

(No Model.)

P. F. KING.
SAFE.

No. 545,163.

Patented Aug. 27, 1895.

Fig. 1.

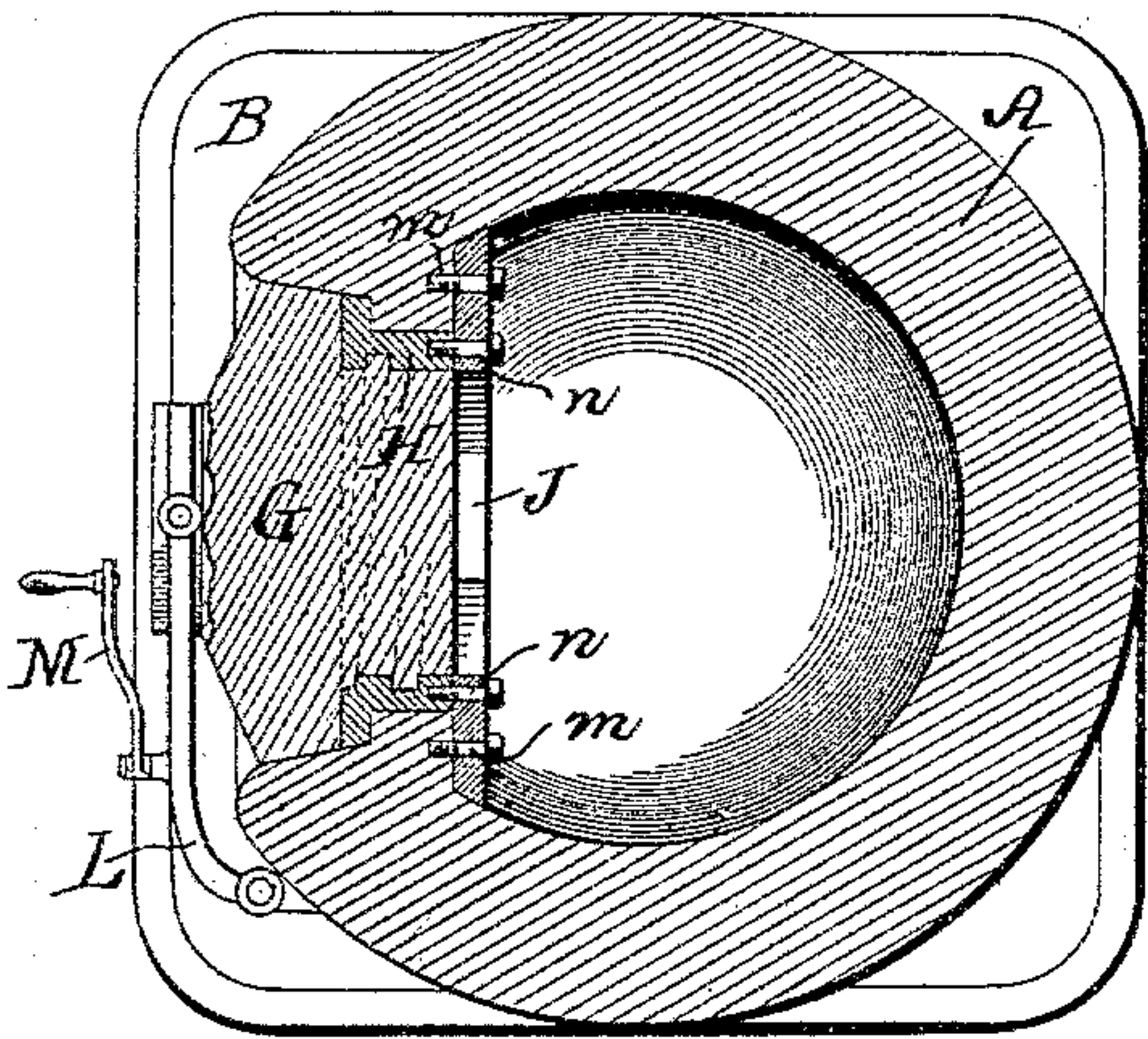


Fig. 2.

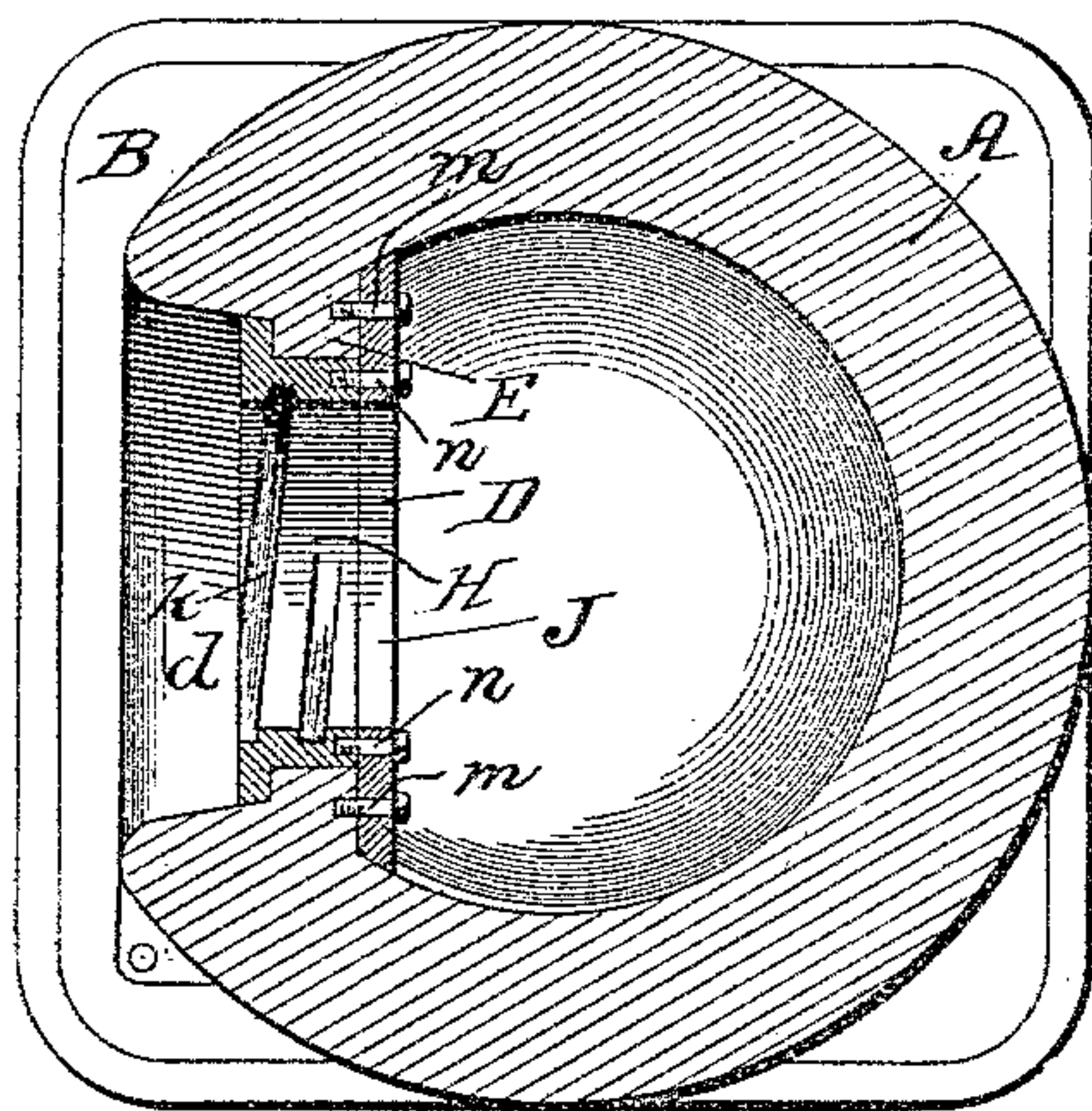


Fig. 3.

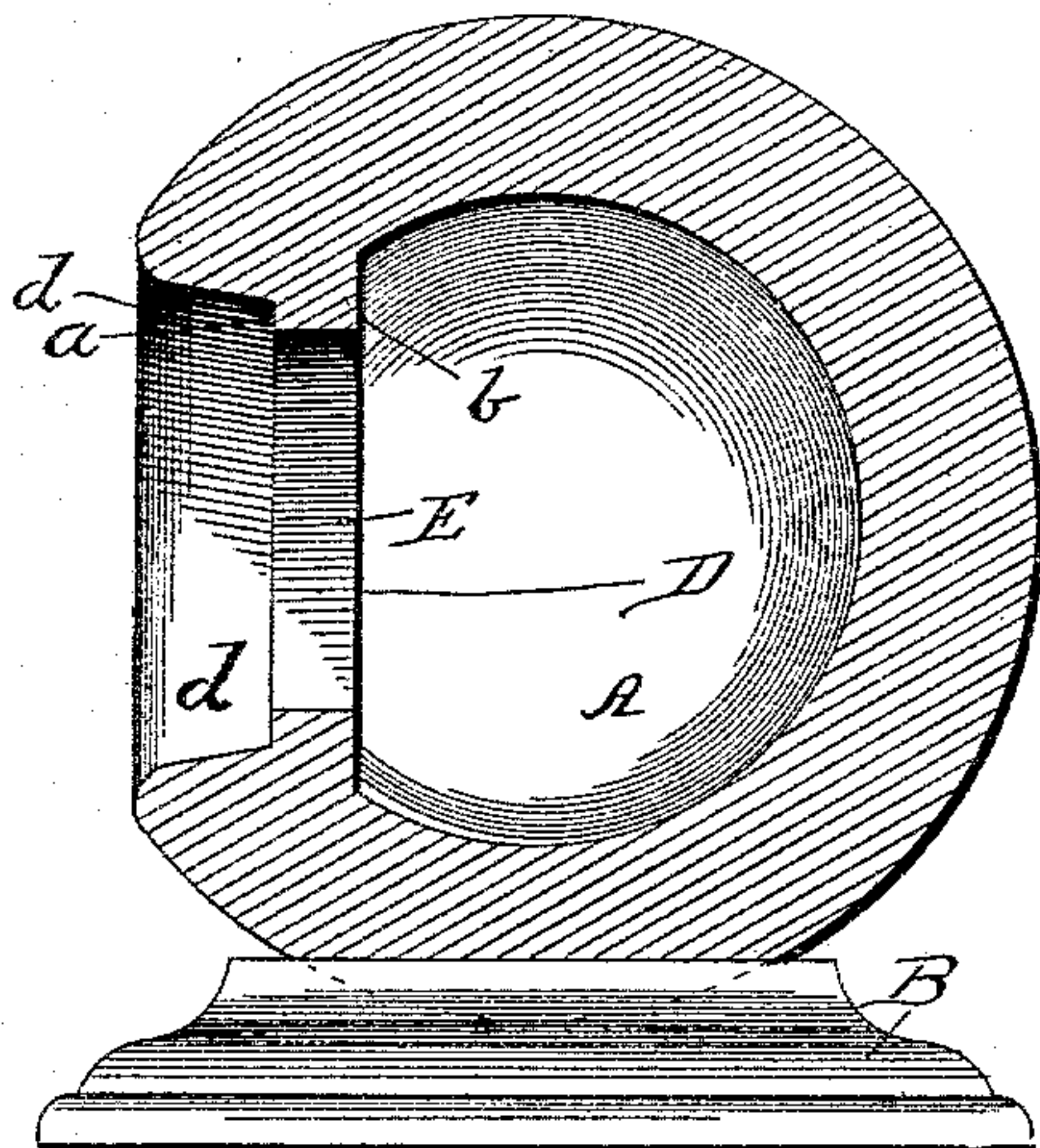


Fig. 4.

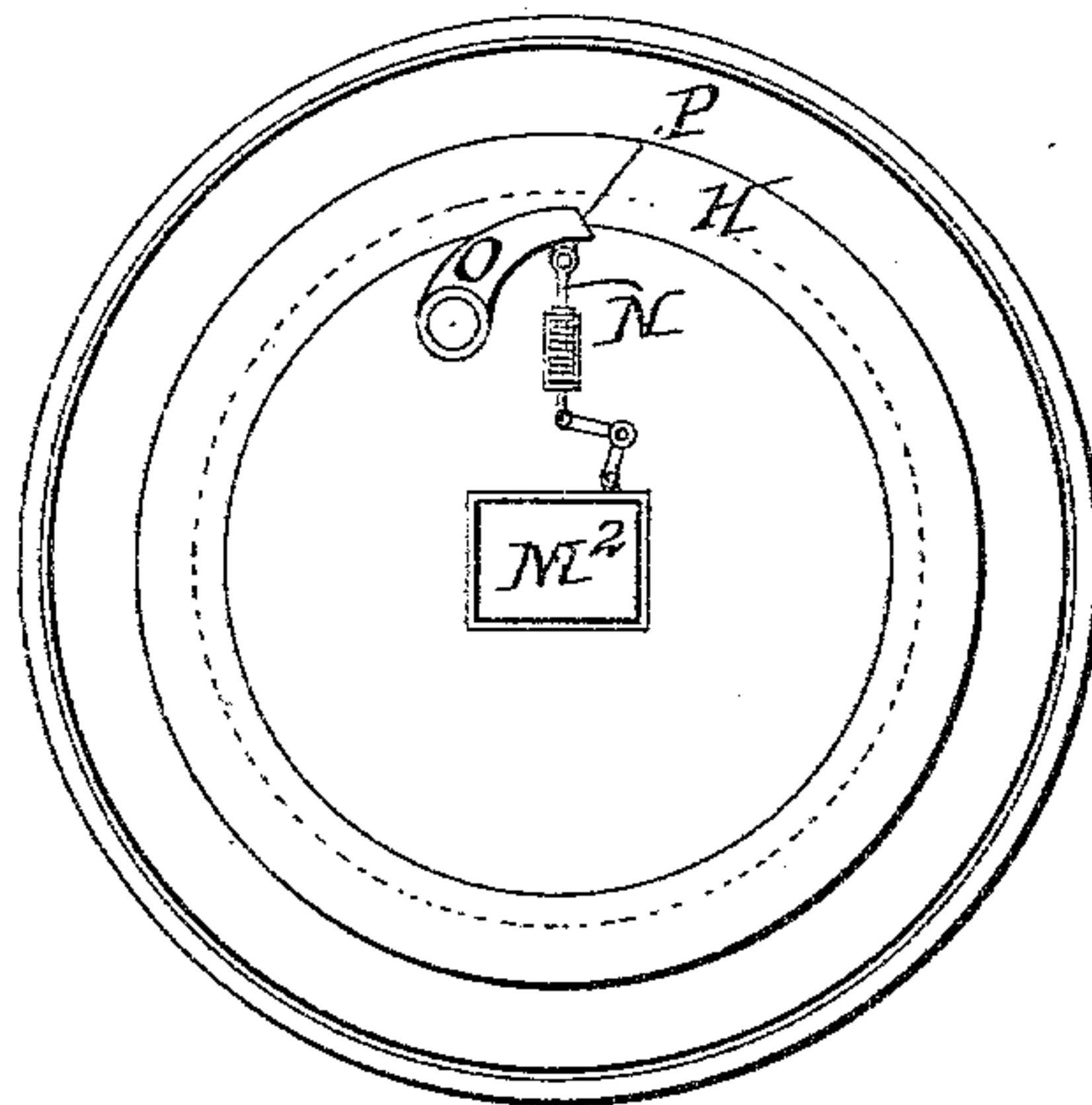


Fig. 5.

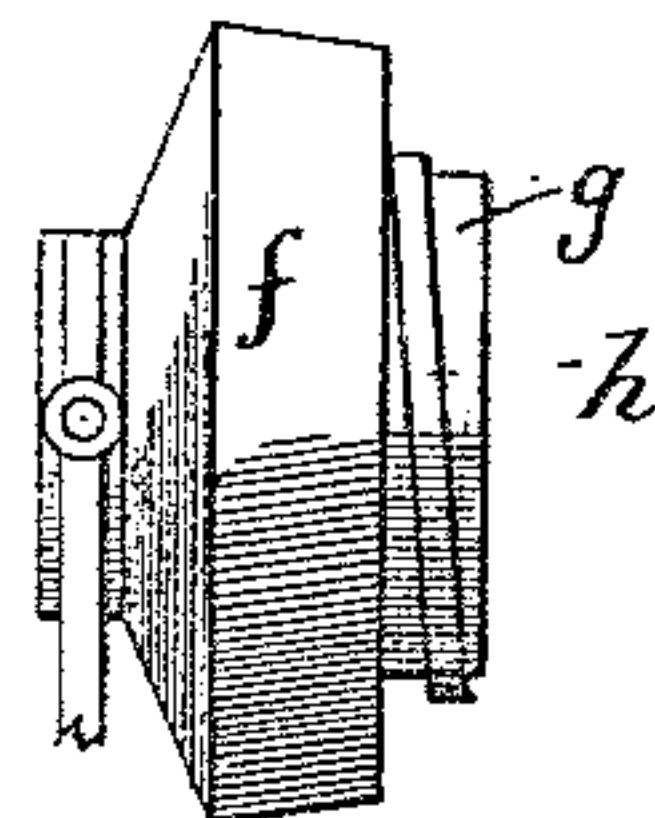


Fig. 6.

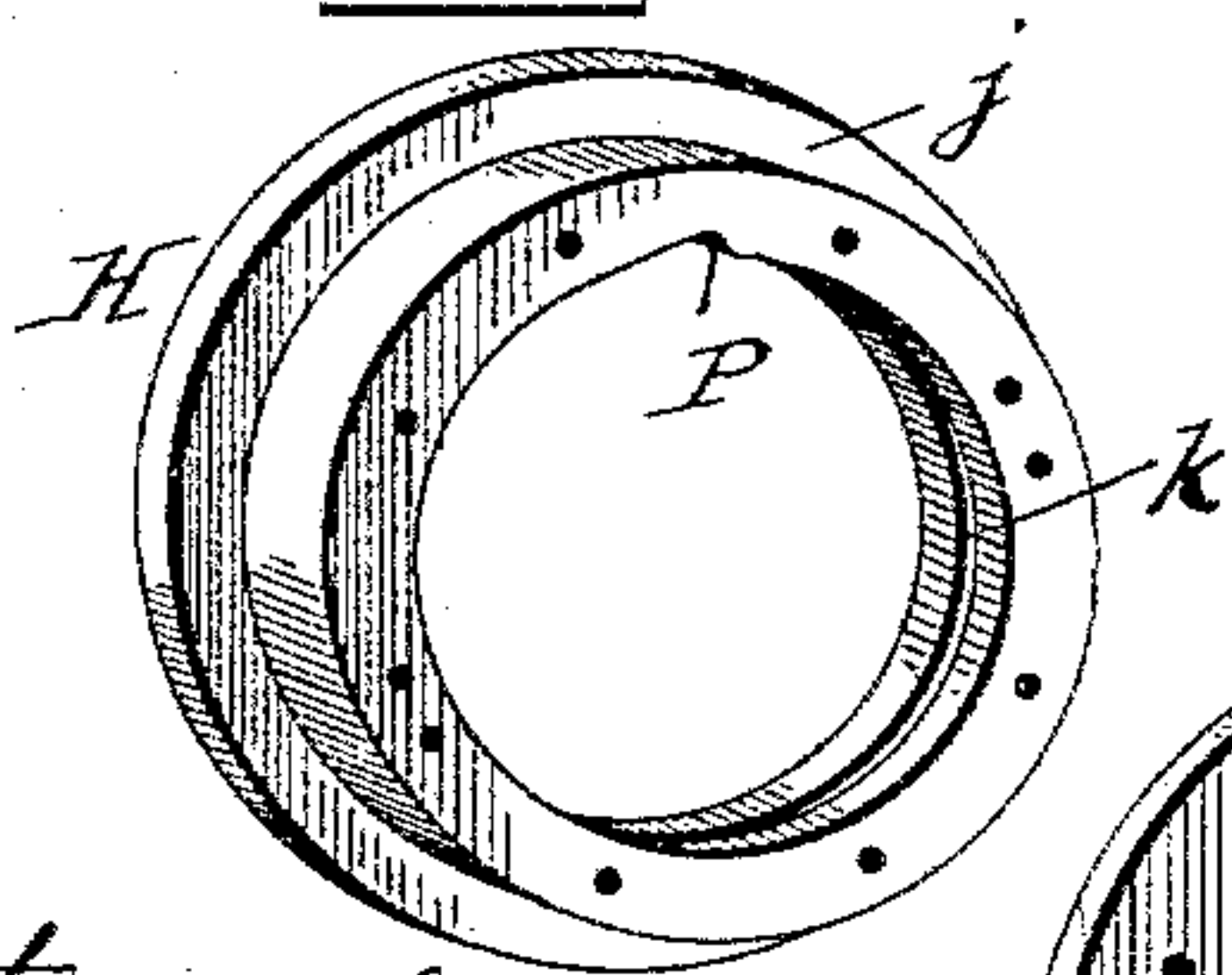
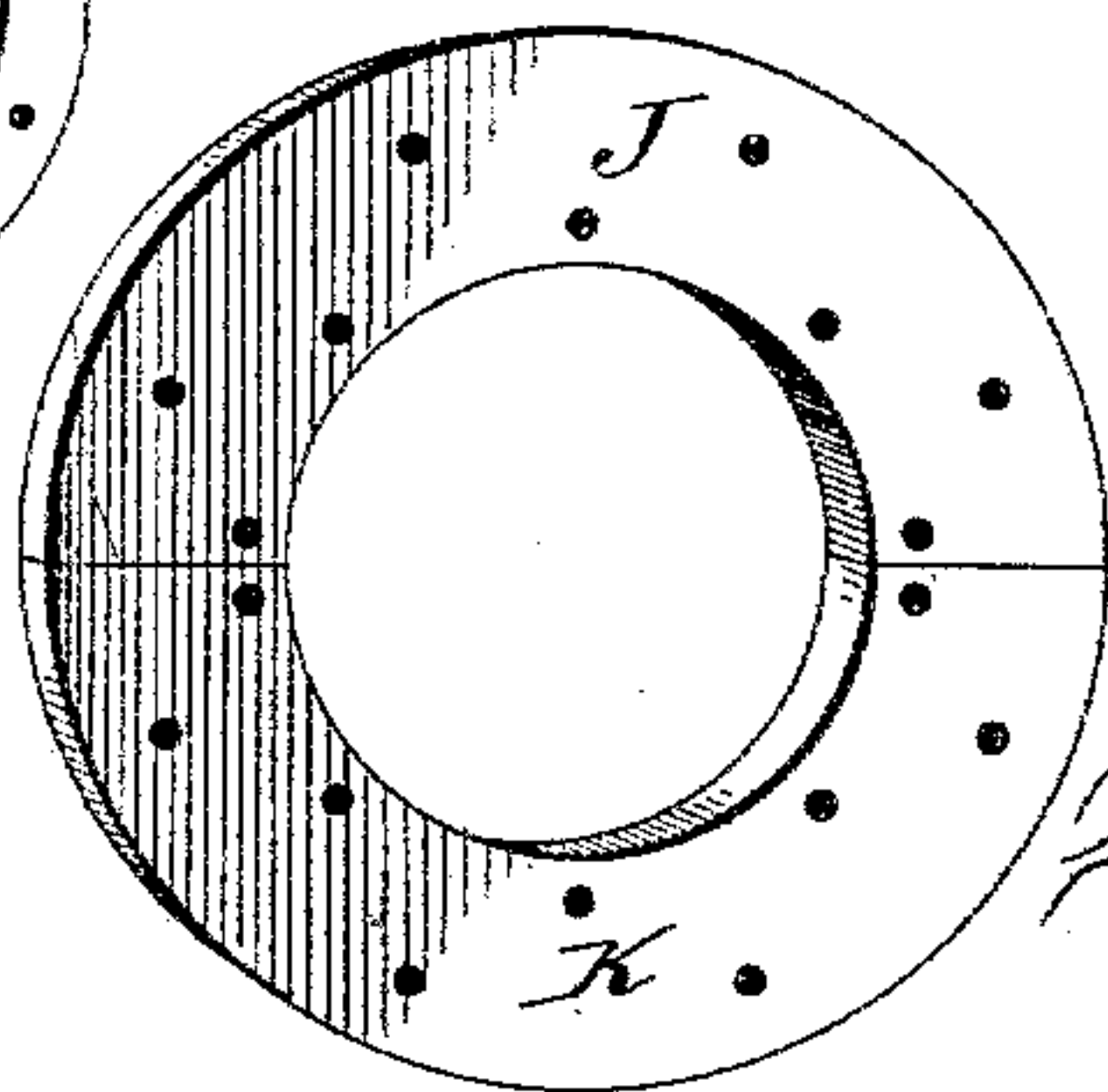


Fig. 7.



Witnesses:
C. W. Graham
Chas. E. Stanley

Inventor
Phineas F. King,
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UNITED STATES PATENT OFFICE.

PHINEAS F. KING, OF CHICAGO, ILLINOIS, ASSIGNOR OF A PART TO C. E. STANLEY, OF SAME PLACE.

SAFE.

SPECIFICATION forming part of Letters Patent No. 545,163, dated August 27, 1895.

Application filed June 7, 1895. Serial No. 552,047. (No model.)

To all whom it may concern:

Be it known that I, PHINEAS F. KING, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Safes, of which the following is a specification.

The object of my invention is to produce a safe which shall be constructed of one solid integral piece of solid metal cast in solid form and provided with a screw-door constructed of one solid integral piece of metal and in a solid form with connecting inside rings and locking mechanism so perfectly arranged that all adjustments may be made upon the inner face of the door, which door when placed in position and secured to the inner face of the safe-body will perfectly adjust itself and avoid the necessity of making the safe body or door in separate parts, which has heretofore been done in safes provided with round or circular doors, in order to afford access to the interior of the safe to adjust the parts with the door closed. By this construction I provide a safe of solid metal having the door screwed firmly into the body portion, which door is firmly screwed into position upon the safe-body and dispensing with plates, bolts, screws, or other forms of fastening devices for the body of the safe or the door. As an additional feature, when the locking mechanism employed is operated automatically by a time-lock with my construction, I provide a door without any spindles or shafts of any character passing through it for operating the locking mechanism.

My invention has certain other objects; and it consists in certain features and arrangement of parts to be described, and pointed out in my claims, reference being now had to the accompanying drawings, in which—

Figure 1 is a central sectional view through the safe, showing the door closed and in a locked position. Fig. 2 is a similar view with the door removed. Fig. 3 is also a similar view with the door, the lock-adjusting ring, and the means for holding the same removed from the said body. Fig. 4 is a view showing the door locked in position and also showing the manner of engagement between the lock-adjusting ring and the locking mechanism.

Fig. 5 is a perspective view of the lock-adjusting ring. Fig. 6 is a detail view of the door. Fig. 7 is a like view of the separate members for holding the lock-adjusting ring.

The body portion of the safe is designated at A, and is made up completely and entirely of a single integral piece of solid resisting material. This body portion is mounted upon a suitable base B and has a circular opening at D. Extended about this opening D is an annular projection E from the body portion A, forming the shoulders *a* and *b*, and the surface of the body portion A about the opening D is formed into an annular bevel-face *d*. The door G of the safe is also made of one solid integral piece of resisting material, and has an annular bevel-face *f* and also a screw-thread holding extension *g*, having thereon the male member *h* of a screw-thread connection. I provide a lock-adjusting ring H, having the annular shoulder *j* and also the female member *k* of the screw-thread connection formed in the ring H.

J and K respectively designate two half portions of what becomes a complete ring when joined together and secured in position in a manner to be described, and which, serving to hold the lock-adjusting ring H in position, are termed the "ring-holding" member or members.

The door G is pivotally mounted upon suitable hinges L and is capable of being rotated upon its pivot by the crank M in a manner common to that class of safes known as the "screw-door" type.

The locking mechanism, consisting of the time-lock M², operating the bolt N, which in turn operates the pivoted latch O, is mounted upon the door, and the latch O is adapted to engage a recess or slot P in the lock-adjusting ring H when the latter is adjusted in position in the manner to be described, the springs normally tending to press outwardly upon the latch O.

The manner of positioning and joining together the door G, made of one solid piece, and the body portion A, also of one solid piece, is as follows: The bevel-face *f* of the door G is ground upon the bevel-face *d* of the body portion A in any suitable manner in order to produce an absolutely tight fit and

joint of the door G into the safe-opening D, so that when the door is closed and locked in position upon the body portion A the front is absolutely impervious to the introduction of explosives or other agents, as there are no openings in the door, and, as this is also the case with the body portion A, I provide a solid safe, impervious at all points to these explosives or other agents. I avoid the necessity of providing an opening in the body portion of the safe or in the door or of making the body portion or door in separate parts to provide access to the interior to adjust the locking mechanism when the door is closed, by the employment of the lock-adjusting ring H, which is positioned in manner following: I first place the lock-adjusting ring H upon the projecting portion *g* of the door G, the screw-thread connection *h* and *k* being engaged, and then adjust the locking mechanism on the door relative to the recess P, so that the locking mechanism operates accurately, readily, and invariably. I then close the door G, having first removed the locking-latch O, or holding it back so that the door may not be locked when closed, and bring a pressure to bear upon the door, causing the ring H, now carried thereby, to wedge itself upon or into the face of the annular projection E, which face may be slightly beveled for this purpose, thus temporarily holding the ring H from turning with the safe-door G when it is turned to disengage the screw-thread connection *h* and *k* to permit the opening of the door. When the door is thus opened, the two ring-holding members J and K may be inserted into the interior of the safe-body A and arranged together upon the shoulder *b* and bolted to the safe-body on the interior thereof by the bolts *m m* and also to the lock-adjusting ring H by the bolts *n n*, thus holding the ring firmly in its adjusted proper position by the ring-holding member or members and the annular projection *j* on the ring H bearing against the shoulder *a*.

It is now obvious that I produce a safe having a solid integral body portion and a safe-door of the same character adapted to close into the safe-body with an air-tight fit, and

that by means of the lock-adjusting ring the locking mechanism is capable of being accurately and properly adjusted with the door of the safe open, thus doing away with openings in the door or safe-body and with separate parts affording access to the interior of the safe when the door is closed, in order to adjust the locking mechanism, which opening or openings must be closed or the separate parts joined together when the adjustment is effected, establishing inherent points of weakness in the surface of the safe.

It will also be observed that the provision of the time-lock mechanism actuating the engaging-latch to engage the lock-adjusting ring automatically or disengaging the latch at predetermined intervals avoids the use of spindles or shafts passing through the door to operate the locking mechanism, and thus providing a safe without any separate parts and without any bolts, screws, or nuts, which safe is made up of a solid body portion and a solid door, the door being fitted to the body portion by an air-tight joint.

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

1. In a safe, a solid integral body portion, a solid integral door, automatically operating locking mechanism and a lock adjusting ring preliminarily positioned upon the door to adjust the locking mechanism to the ring and means for permanently holding the locking adjusting ring upon the safe body portion.

2. In a safe, a solid integral body portion, a solid integral circular door, locking mechanism, a lock adjusting ring adapted for preliminarily positioning upon the door to adjust the locking mechanism and a screw connection on said ring and on the door together with fastening devices for permanently holding the ring on the body portion.

In testimony whereof I affix my signature in presence of two witnesses.

PHINEAS F. KING.

Witnesses:

CHAS. C. BULKLEY,
C. E. STANLEY.