

W. N. HALL.
Key-Hole Guards.

No. 145,865.

Patented Dec. 23, 1873.

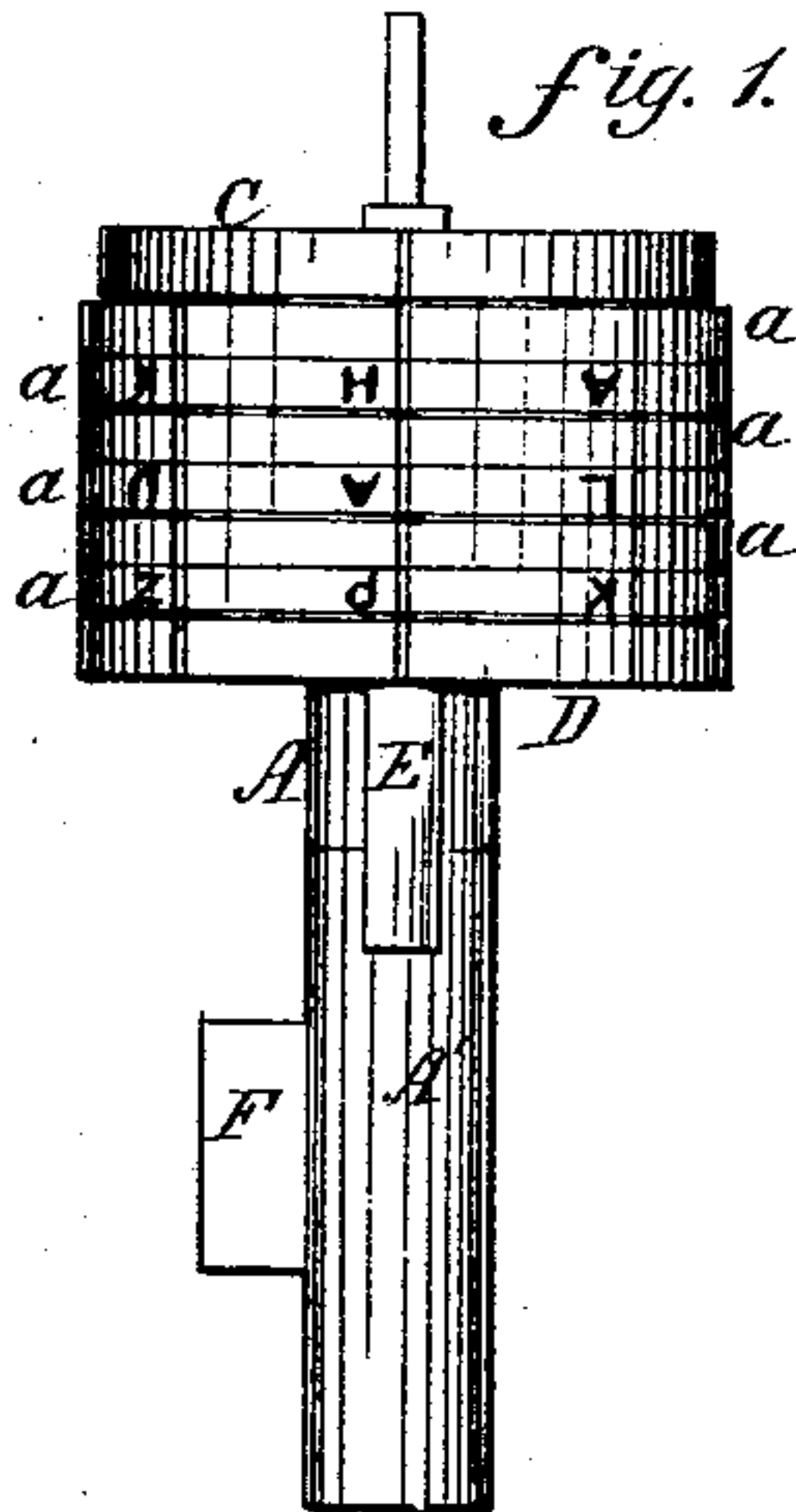


fig. 3.

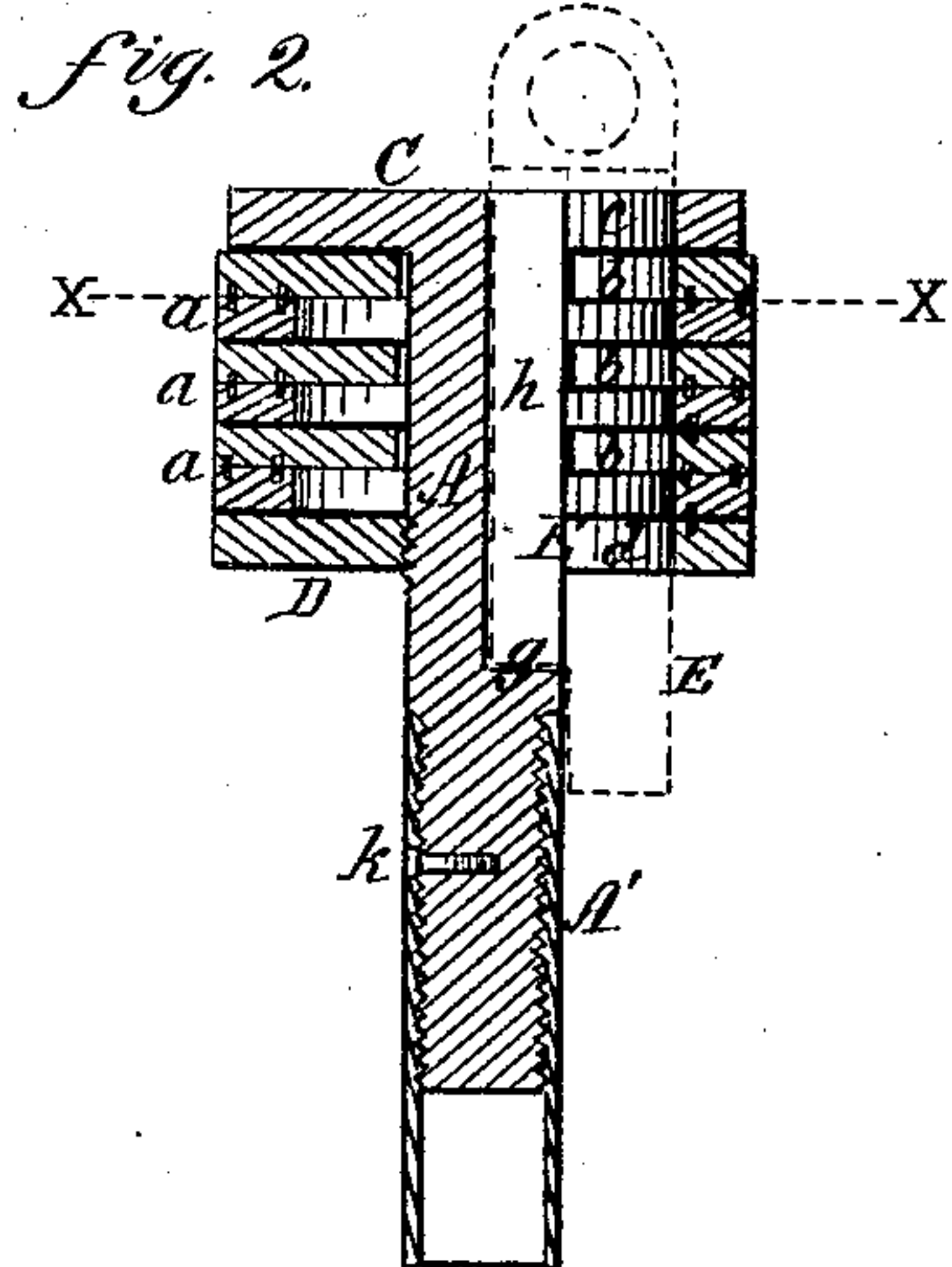
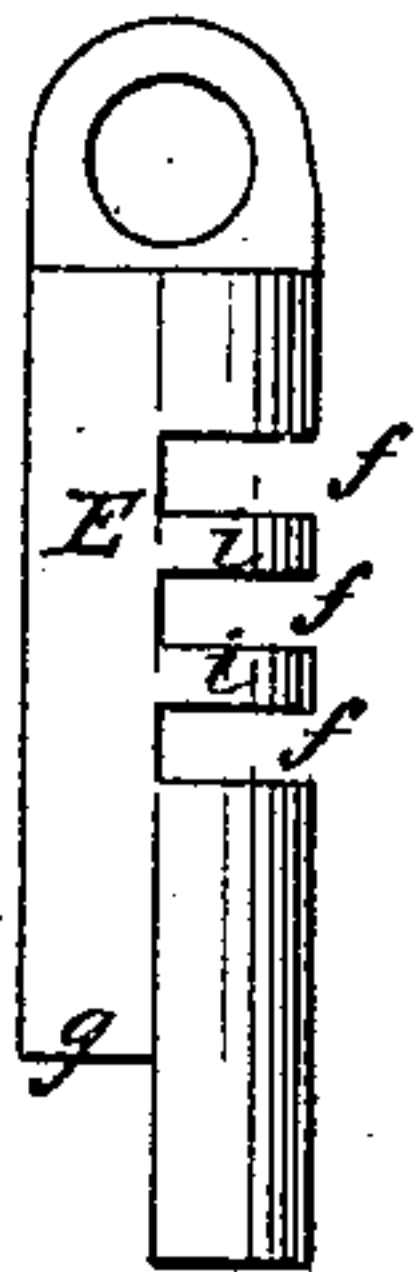


fig. 4.

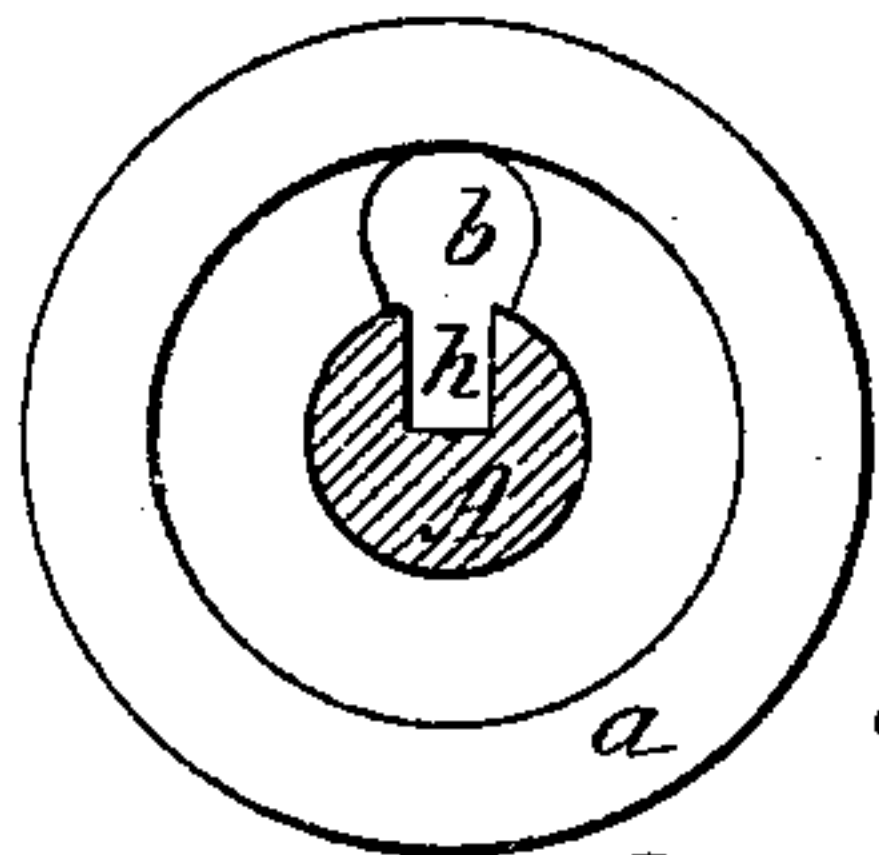


fig. 6.

fig. 5.

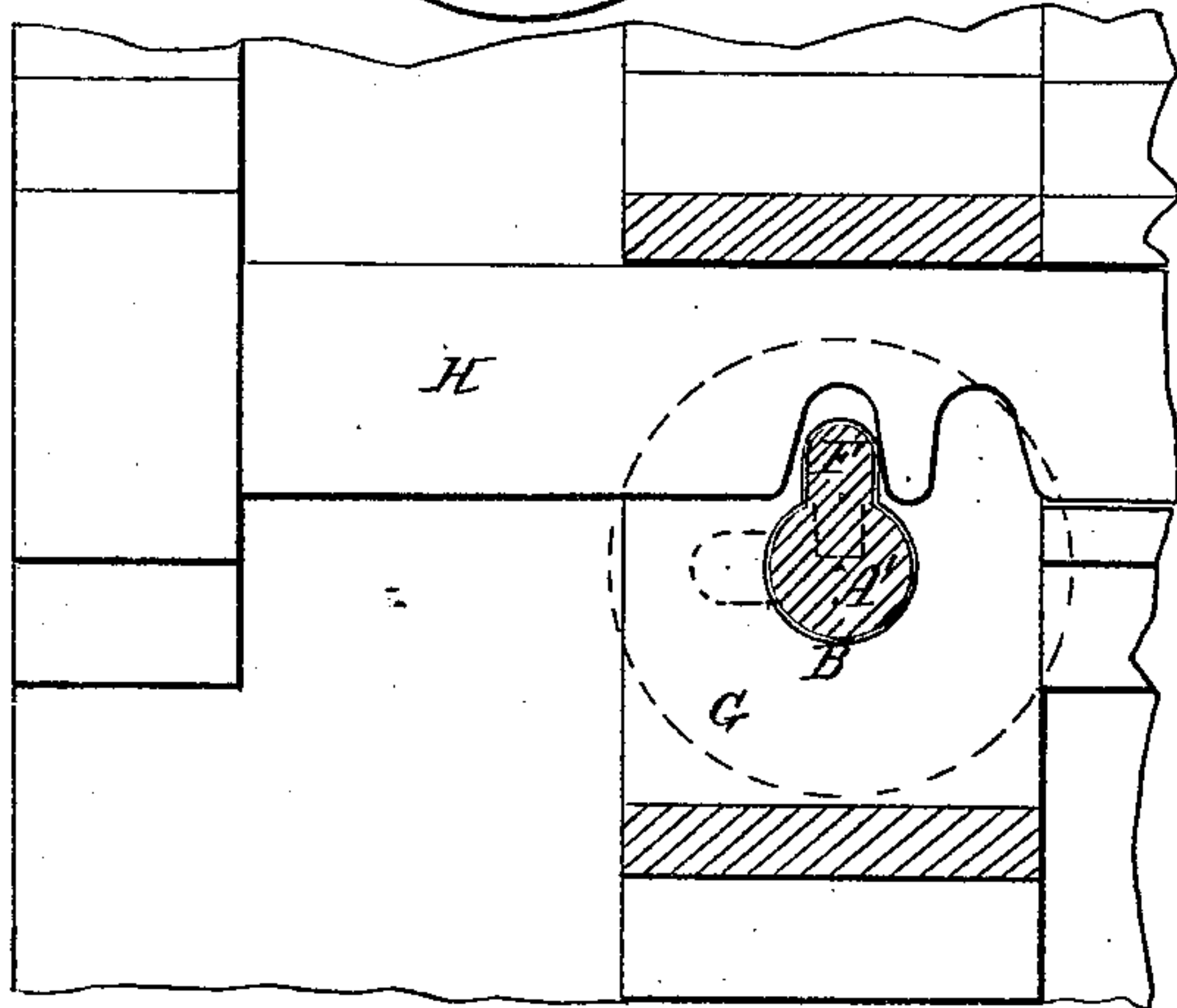
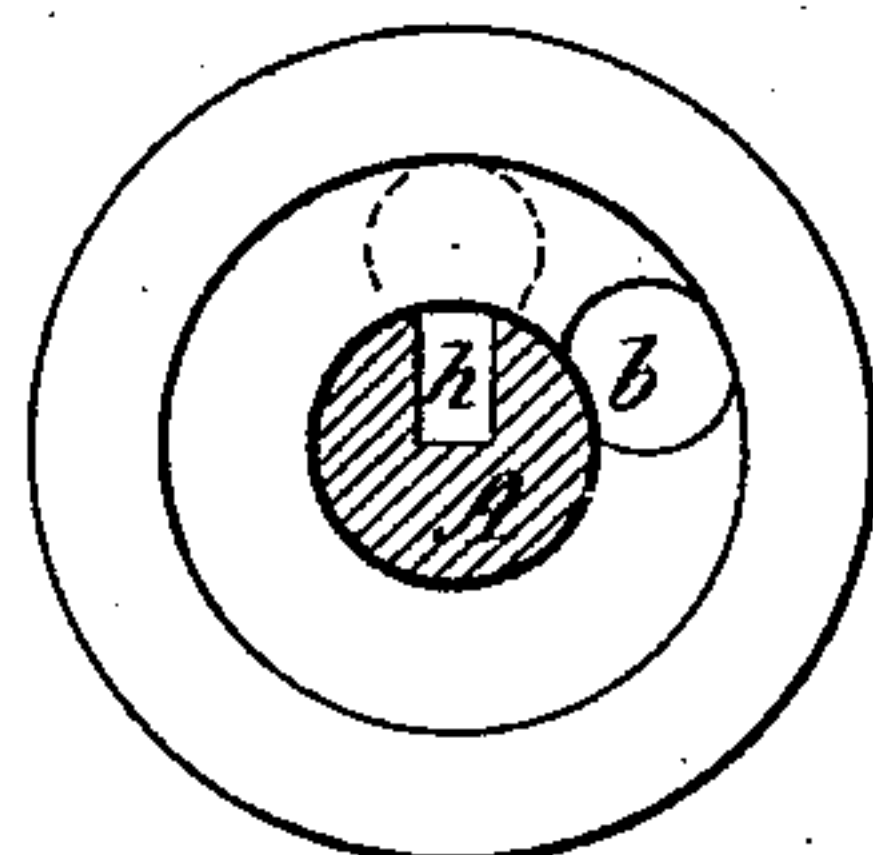
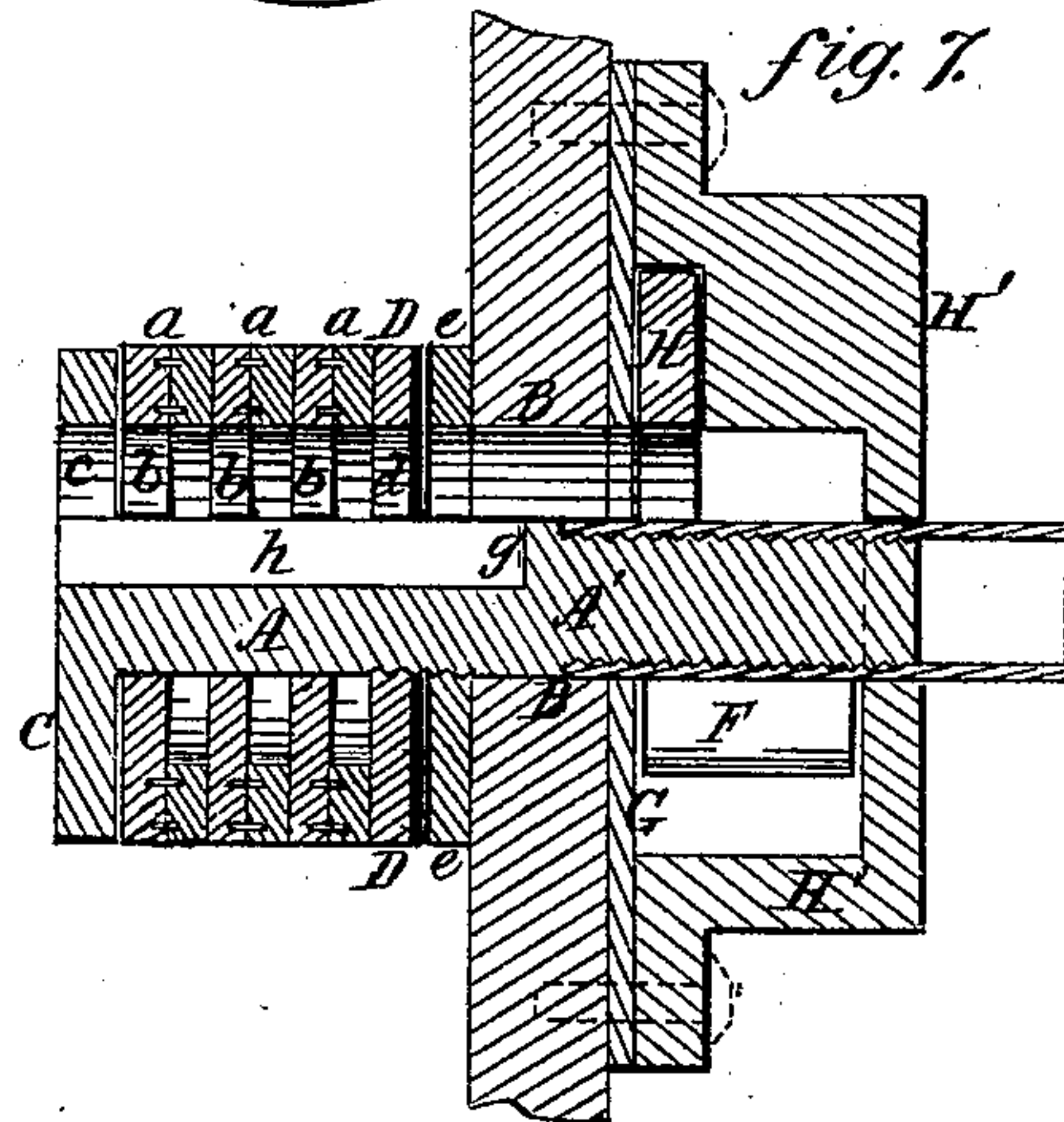
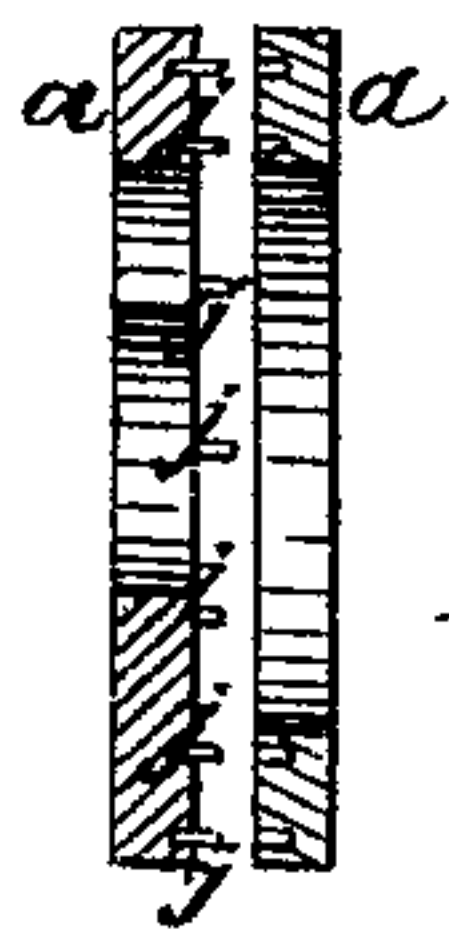


fig. 8.



Witnesses:

West Wagner.
W. E. Chaffee

Inventor:

William N. Hall,

By Johnson, Klauke & Co.
his Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM N. HALL, OF MEXIA, TEXAS.

IMPROVEMENT IN KEY-HOLE GUARDS.

Specification forming part of Letters Patent No. **145,865**, dated December 23, 1873; application filed June 2, 1873.

To all whom it may concern:

Be it known that I, WILLIAM N. HALL, of Mexia, in the county of Limestone and State of Texas, have invented a new and useful Improvement in Permutation Key-Hole Guards for Locks, adaptable also as a combined lock, of which the following is a specification:

The object of my invention is to furnish a guard for the key-holes of locks, to prevent the use of keys by unauthorized persons, the picking of the lock, and as a means for operating the bolt when fitted for that purpose; the invention whereof consists of a separate portable permutation key-hole stopper, in which the stem carries a series of permutation-disks between a fixed head and a screw-nut, a projection for securing it within the lock, and a removable notched pin, which is locked by the permutation-disks, and which portable guard may be used as the operating key for the lock by withdrawing the notched pin and using the stem-projection, which secures the guard in place, as the means for locking and unlocking the bolt, the said guard being applicable to locks with or without key-hole posts, and when secured covers and seals the key-hole, and can only be removed for the use of the key by the person having a knowledge of the numbers or combination upon which it was fastened in place.

The portable guard is shown in the side view and section, Figures 1 and 2 of the accompanying drawings, in which Figs. 3, and 4, and 5 are the notched removable pin and cross-sections of the permutation device; and Figs. 6 and 7 show sectional views of the guard applied to the lock, and also when used as the means for operating the bolt.

The portable guard consists of a stem, A, to be inserted within the key-hole B of the lock when the key is withdrawn. Its outer portion is provided with a head fixed plate, C, and a screw-nut, D, and between these a sufficient space is left for a series of permutation-disks, *a*, arranged to be turned upon the stem A, and provided with openings *b* corresponding with similar openings *c d* in the head-plate C, and nut D for the reception of a removable notched locking-pin, E, which not only passes through these plates from the outside, but into the key-hole B of the lock, for a purpose to be pres-

ently described. The guard-stem A has a projection, F, which passes into the key-hole B, so as to be turned out of line therewith against the inner plate G of the lock, in which position the fixed nut D of the stem will fit against the escutcheon *e* of the key-hole. The stem-projection F and the notched locking-pin E, when inserted, must, however, be at right angles to each other, the one being within the lock and the other within the key-hole, the object whereof is to fasten or lock the guard in its position, and to form a seal to the key-hole, as shown in Figs. 6 and 7. The pin E is provided with a series of notches, *f*, on one of its edges, equal in number to the permutation-disks *a* used, and with which they interlock to fasten the said pin within them and in the key-hole. To bring the notches *f* exactly in range with the permutation-disks, a stop, *g*, in the stem A, serves to limit the inward movement of the notched pin E; and to allow the permutation-disks *a* to turn over the notched pin, the latter is fitted in a groove, *h*, in the stem A, the inner end of which groove forms the stop *g* for the notched pin, the outer end of which forms its handle. To insert the notched pin E, the openings *b* in the permutation-disks must, of course, be brought in line with each other, and with those *c d* in the head and nut C D, as shown in Fig. 2, and, when inserted, the disks *a* are turned upon the stem A, so as to interlock with the notch-divisions *i* of the locking-pin E, and so hold it fast until the openings *b c d* are again brought in line. Before the notched pin E is inserted the stem A must be inserted in the key-hole B and turned a half round to carry the projection F out of line, as shown by dotted lines in Fig. 6, and this, of course, takes place after the lock is locked and the key withdrawn. Nor can the key be again inserted to unlock the lock until the guard is unlocked and removed. This is effected by letters or numbers and notches on the circumference of the disks *a*, head-plate C, and nut D, when brought to the proper combination, and with the notches in line with a notch in the escutcheon-plate, which will indicate when the notched pin E can be withdrawn or inserted. The permutation-disks *a* are each of two plates, and they are locked together so as to make one disk by pins *j*, as

shown in Fig. 8, in order that a limited number of disks may be used to increase the changes in the combination of letters or figures by which the guard is locked and unlocked. The portion of the stem A', which carries the projection F, is made adjustable by screwing upon the stem A, to adapt it to different depths of key-holes, or thicknesses of doors, trunks, &c., and this adjustable portion A' is made tubular to adapt it to key-holes with or without key-posts. When adjusted the tubular stem is secured by a screw, *k*, fitting into one of a series of holes in the parts for that purpose.

The device thus described can be used with any kind of lock having a key-hole, and is independent of the key thereof as a stopper for the key-hole. It may, however, be combined with the lock, and constitute the key for locking and unlocking it, as shown in Fig. 6. When thus used the stem-projection F serves as the means of operating the bolt H, and the head C the handle.

The bolt H must be made to receive the action of the stem-projection F, so that in turning the latter the bolt will be thrown to lock or unlock it. When the key-hole guard is used as the bolt-key, it is kept locked in its position as a fixture of the lock by means of the notched pin E, as described. In fitting the guard and lock together for use, I make the staples H' for the bolt in two separate sections, and dovetail them together for convenience in securing the parts. The key-hole guard in this way can be used as a permutation-key to the lock; but its chief feature of

utility lies in its capacity for attachment to any lock wherein the key-hole will admit the stem and its projection.

It is obvious that the number of permutation-rings may be increased, and that in making the changes the nut D must be unscrewed from the stem and the rings changed, the one with the other, and the sections of each ring can also be changed in like manner, and thus effect a great number of changes.

In Fig. 1 the permutation-rings of the key-hole guard or stopper are shown as having been locked upon the letters H A P.

Having described my invention, I claim—

1. A separate portable permutation key-hole guard, consisting of a stem, A, with locking projection F, a series of permutation-disks, *a*, on the outer end thereof, a fixed head, C, removable nut D, and a removable notched pin, E, arranged for use with the disks *a* and the key-hole B, essentially as described.

2. The key-hole guard, having the permutation-disks *a*, for use with the removable notched pin E and the locking projection F, arranged and fixed upon the same stem A, as described, so that by removing the notched pin E the permutation-disks and fixed head may also serve as a handle to operate the stem-projection F to lock and unlock the bolt H, as described.

In testimony whereof I have hereunto set my hand this 8th day of May, A. D., 1873.

WILLIAM N. HALL.

Witnesses:

WILLIAM A. BUCKNER,
B. GILLESPIE.