

(No Model.)

A. J. WOLFF.
LOCK.

No. 575,539.

Patented Jan. 19, 1897.

Fig. 1.

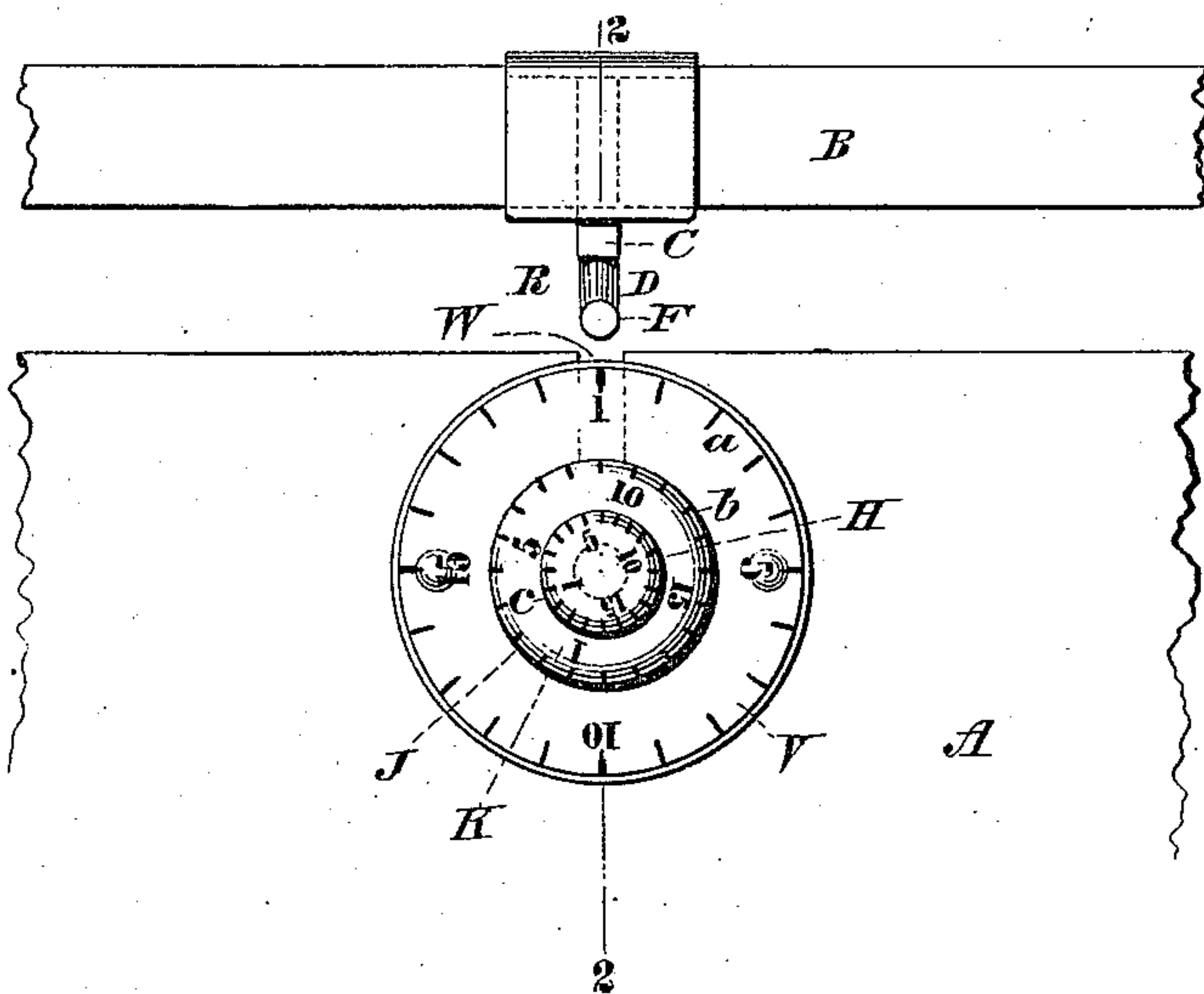


Fig. 2.

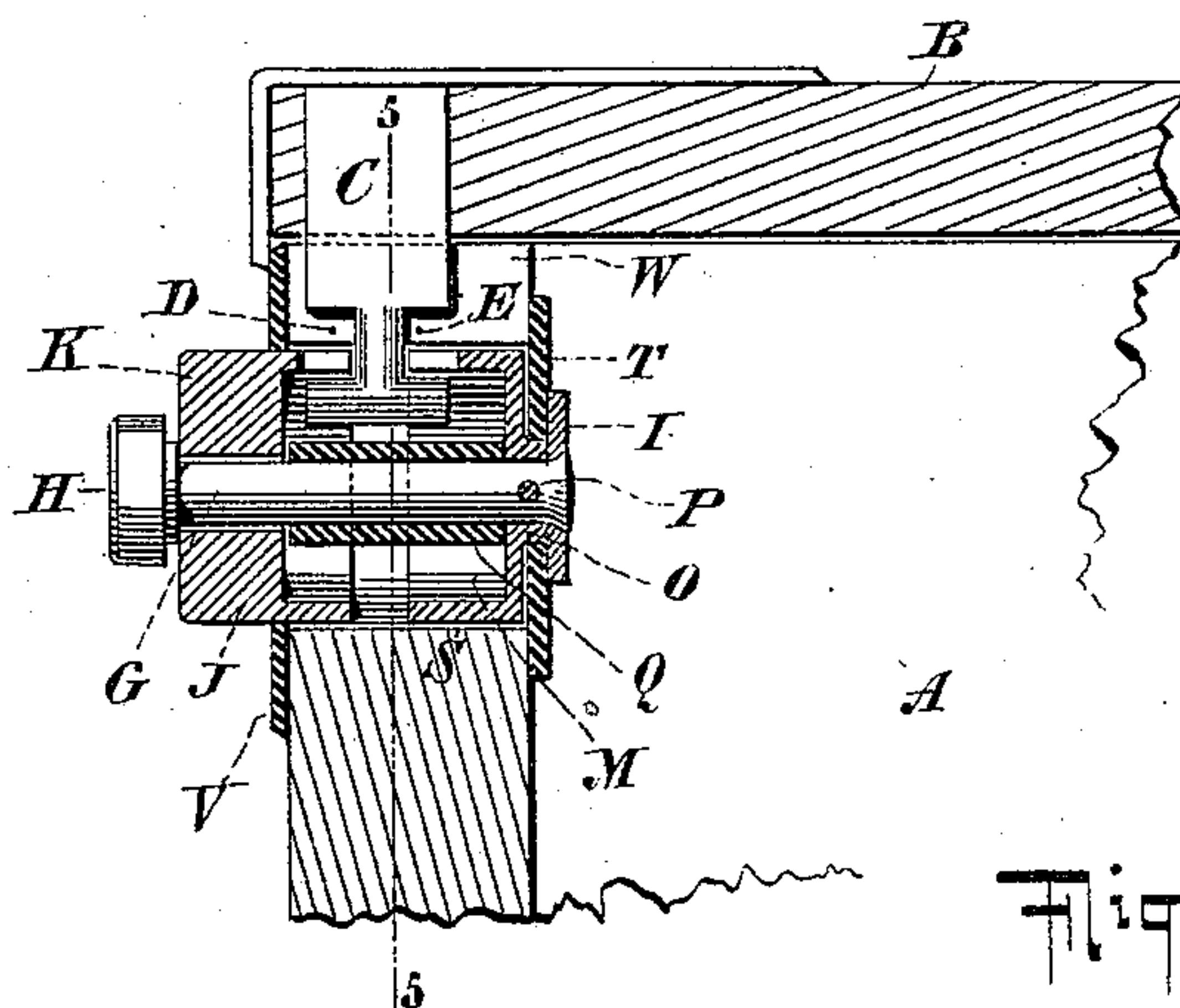


Fig. 3.

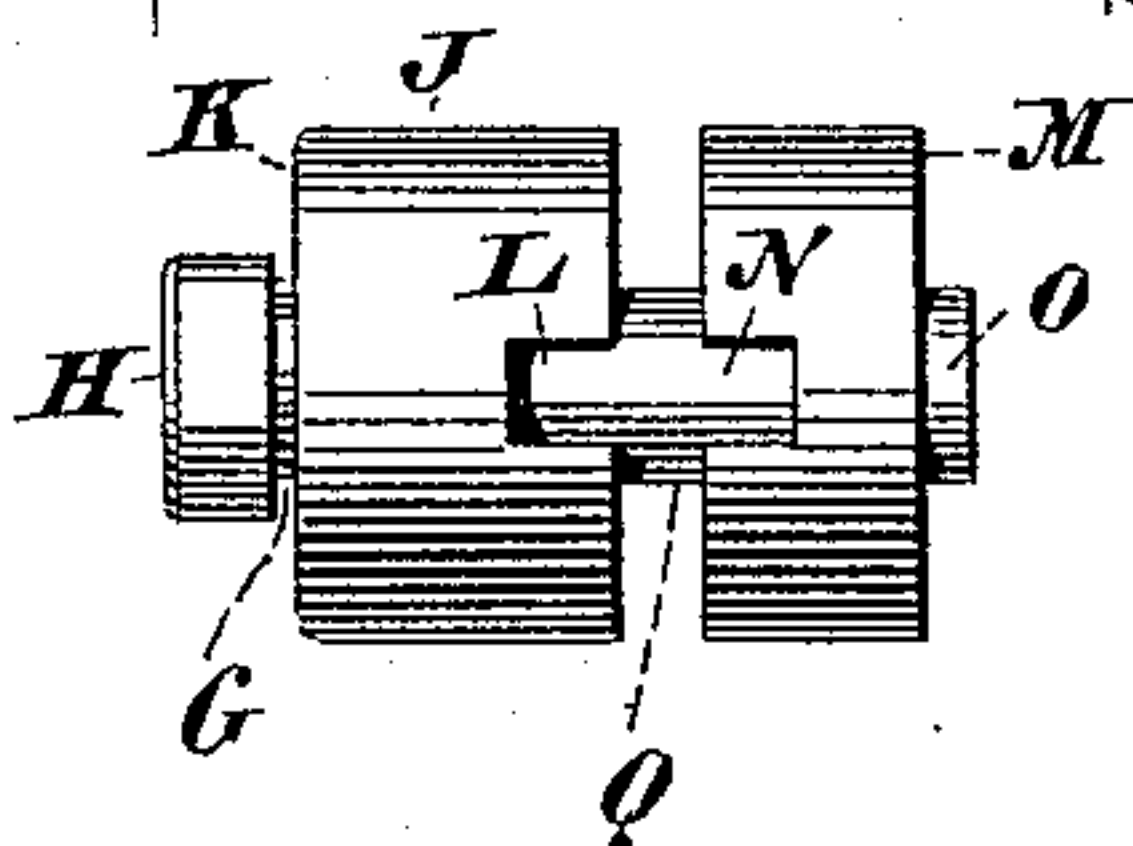


Fig. 4.

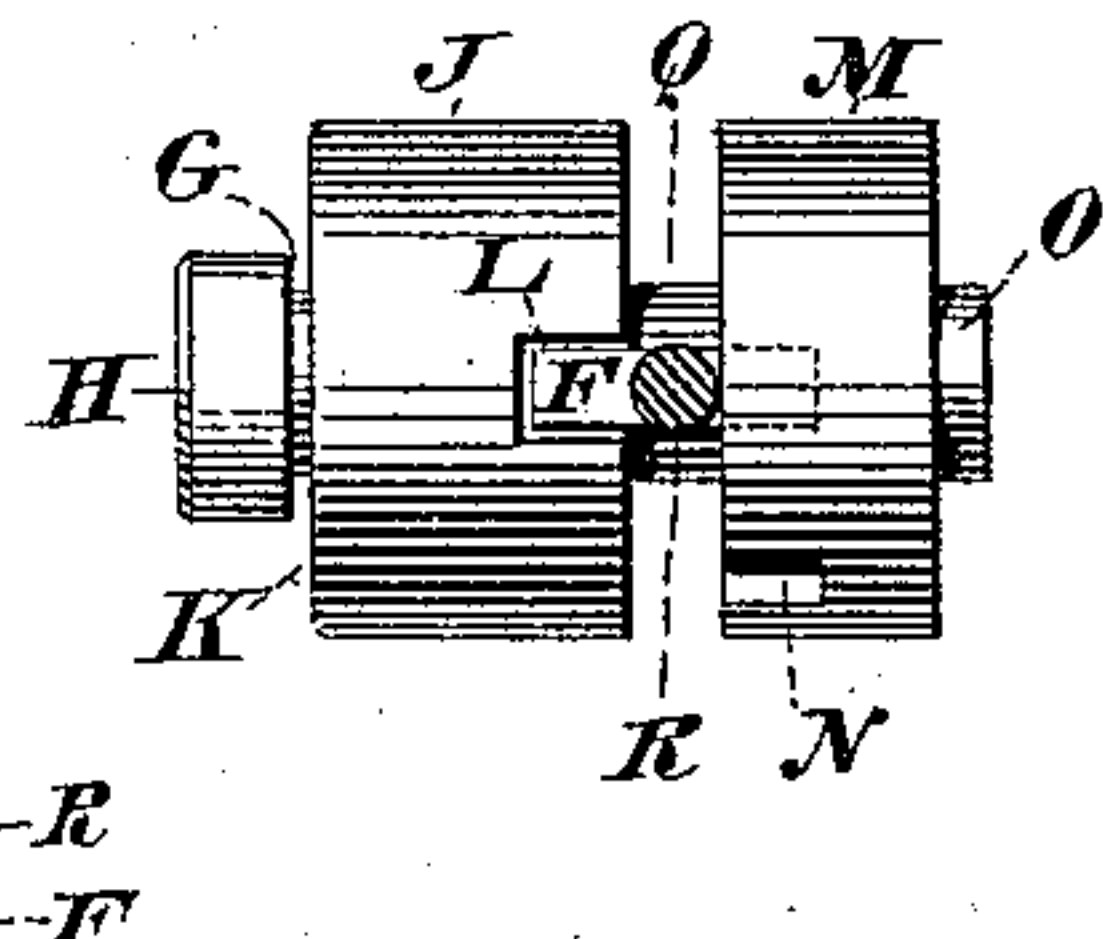
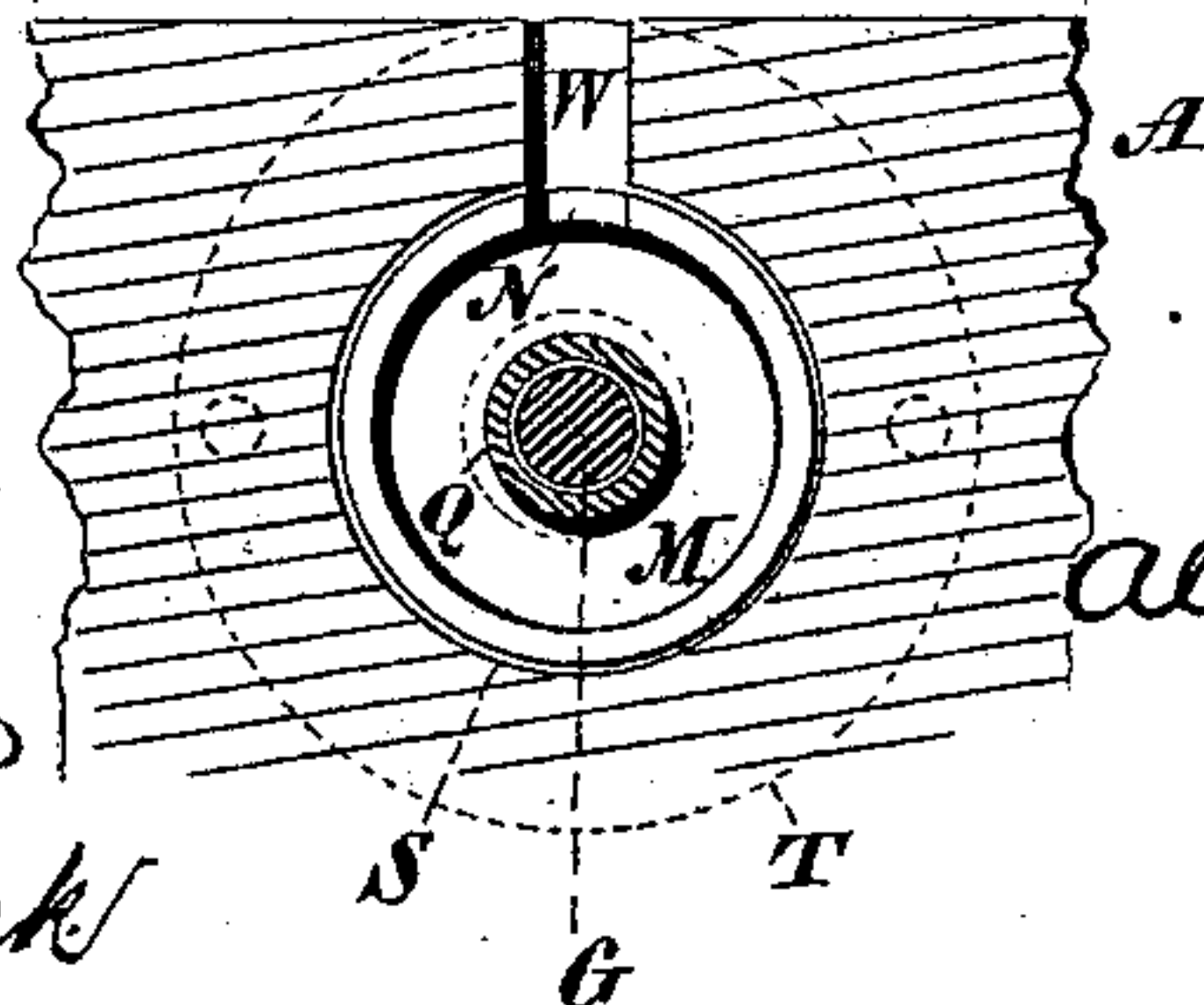


Fig. 5.



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LOCK.

SPECIFICATION forming part of Letters Patent No. 575,539, dated January 19, 1897.

Application filed January 22, 1896. Serial No. 576,379. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER JOHN WOLFF, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Locks, of which the following is a specification.

The invention relates to improvements in locks; and it consists in the novel devices and arrangements of parts hereinafter described, and particularly pointed out in the claims.

Referring to the accompanying drawings, forming a part of this application, Figure 1 is a front view of a portion of a trunk or chest provided with a lock constructed in accordance with and embodying the invention, the lid of the trunk or chest being shown partly open. Fig. 2 is a vertical section of same on the dotted line 2 2 of Fig. 1, but showing the lid or cover closed and the hasp connected with the same being within the cylindrical locking portions of the lock proper. Fig. 3 is a detached top view of the cylindrical portions of the lock removed from the trunk or chest, the two cylindrical portions of the lock being shown in position to receive the hasp connected with the lid or cover. Fig. 4 is a like view of same, illustrating the hasp within the cylindrical portions of the lock and one of said portions being shown with its entering slot turned to one side of the said hasp in order that the latter may be incapable of removal; and Fig. 5 is a vertical section of the lock on the dotted line 5 5 of Fig. 2, the lid or cover being omitted from Fig. 5 and the hasp being shown in its elevated position ready to be depressed into the cylindrical portions of the lock.

In the drawings, A designates the trunk or chest, and B the cover therefor, to which cover in any suitable manner is secured the hasp C, having at its lower end the recesses D E and bar F.

The lock proper contains the central revoluble spindle G, having upon its outer end the knob or handle H and upon its inner end the washer I, which washer prevents the said spindle from being drawn outward from the lock. Upon the outer portion of the spindle G is mounted the cylinder J, having a solid

head K and entrance opening or recess L, the latter being at the inner edge of the cylinder within the thickness of the trunk or other article to which the lock may be applied. Upon the inner end of the spindle G is placed the cylinder M, having an entrance-recess N, corresponding with the recess L of the cylinder J. The inner end of the cylinder M is provided with the sleeve O, which snugly fits the spindle G and is secured thereto by a pin P. The cylinder J is free to revolve upon the spindle G, while the cylinder M is, by means of the pin P, rigidly secured to the said spindle G and revolves with the said spindle. Upon the spindle G may be placed the sleeve Q as a means for properly spacing the cylinders J M from one another. The said cylinders J M are, as illustrated in Figs. 3 and 4, separated from one another at their inner edges a sufficient distance to receive between them the stem R of the hasp C.

In order that the spindle G may not be withdrawn outward from the lock, the washer I has been provided thereon, and in order that the cylinders J M may not be withdrawn from the aperture S, formed in the trunk to receive them, an escutcheon-plate T is provided upon the inner face of the trunk and mounted upon the sleeve O between the washer I and the solid end of the cylinder M, as illustrated in Fig. 2. The plate T will be fastened by screws to the inner side of the trunk, and hence will operate to retain the lock in position without interfering with the revoluble motion of the cylinder M. Upon the outer face of the trunk and surrounding the cylinder J will be provided the escutcheon-plate V.

Above the cylinders J M the trunk is provided with the slot W to permit the passage downward of the hasp C, in order that the bar F, formed thereon, may pass through the recesses L N and reach within the cylinders J M, as shown in Fig. 2.

The spindle G and cylinders J M being in position and secured within the aperture S and the hasp C being in position upon the lid or cover B, the lock will be in condition for immediate use. In order that the cover B may be closed and the hasp C secured by the cylinders J M, the latter must be turned to such position that their recesses L N are in line with the cross-bar F, as illustrated in

Figs. 2 and 3, and when said cylinders J M are in this position the lid B may be closed and the said cross-bar F will pass downward through the slot W and through the recesses L N to a position in near relation to the sleeve Q, whereupon by turning the spindle G the recess N of the cylinder M may be quickly turned to one side of said bar F, as illustrated in Fig. 4, whereupon the lid B will be locked in its closed position. The cylinder M may thus be used alone for locking the lid or cover B; but preferably the cylinder J will also be given a partial rotary motion, in order that its recess L may be turned to one side of the cross-bar F, and thereupon the said cylinder J will also serve to lock the cover B in its closed position. It is apparent, therefore, that the hasp C may be secured within the lock either by turning the cylinder M or the cylinder J, or both the cylinders M and J. The cylinder M will always be turned by pressure applied to the head H upon the spindle G, and the cylinder J will be turned by pressure applied upon its solid head K, which projects outward beyond the escutcheon-plate V.

In order that the cover B may be opened, it will be necessary that both the cylinders J M be so turned that their recesses L N are not only in line with one another, but also in line with the bar F of the hasp C, and to help the owner of the trunk in thus turning the cylinders J M, and also to form the necessary "combinations" for safety, I provide upon the plate V the numbered index *a*, and upon the solid head K the correspondingly-numbered index *b*, and upon the head H of the spindle G the correspondingly-numbered index *c*, and the numbers of the indexes *b c* will be arranged with respect to the recesses L N of the cylinders J M, so that the user of the trunk may, by turning predetermined numbers of the indexes *b c* into a predetermined relation to one another and to some predetermined number on the index *a*, know that thereby the recesses L N of the cylinders J M will come into alinement with one another and the bar F of the hasp C. The locks will be so made that the index-numbers for the recesses L N of one lock will not correspond with the recesses L N of other locks, and hence a person knowing the proper combination for one lock would be unable by means of that combination to open a trunk having thereon a different lock of the kind embodied herein. In the present instance the indexes are so arranged with respect to the recesses L N that said recesses will be uppermost and in line with one another when the numeral "9" of the index *b* is in line with the numeral "1" of the index *a* and the numeral "6" of the index *c*, and hence when desiring to open the trunk it will be necessary to turn the cylinder J until the numeral "9" of the index *b* is in line with the numeral "1" of the index *a*, and then turn the head H until the numeral "6" is in line with the said numeral "9" of the index *b*. The trunk lid or cover B may

be then freely opened at will, and upon the said lid or cover B being closed the locking of the same may be effected by simply turning to the right or left either or both of the cylinders J M.

It may be readily seen that if the first lock made is capable of having its recesses L N turned upward into alinement with one another when the numerals "1," "9," and "6" of the respective indexes are in line with one another the second lock made may be rendered incapable of being opened when said numerals on these indexes are in alinement with one another by simply in the manufacture of the lock forming the recesses L N in line with some different set of numerals on said indexes. The "changes" may be readily made and the lock is of such a nature that it is adapted to receive a large number of such changes.

The lock is inexpensive of manufacture and dispenses entirely with the use of a key.

The lock is particularly adapted to trunks, boxes, and like articles, but the invention is not limited to the nature of the use to which the lock may be put, nor is the invention limited to all of the details of construction presented, since these may vary with the circumstances of the use to which the lock may be put.

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

1. In a lock the central revoluble spindle, and the flanged and recessed locking-cylinder rigidly secured upon its inner end and having its flange turned outward, combined with the independently-revoluble flanged and recessed locking-cylinder on the outer end of said spindle and having its outer closed end fully exposed and its flange turned inward, and a hasp adapted to enter said recesses and be secured within said cylinders, said hasp having the two oppositely-projecting bars or arms, and said cylinders being entirely independent of each other and capable of independent operation; substantially as shown and set forth.

2. In a lock the central revoluble spindle having the indexed exposed head, and the flanged and recessed locking-cylinder rigidly secured upon the inner end of said spindle and having its flange turned outward, combined with the independently-revoluble flanged and recessed locking-cylinder on the outer end of said spindle and having an index on its fully-exposed closed end, and having its flange turned inward, and a hasp adapted to enter said recesses and be secured within said cylinders, said hasp having the two oppositely-projecting bars or arms, and said cylinders being entirely independent of each other and capable of independent operation; substantially as shown and set forth.

3. In a lock the central revoluble spindle having an exposed head, and the flanged and recessed locking-cylinder rigidly secured on the inner end of said spindle and having its

flange turned outward, combined with the independently-revoluble flanged and recessed locking-cylinder on the outer end of said spindle and fully exposed at its outer end and
5 having its flange turned inward, the sleeve on said spindle between said cylinders, and the hasp adapted to enter the recesses of said cylinders and be secured within the latter, said cylinders being entirely independent of each
10 other and capable of independent operation, and said hasp having the two oppositely-projecting bars or arms; substantially as shown and set forth.

4. In a lock, the central revoluble spindle
15 having an indexed exposed head, and the flanged and recessed locking-cylinder rigidly secured upon the inner end of said spindle and having its flange turned outward, combined with the independently-revoluble
20 flanged and recessed cylinder on the outer end of said spindle and having an index on its exposed end and having its flange turned inward, the indexed plate exterior to said exposed end, and the hasp having the oppositely-projecting bars or arms adapted to enter the recesses of said cylinders and be se-

cured within the latter, said cylinders being entirely independent of each other and capable of independent operation; substantially
30 as shown and set forth.

5. In a lock, the central revoluble spindle G having upon its outer end the knob H and upon its inner end the washer I, combined with the revoluble recessed locking-cylinder J loosely mounted on the outer end of said
35 spindle and having the exposed solid head K, and having its flange turned inward, the recessed locking-cylinder M rigidly secured upon the inner end of said spindle and having its flange turned outward and having also
40 the sleeve O, and the plate T mounted on the sleeve O between the said washer I and the solid end of said cylinder; substantially as shown and set forth.

Signed at New York, in the county of New
York and State of New York, this 18th day
45 of January, A. D. 1896.

ALEXANDER JOHN WOLFF.

Witnesses:

CHAS. C. GILL,
E. JAS. BELKNAP.