

H. B. IVES.
Bolt.

No. 222,630.

Patented Dec. 16, 1879.

Fig. 1.

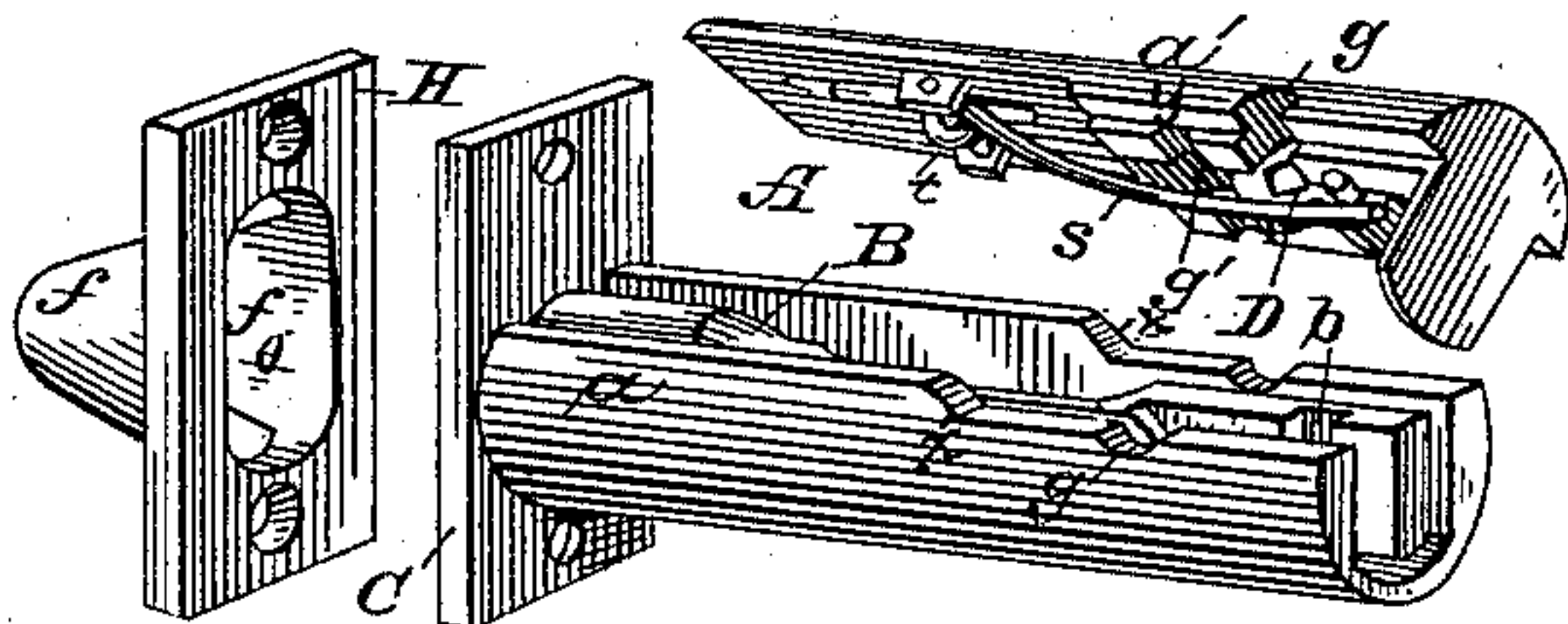


Fig. 2.



Fig. 3.

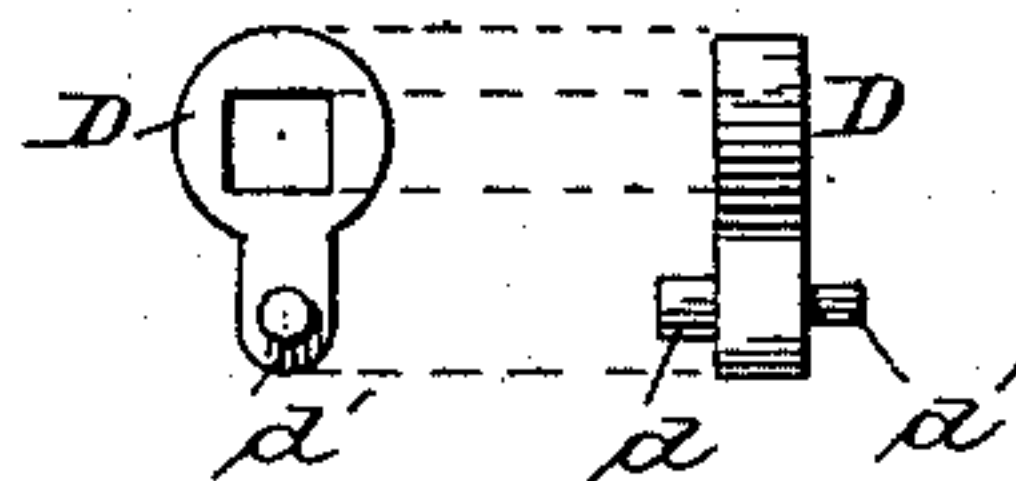


Fig. 4.

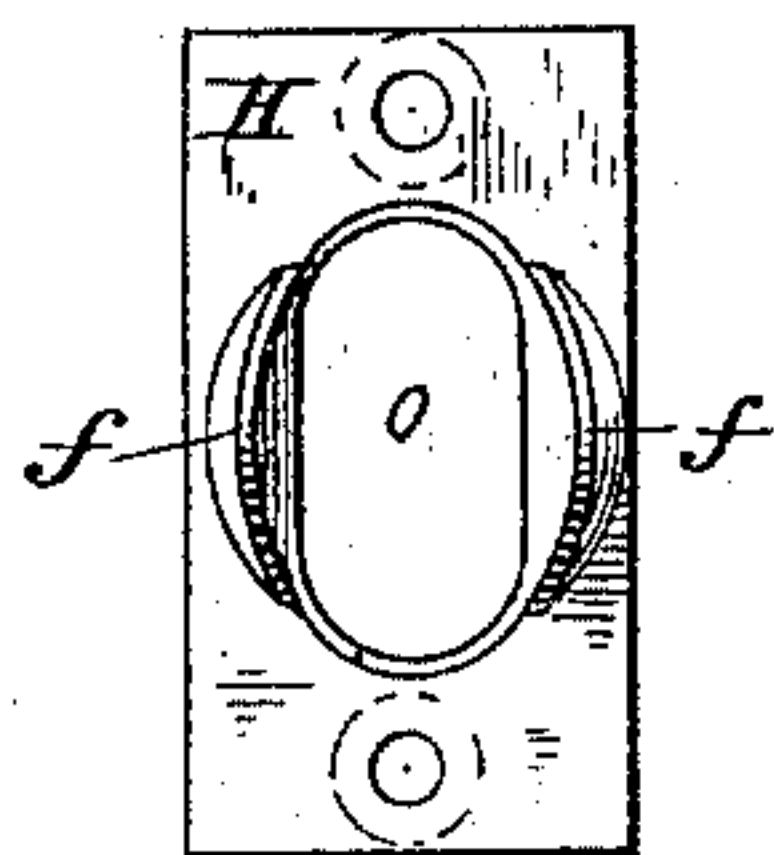
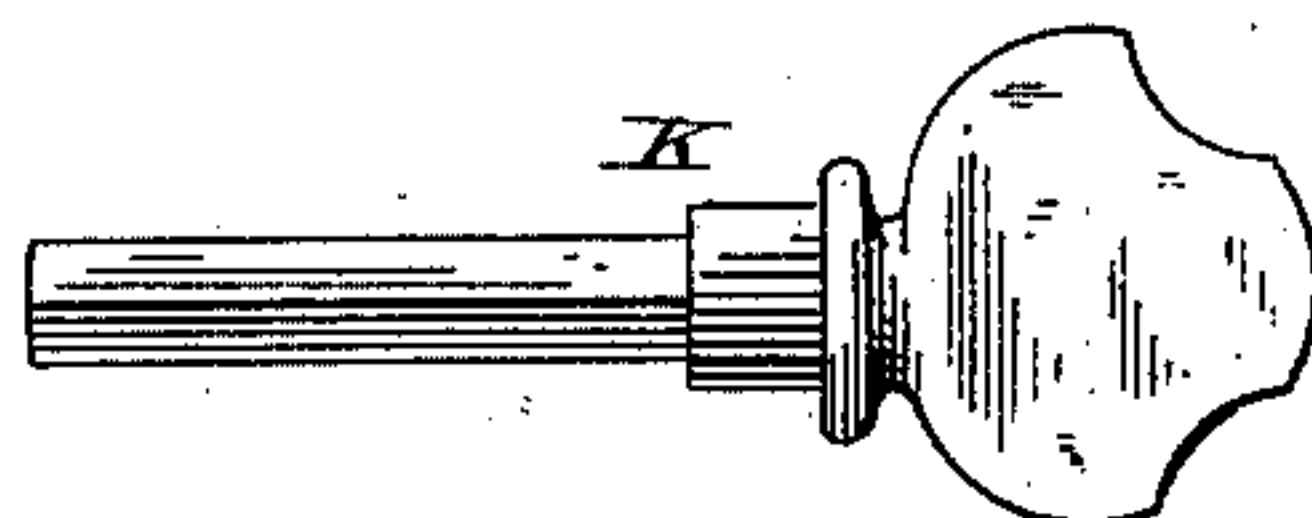


Fig. 5.



Attest:

Raymond Barnes.
Otter Jones

Inventor:

Hobart B. Ives
Per J. N. Kalb
Atty

UNITED STATES PATENT OFFICE.

HOBART B. IVES, OF NEW HAVEN, CONNECTICUT.

IMPROVEMENT IN BOLTS.

Specification forming part of Letters Patent No. 222,630, dated December 16, 1879; application filed August 15, 1879.

To all whom it may concern:

Be it known that I, HOBART B. IVES, of New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Door-Bolts; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of my invention is to make a door-bolt simple, strong, and durable, which is adapted to enter the edge of the door.

The invention consists in making the cylindrical case of the bolt of two parts, the one greater and the other less than a semicircle, and in connecting and grooving them, so that they form bearings for the operative parts of the bolt without an additional case or other equivalent.

It also consists in making the lever or crank of the bolt with two projections or pins, one on either side of its outer end, operating on the bolt and borne upon by the spring, respectively, and in providing the bolt with a vertical groove or slot for the reception of the pin on the crank.

Figure 1 is a perspective view of my bolt and hasp with the smaller side of the casing removed. Fig. 2 is a side view of the bolt. Fig. 3 is the dog or crank. Fig. 4 is a plan view of the keeper. Fig. 5 is the key.

A is the cylindrical case or barrel of the bolt, composed of two pieces, *a* and *a'*, of which *a* constitutes the main portion and is channeled out its entire length U-shaped, and *a'* is the lesser portion, solid, except where it is grooved or recessed to receive and accommodate the various parts of the bolt. To the greater portion, *a*, is bolted, riveted, or cast, the face-plate C, which is provided with a center hole for the passage of the bolt, and also with screw-holes, as shown, for securing it to the door.

The part *a* has a depression, *x*, beginning at about the center of its length and extending to the closed end of the case. The part *a'* has an enlargement, *y*, beginning at about the center of its length and extending to the closed

end of the case. The enlargement *y* fits into the depression *x*, and the two parts are held together by a screw.

The closed end of the bolt is formed by an extension of the lesser piece, *a'*, into the greater, which is cut away to receive it. Near the closed end of the case it is bored horizontally to allow the introduction of the key, as shown at *g*.

This formation of the case in two pieces, the one hollow and the other solid, and enlarged and lessened, as above described, enables me to use but one case and still have the strength and compactness of a solid barrel or case, one or the other of which must be sacrificed if the case were divided in any other way.

B is the bolt, provided near one end with the transverse slot *b*, in which works one pin, *d*, of the lever or crank D, and fashioned to fit into the bolt without discommoding the other parts.

The crank D has two pins, *d* and *d'*, on the opposite sides of its outer end, or it may be one pin passing through the dog. The pin *d*, as stated, works in the groove *b*, while the pin *d'* is borne upon by the curved spring *s*, which is twisted round a transverse pin, as shown at *t*, and has its lower end resting in a groove. This gives great strength to the spring, and it holds the crank in position securely.

The inner end of the crank D is circular, and rests in a groove or bed, *g'*, cut transversely across the key-hole *g*. This end is enlarged and has a square center hole through which the key passes. The crank and spring rest upon the smaller part of the case, *a'*, and the bolt lies in the channel in the larger part, *a*.

K is the key, which is merely a square shaft; but any other shaped key can be used by changing the shape of the hole in the crank.

H is the keeper, which is provided with the fins *f f*. These fins enter a hole of the same caliber as the barrel or case of the bolt. The keeper has an oblong box, *o*, which receives the end of the bolt. It is made oblong, so as to allow for sagging in the door.

My bolt is not a spring-latch, but is intended to be turned whenever it is desired to lock or unlock the door.

When the door is unlocked the dog will

have its outer end turned toward the closed end of the bolt, and when it is locked the dog will be reversed. The spring bears hard upon the crank whichever position it assumes.

The formation of my bolt is such that it needs only one case or barrel to complete the inclosure and furnish fulcrums and bearings for the different parts of the bolt.

I claim—

1. The case or barrel consisting of the hollow channeled portion *a*, having the depression *x*, and the solid portion *a'*, having the enlargement *y*, grooved and cut to accommodate the interior working parts of the bolt, in combination with said parts, substantially as set forth.

2. The crank *D*, circular at one end and

working in a suitable groove, and provided with the pins *d d'* at the other end, in combination with the slotted bolt *B* and spring *s*, substantially as set forth.

3. The bolt *B*, provided with the vertical slot *b*, in combination with the crank *D*, formed as described, and provided with the pin *d*, which enters the slot *b*, and the pin *d'*, upon which rests the spring *s* and the case *a a'*, as and for the purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

HOBART B. IVES.

Witnesses:

GEORGE TERRY,
ROGER M. SHERMAN.