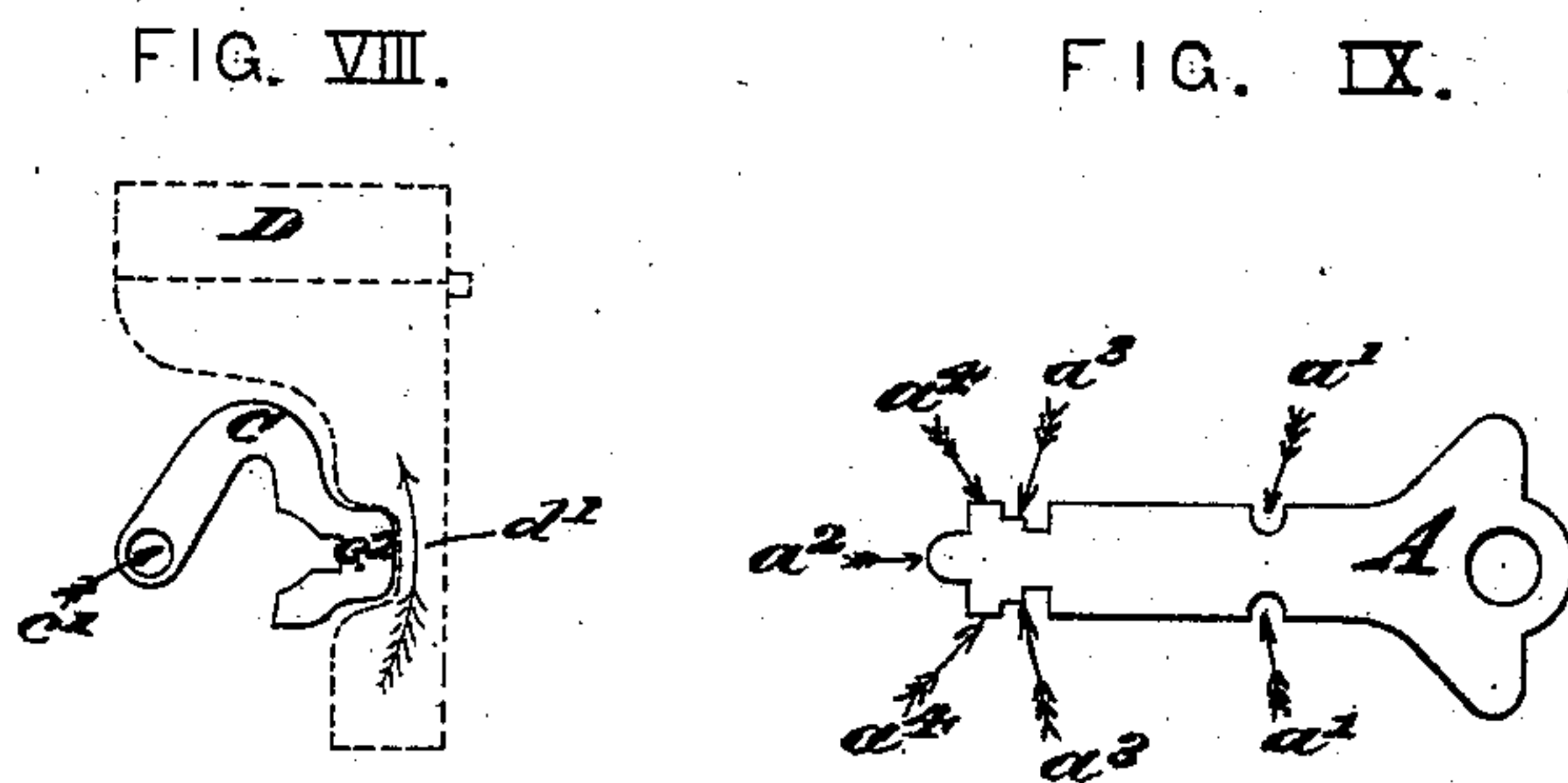
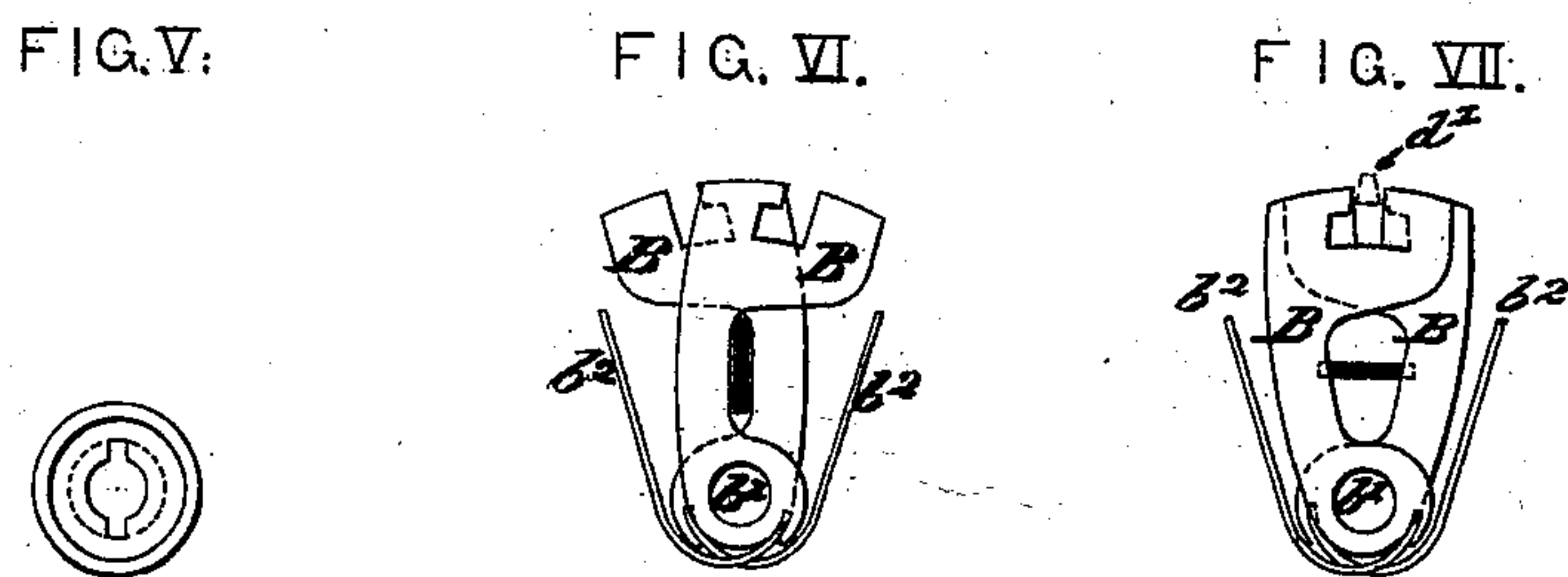
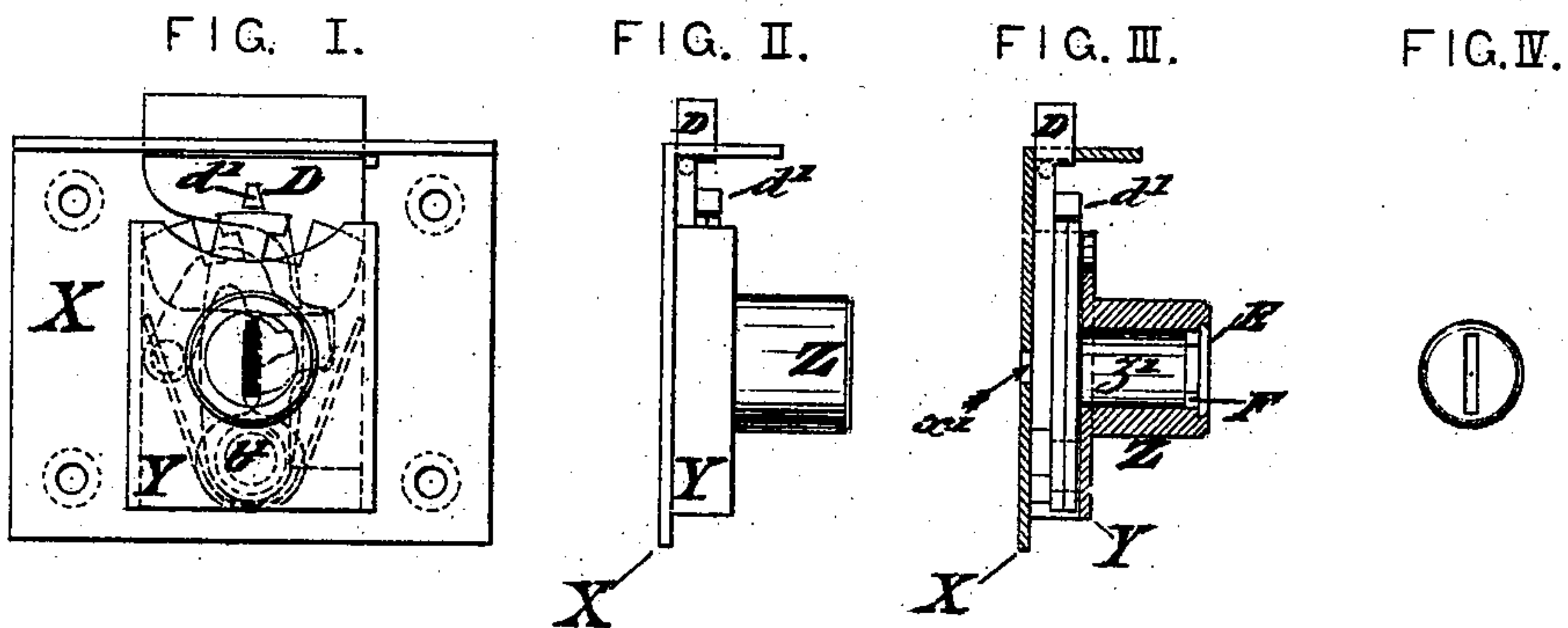


W. H. TAYLOR.
LOCKS FOR DRAWERS, &c.

No. 172,899.

Patented Feb. 1, 1876.



WITNESSES:
John H. Gins,
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UNITED STATES PATENT OFFICE.

WARREN H. TAYLOR, OF STAMFORD, CONNECTICUT.

IMPROVEMENT IN LOCKS FOR DRAWERS, &c.

Specification forming part of Letters Patent No. 172,899, dated February 1, 1876; application filed December 9, 1875.

To all whom it may concern:

Be it known that I, WARREN H. TAYLOR, of Stamford, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Drawer or Cabinet Locks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to that class of drawer or cabinet locks having a sheet-metal key and projecting key-barrel.

My improvements consist in constructing such locks in the manner hereinafter set forth and claimed, so as thereby to reduce their cost and increase their general utility.

In the drawings, Figure I is a front elevation, Fig. II is an end elevation, and Fig. III a vertical section, of my improved lock. Figs. IV to VIII are details of the same, and Fig. IX represents the key, like letters of reference indicating like part in all the figures.

The general construction of my improved lock is as follows: X is the back plate of the lock. Y is the cap formed with a barrel, Z. A, Fig. IX, is the key, having an end pivot, a^2 , guide-notches $a^1 a^1$, bits $a^3 a^3$, and wings $a^4 a^4$, both edges being alike. B B are double tumblers vibrating in opposite directions. For economy I pivot them upon one fixed center, b^1 , and $b^2 b^2$ are the usual tumbler-springs. C, Fig. VIII, is the talon-lever, which turns on a stationary pivot, C^1 , the free or vibratory end C^2 of which fits into the talon d' of the bolt D. The inwardly-curved edge of the lever end C^2 forms the intermediate talon against which the key-wing a^4 strikes, throwing the bolt the full distance. The bolt D has the usual fence d' for engagement with the tumblers.

Fig. VI represents the double tumblers closed. Fig. VII represents them fully open.

E, Fig. III, is the guide-disk. (Shown in elevation, Fig. IV.) It is secured in the outer end of the barrel Z, and capable of rotation therein, and its key-hole conforms to the section of the key. The barrel Z is bored to form the cylinder or stationary guide z' for guiding the key in its sliding motion toward and into

the end bearing x' , and in this cylinder z' is formed the divided ring F, (shown in front elevations, Fig. V,) with the disk E removed. The two parts of the said ring enter, respectively, the notches $a^1 a^1$ of the key, preventing its withdrawal, except when it is vertical. The key is guided in its axial motion by its pivot a^2 and the bearing x' on the back plate X.

The action is as follows: The key, being equally bitted on both edges, may be passed, either side up, through the rotatory guide-disk E, and through the vertical slots, separating the half-rings F, its pivot end a^2 being guided by the fixed longitudinal key-guide or cylinder z' into the bearing x' . The notches $a^1 a^1$ then coinciding with the cut ends of the half-rings, the key can turn a half-revolution either way, for locking or unlocking, and during such half-revolution the half-rings engage with the notches $a^1 a^1$ and prevent the withdrawal of the key until it is again vertical, and the bolt is fully in or out. In the act of locking, the key, on being turned a quarter revolution in the direction of the arrow, Fig. VIII, reaches the position there shown. At this point the bits $a^3 a^3$, being horizontal, fully open the tumblers, and the fence d' can escape, as in Fig. VII. Simultaneously with the said quarter-turn of the key its wing a^4 , by impact upon the talon-lever C, has carried the latter upward to the horizontal position, half throwing the bolt D, as shown in Figs. VII and VIII. In the succeeding quarter-turn the key again becomes vertical for withdrawal, as in Fig. VI, leaving the tumblers closed beneath the fence d' and the bolt D locked, as in Fig. I. The backward half-revolution of the key effects the aforesaid movements in reverse order for unlocking.

In the said operations of locking and unlocking, the key is perfectly guided in its semi-rotatory axial motion and confined to its work by the end bearing x' and guide-disk E, so that I dispense with the plug or rotatory cylinder heretofore used in locks of this class which have sheet-metal keys. The plug thus rendered unnecessary and dispensed with is, in other locks of this class, slotted lengthwise to receive the body of the key and rotate therewith in the barrel. This plug necessarily incloses the key on one side, requiring a corre-

spondingly-larger diameter or working space within the barrel.

My invention, by dispensing with the plug, reduces the working diameter of the cylinder \approx' to the bare width of the key, effecting further economy in materials and labor, and, by compactness, reducing the cutting away or removal of wood in attaching the lock to a drawer or other article to which it is to be applied. Although thus reducing the diameter of the guide-barrel and the width of the key, I still secure the long-throwing action of a broader key on the bolt by employing the intermediate talon-lever hereinbefore described.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is as follows, viz:

1. A lock constructed for a flat or plate key, the said lock having at one end of its keyway a rotary guiding-disk, and at the other end

thereof a fixed bearing or center, both on the same axial line, when constructed substantially as and for the purposes specified.

2. In a lock constructed for a flat or plate key, the combination of a rotary guiding-disk at one end of the keyway of the said lock, a stationary bearing at the other end, and interposed between the said guiding-disk and said bearing a fixed longitudinal key-guide, when constructed as and for the purposes specified.

3. In a lock constructed for a flat or plate key, a vibrating talon, its inner curved edge being the talon for the key-bits, and its outer or free end fitted into and occupying the bolt-talon, when constructed substantially as and for the purposes specified.

WARREN H. TAYLOR.

Witnesses:

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