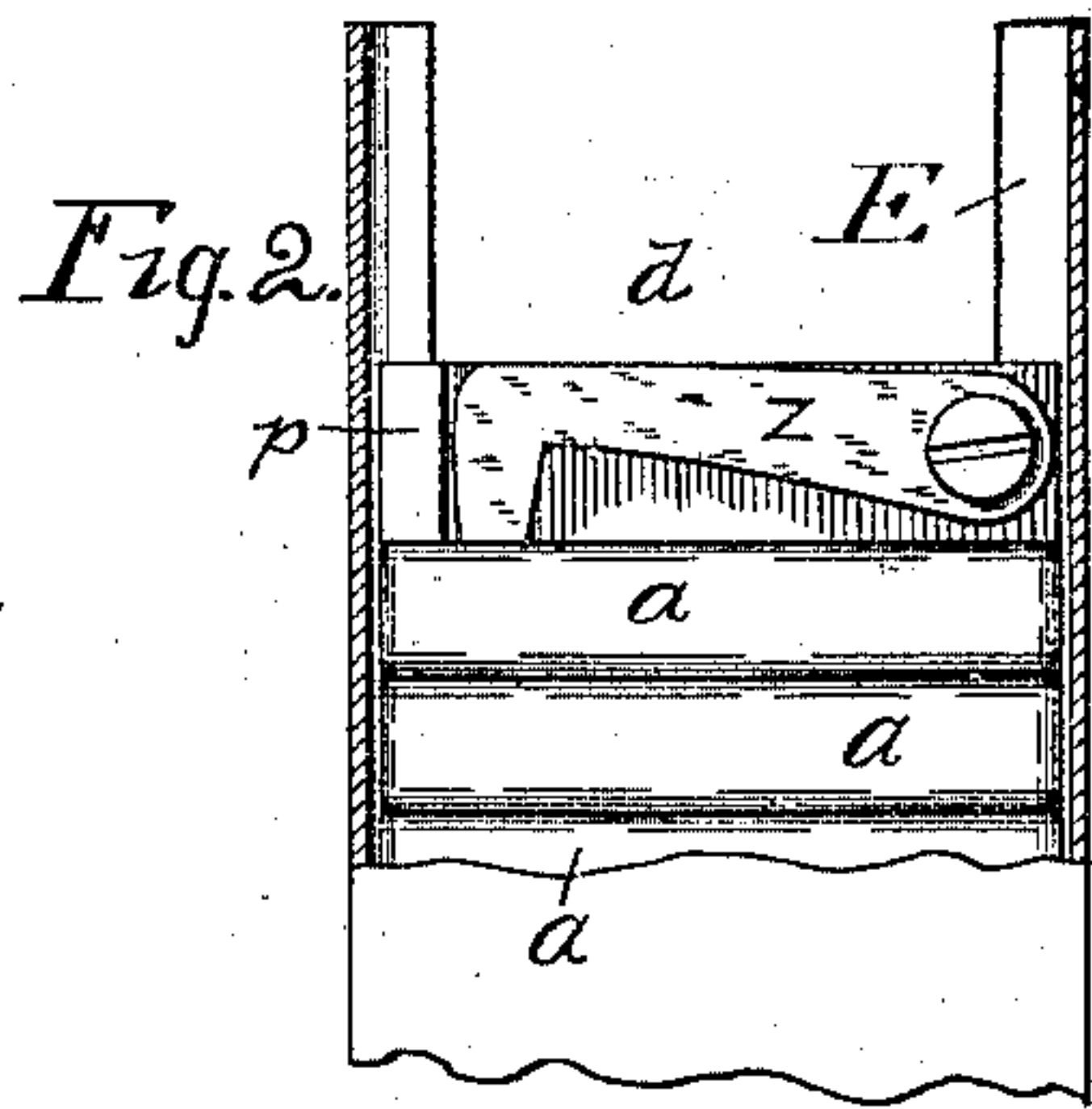
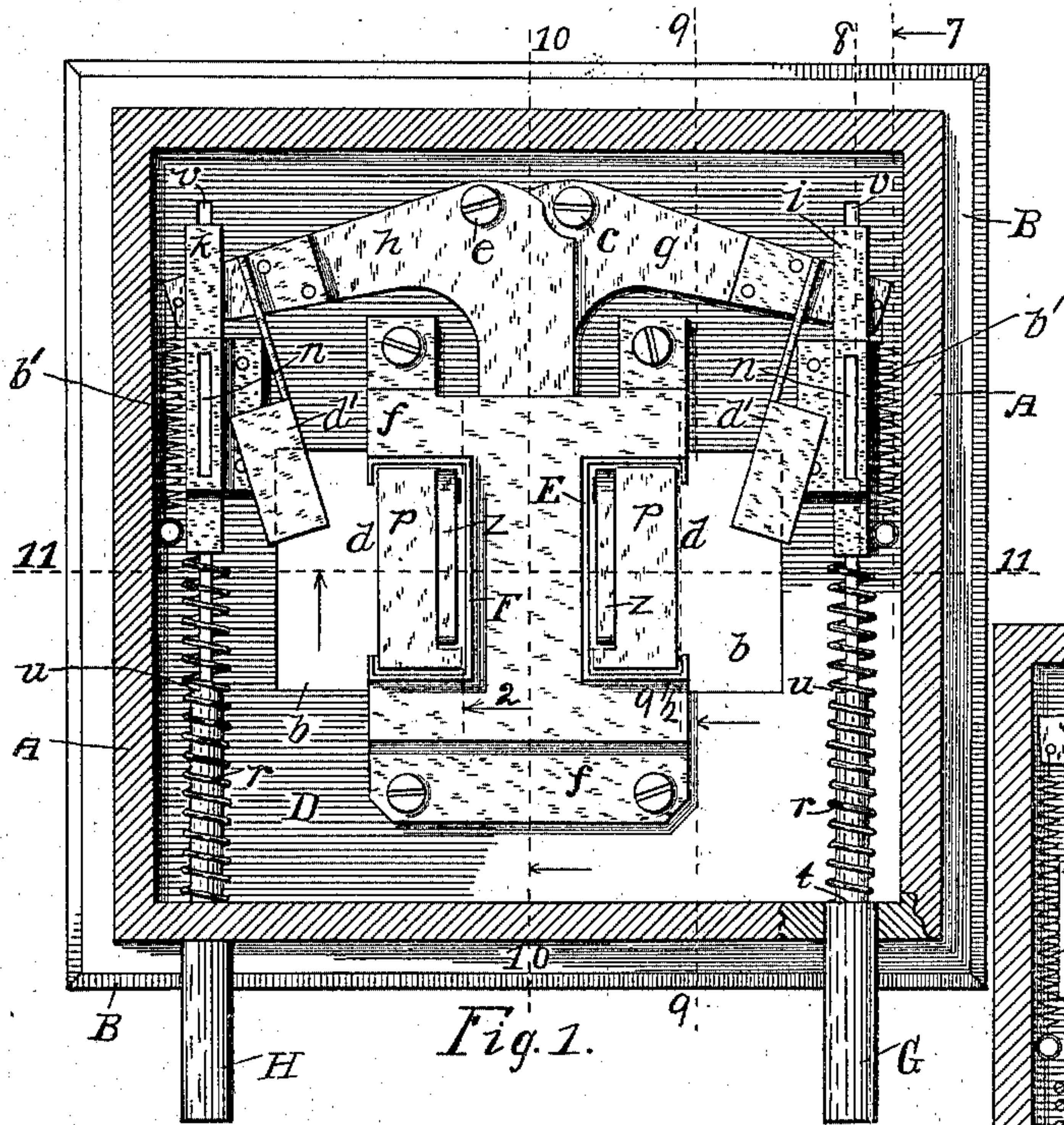
PATENTED JAN. 12, 1904.

H. V. HOAG, JR.
VENDING MACHINE.

APPLICATION FILED APR. 8, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Attest:
M. B. Smith
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Inventor:
Herman V. Hoag, Jr.
By E. B. Whitmore, Atty.

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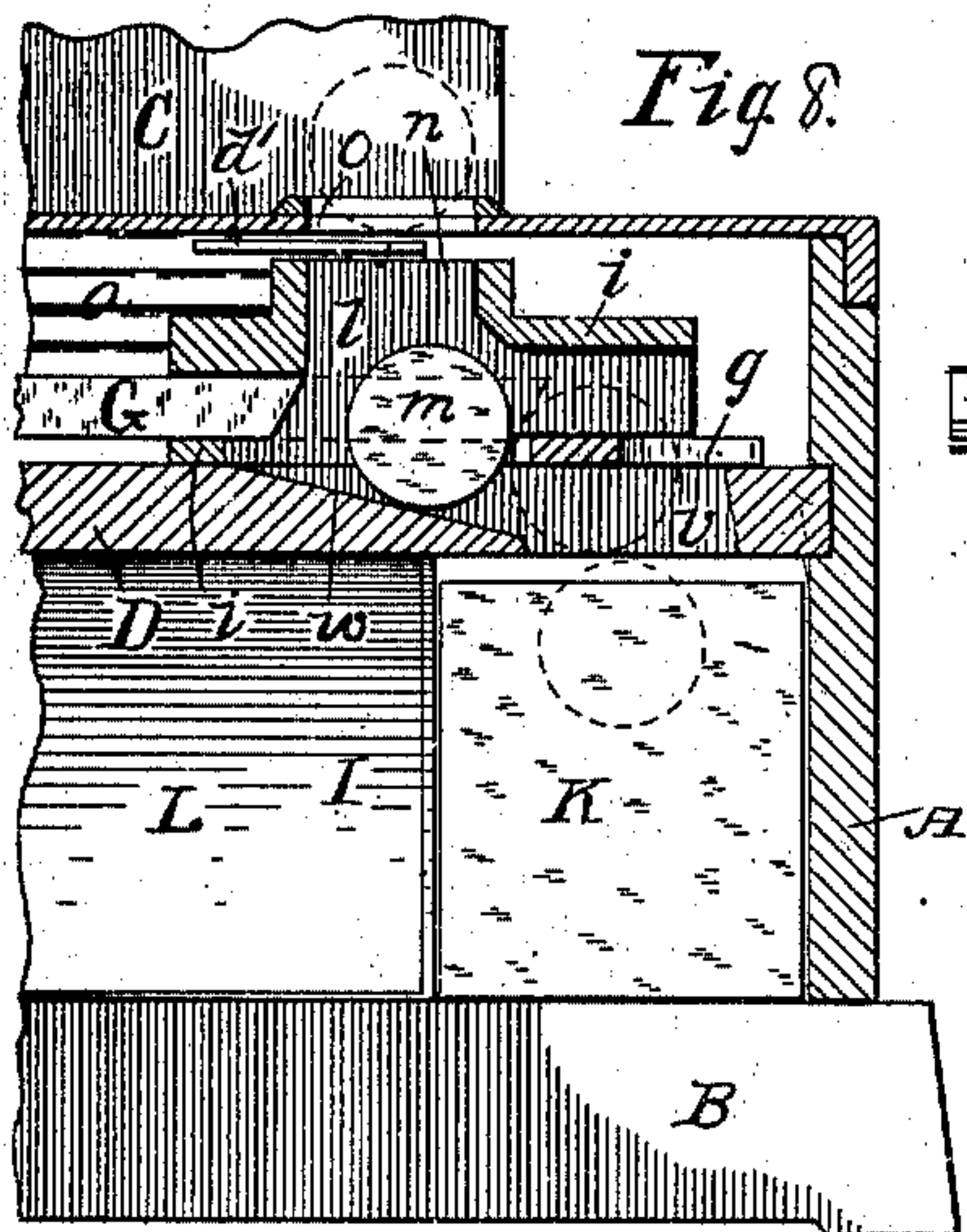


Fig. 8.

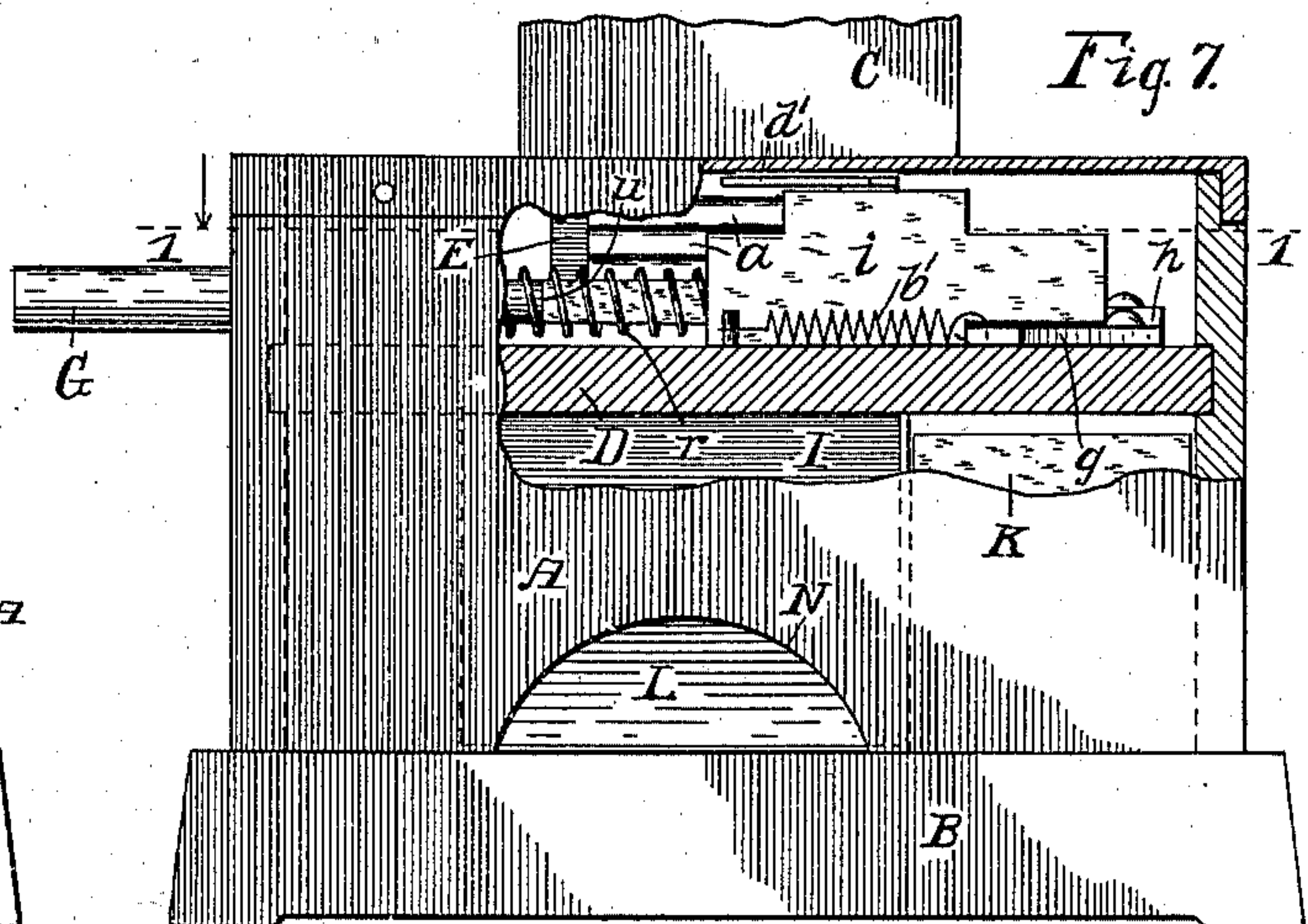


Fig. 7.

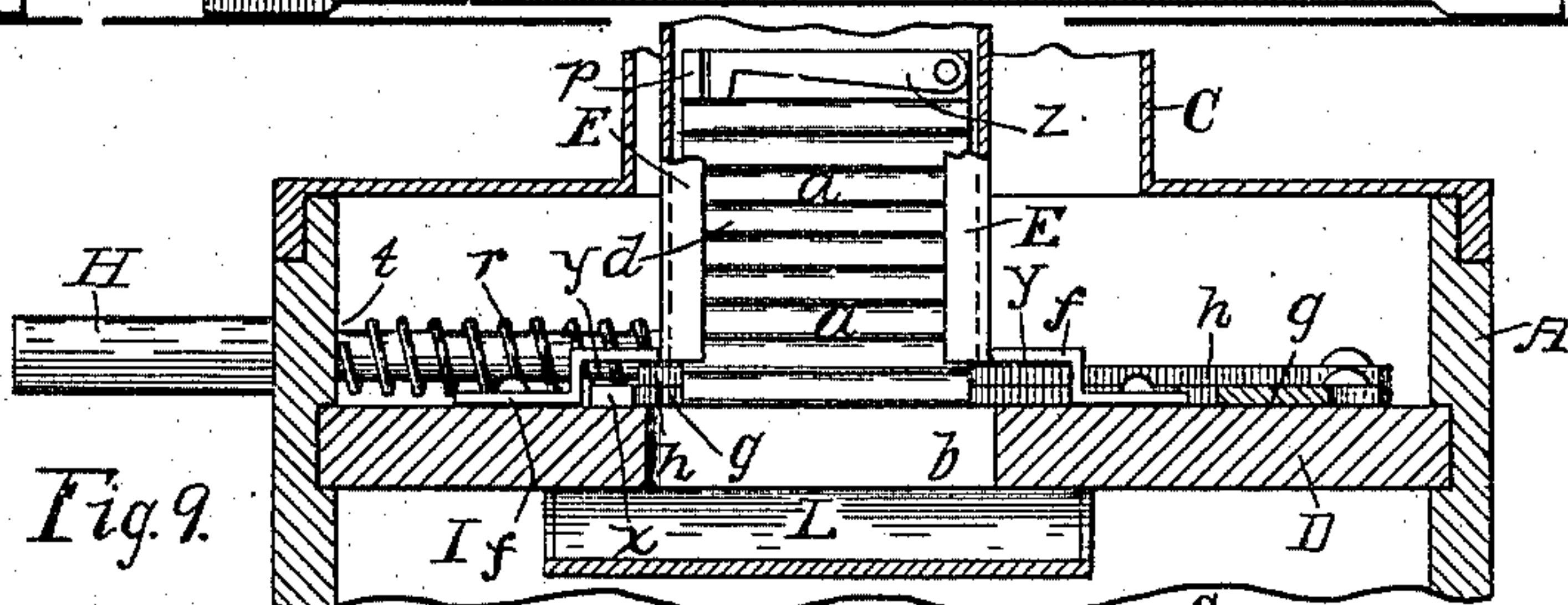


Fig. 9.

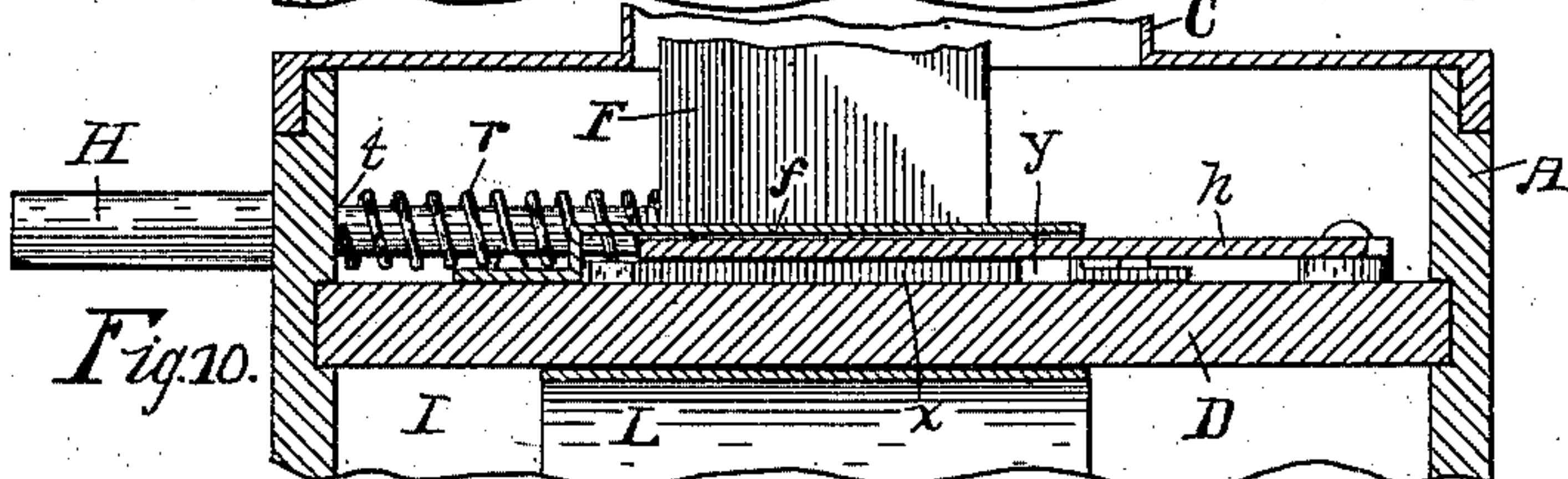


Fig. 10.

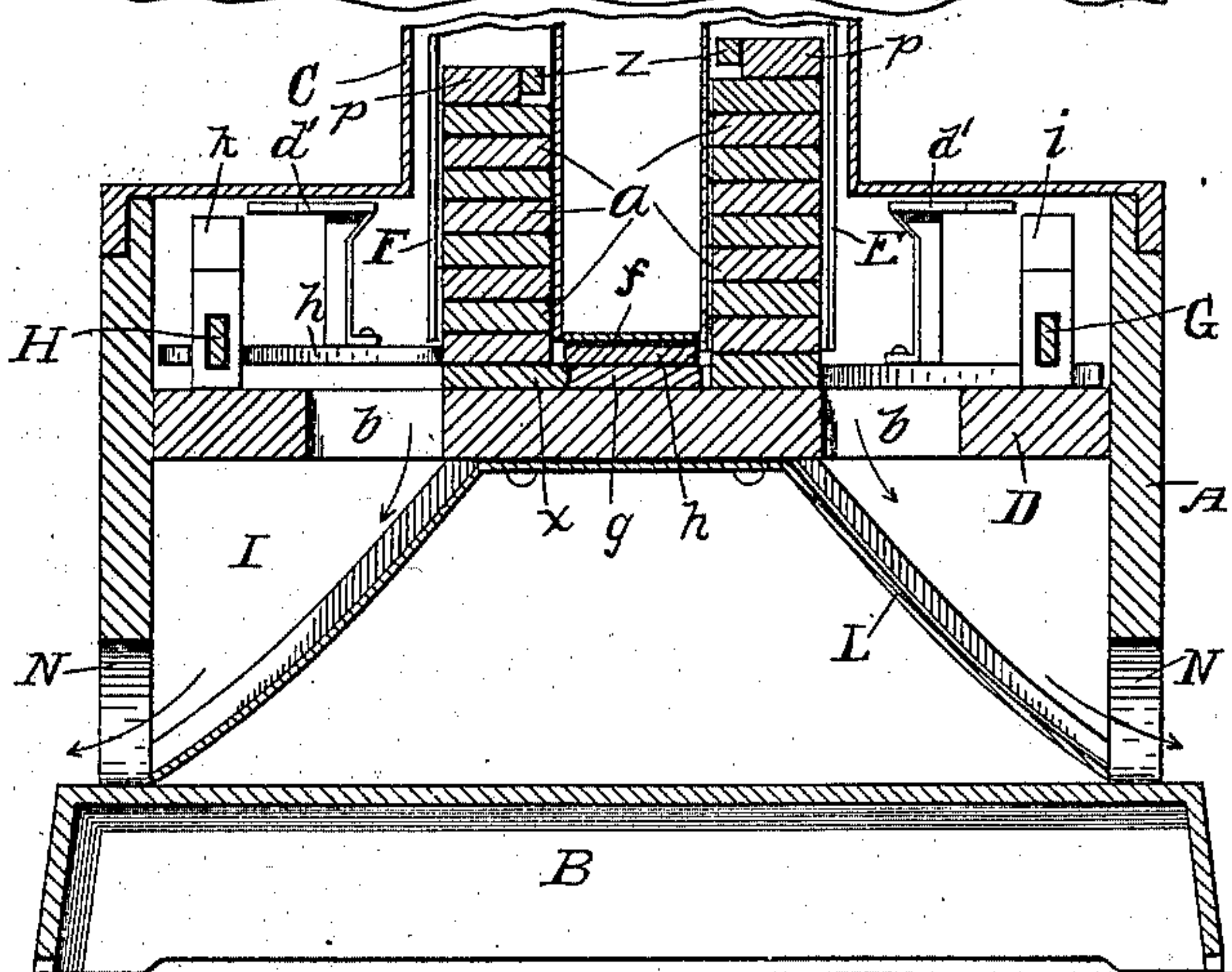
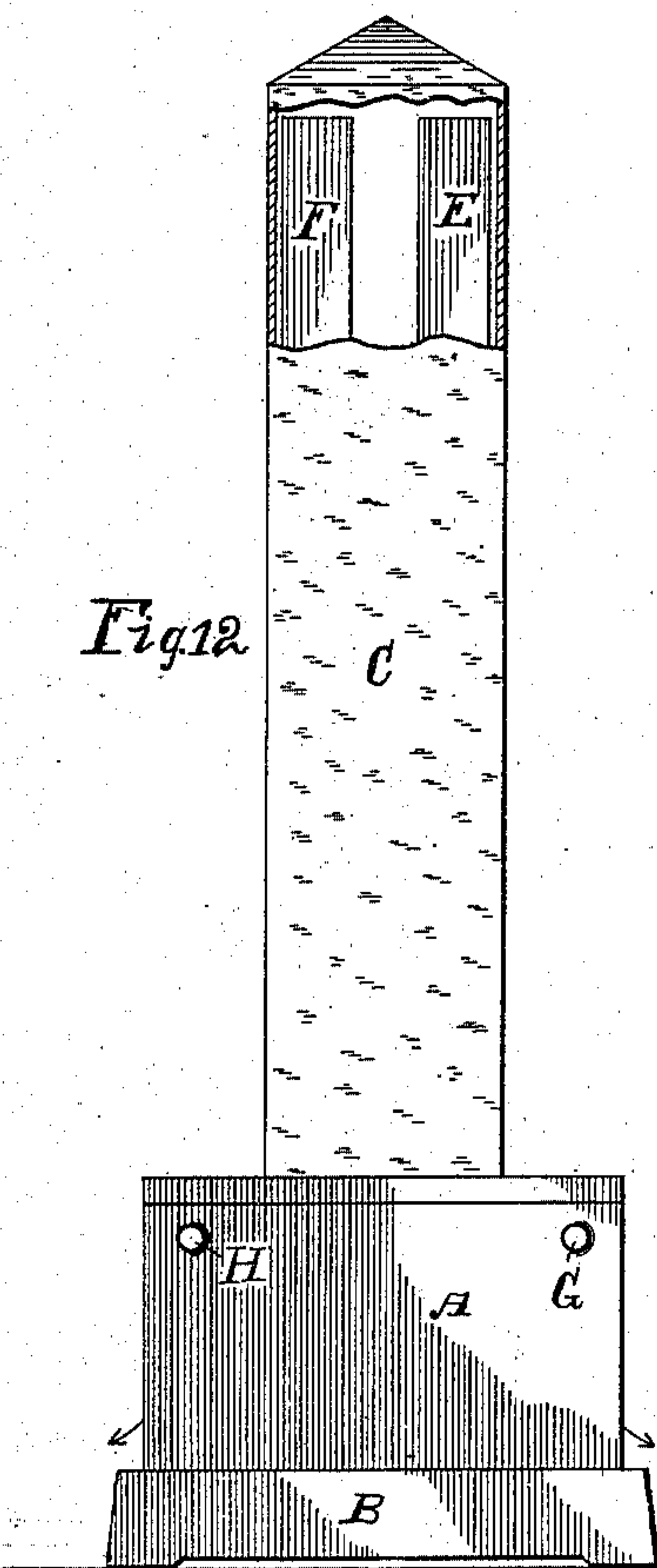


Fig. 11.

Fig. 12.



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UNITED STATES PATENT OFFICE.

HERMON V. HOAG, JR., OF SMITHVILLE FLATS, NEW YORK, ASSIGNOR
TO PUN VENDING COMPANY, OF ROCHESTER, NEW YORK.

VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 749,485, dated January 12, 1904.

Application filed April 8, 1902. Serial No. 101,971. (No model.)

To all whom it may concern:

Be it known that I, HERMON V. HOAG, JR., of Smithville Flats, in the county of Chenango and State of New York, have invented a new and useful Improvement in Vending-Machines, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

My invention is a vending-machine or a device for holding and delivering to purchasers small packages of merchandise—such as chewing-gum, confections, and the like—the invention being hereinafter fully described, and more particularly pointed out in the claims. This machine is usually constructed to hold such packages arranged in two vertical columns, to be delivered singly to the purchaser, a coin having been first inserted in the machine to constitute temporarily an essential working part thereof.

One object of my invention is to produce a vending-machine simple in construction and operation, having few parts, and one that may be produced at little expense.

Another object of the invention is to provide means for automatically closing the coin-receiving openings to prevent coins being dropped into the machine after the packages are exhausted.

Other objects of the invention will be brought out and made to appear in the following specification, reference being had to the accompanying drawings, forming a part thereof.

Figure 1 is a horizontal section of the inclosing case, taken as on the dotted line 1 1 in Fig. 7, showing the interior parts in plan. Fig. 2 is a vertical section of the upper part of one of the vertical chutes, taken on the dotted line at the point of arrow 2 in Fig. 1. Fig. 3 is a plan of some of the interior parts in their operated positions, parts being broken away and the inclosing case horizontally sectioned as on the dotted line 1 1 in Fig. 7. Fig. 4 is a plan, parts being omitted to uncover parts beneath, the left delivery-lever being shown in two positions by full and dotted lines, the section being on the dotted line 1 1 in Fig. 7. Fig. 5 is a vertical section of a part of the floor and adjacent parts of the

inclosing case, taken as on the broken dotted line 5 5 in Fig. 3, with some associated parts, showing the method of locking a delivery-lever, view indicated by arrow pointed on said dotted line. Fig. 6 is a vertical section of a part of the floor and associated parts, taken as on the dotted line 6 6 in Fig. 3, further showing the manner of locking the delivery-levers. Fig. 7 is a side elevation of the lower part of the device seen as indicated by arrow 7 in Fig. 1, parts being vertically sectioned as on the dotted line at the point of the arrow. Fig. 8 is a vertical section of a coin-receiver and adjacent parts, taken on the dotted line 8 in Fig. 1. Fig. 9 is a vertical section of parts on the dotted line 9 9 in Fig. 1, a part of the right chute being broken away and vertically sectioned as on the dotted line 9½ in Fig. 1. Fig. 10 is a central vertical section of parts on the dotted line 10 10 in Fig. 1, parts broken away. Fig. 11 is a central vertical section of the lower parts of the machine, taken as on the dotted line 11 11 in Fig. 1. Fig. 12 is a front elevation of the machine, a part being broken out. Fig. 2 is drawn to a scale larger and Fig. 12 to a scale smaller than that of the remaining figures.

Referring to the parts shown, A is the inclosing case or body of the machine, preferably rectangular in form, rising from a laterally-extended base B. This inclosing case comprises a shaft or upper portion C, which may have any desired form of cross-section, as circular or polygonal, it being preferably made square to give the casing a monumental appearance, as shown in Fig. 12. Within the body or case A is placed a horizontal floor D, which supports the principal working parts of the machine, it being pierced by two rectangular openings *b b*, down through which the released packages fall.

E and F are respectively right and left vertical hollow chutes for holding the packages *a*, placed back toward back and separated, as shown, each chute being formed with an open front side *d*. These chutes are held at their lower ends by a low base-piece or table *f*, secured to the floor D, with space *y* beneath, the chutes extending upward within the part

C of the inclosing case, as shown in Fig. 12. The chutes pass downward through the table *f*, their lower ends opening into the space *y* beneath, space being left between the ends of the chutes and the floor D.

Associated with the chutes E F, respectively, are bent delivering-levers *g h* for the packages *a*, held to turn in horizontal directions above the floor D upon pivot-studs *c e*, rigid in the floor. One lever plays above the other and both act in the space *y* beneath the table or base *f*, each lever commanding the space below its associated chute. The construction is such that the openings *b b* in the floor are adjacent to the lower ends of the respective chutes and at or near the terminals of the forward sweeps of the delivery-levers, the latter in approaching the respective openings passing beneath the open ends of the chutes. *i* and *k* are respectively right and left hand hollow coin-receivers secured rigidly to the floor D, each being formed with a narrow vertical longitudinal cavity *l*, Fig. 8, for receiving the coin *m*. The walls of these cavities serve to hold the contained coins in vertical positions, each cavity opening out at the top of the receiver through an elongated opening or slot *n*. The inclosing case is formed with slots *o o*, Figs. 4 and 8, directly over and corresponding with the slots *n n*, so that coins may be passed from without by the purchaser directly into the receivers *i k*. Beneath each coin-receiver *i k* and in line with the cavity *l* therein the floor D is formed with a vertical slit *v*, Figs. 1, 4, and 8, which, together with the co-acting cavity *l*, forms a continuous passage for the coin from without the machine downward to the interior space I below the floor D. Co-acting with these receivers, respectively, are two horizontal push-pins or plungers G H, projecting from the front face of the body A in position to be pressed inward by the purchaser. These plungers are usually round in form throughout most of their lengths, but made flat and thin at their inner ends back to shoulders *u u*, as shown, these thin portions entering the narrow cavities *l* in the respective coin-receivers *i k*, which constitute rests or bearings for the inner ends of the plungers. These plungers are adapted to have endwise motions in their bearings, each being provided with a controlling-spring *r*, pressing at its ends against the adjacent receiver and a shoulder *t* of the plunger, respectively, to hold the plunger normally outward or projecting farthest from the face of the body A. By observing Figs. 1, 4, and 8 it will be seen that the plungers G H are in line with the respective delivery-levers *g h* and when pushed in their inner ends approach the adjacent parts of said respective levers. Also when pushed in the plungers do not wholly reach the levers to move them, there being always space between the end of either plunger and its asso-

ciated lever on account of the stop-shoulder *u* of the plunger encountering in advance the adjacent coin-receiver, the latter inclosing the space between said plunger and the lever; but if a coin *m* be previously inserted in the receiver, and so become interposed between the end of the plunger and the lever, as shown in Fig. 8, the lever will be turned on its bearing by the advancing plunger to the position shown in Fig. 3, and the coin will be in position to drop through the slit *v*, Fig. 8, into a receptacle K beneath the floor. The coin when dropped into the receiver falls upon the inclined floor *w* of the slit *v* and rolls from gravity down against the delivery-lever ready to receive the thrust of the plunger, the end of the latter being slanted or made inclined, so to tend to urge the coin in a downward direction in the slit *v*.

Beneath the chute F is placed a thin piece *x*, Figs. 3, 4, 6, 9 to 11, constituting a raised part of the floor D, over which piece the delivery-lever *h* sweeps in its movements toward and from the adjacent opening *b* in the floor, this part *x* corresponding in thickness with that of the lever *g*. The packages of goods *a* are arranged in columns in the chutes, as shown in Figs. 9 and 10, the bottom package in the chute E resting directly upon the floor D and the corresponding packages in the chute F resting upon the raised part *x*. From these columns the packages are pushed toward the right or the left, as the case may be, by the levers *g h* when the plungers are pushed in, the displaced packages falling through the openings *b b* in the floor D, the levers taking the bottom package of each column at each forward sweep. Beneath the floor is placed an inclined slide or chute L, Figs. 6 to 11, to conduct the released packages outward, they being delivered through openings N N, Figs. 7 and 11, formed in opposite sides of the inclosing case A.

This machine is constructed with parts to lock the delivery-lever and to close the coin-receiving opening *n* on either side of the machine after the last package of goods is delivered from either chute E F. The levers *g h* are controlled, respectively, by springs *b'*, which hold them in normal positions away from beneath the respective chutes, as shown in Figs. 1 and 4. These levers are also formed with openings or notches *s s*, Figs. 3, 4, and 5, and upon each column of packages is placed a rectangular lock block or body *p*, usually of heavy metal, provided with a pivotal latch *z*. These lock-blocks follow downward within the respective chutes as the packages therein are removed by the levers, and when the last package is removed from either chute the block drops upon the lever, this taking place when the lever is at its operated position (shown in Fig. 3) just as the last package is pushed from its place down the opening *b*. In this rela-

tion of the parts the latch z of the lock-block on either side of the machine is in position to swing downward through the opening s in the lever under it, as appears in Figs. 5 and 6.

5 Beneath the notch s in the lever g when in its operated position the floor D is formed with a corresponding opening a' , into which the extreme point of the latch z enters. This serves to lock the lever and prevent it being returned
10 to its normal position out from under the chute, as in other cases, by the controlling-spring b' . Similarly the lever h is locked in its operated position by the coacting lock-body, the point of the latch z entering a notch c'
15 in the raised part x of the floor.

Upon each delivery-lever g h is secured a closer d' , Figs. 1, 3, 7, and 8, for the adjacent coin-opening n to prevent coins being dropped therein after the packages are exhausted at
20 either side of the machine and the lever locked, as stated. These closers consist each of a small horizontal sheet-metal plate held by the associated lever in position to pass just above the adjacent coin-receiver and cover the slot n
25 therein when the lever is turned by the coacting plunger, as stated. (Clearly shown in Fig. 3.) This prevents coin from being passed into the machine at either side until the chute on that side has been again filled and the lever un-
30 locked.

It is clear that this machine may be constructed with one or more chutes for holding the packages of merchandise (each chute having its system of operating mechanism) with-
35 out departing from my invention and that these chutes may be of different sizes or vary

in form of cross-section to adapt them to packages of different sizes and shapes.

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

1. A vending-machine, comprising a floor, chutes above the floor, bent delivery-levers having portions overlapped and mounted to turn in horizontal directions upon independent pivots to work one beneath each chute, and means for operating said levers, said levers being mounted to move in different vertical planes, and a raised portion on said floor beneath one of said chutes corresponding in thickness to the thickness of the lever.

2. A vending-machine comprising a floor, chutes above the floor, bent delivery-levers mounted to turn in horizontal directions upon independent pivots to work one beneath each chute, and means for operating said levers, said levers having notches in the outer ends of their longitudinal portions, said notched portions being overlapped and lock-blocks having latches to engage said notches, the floor being provided with an opening a' to receive the extreme point of said latch when the levers are in operative position and a raised portion on said floor in the plane of one lever and below the plane of the other lever corresponding in thickness to the thickness of one of said levers.

In witness whereof I have hereunto set my hand this 27th day of March, 1902, in the presence of two subscribing witnesses.

HERMON V. HOAG, JR.

Witnesses:

ENOS B. WHITMORE,
MINNIE SMITH.