

W. H. Hart,

Bolt.

No. 103600.

Patented May 31, 1870.

Fig. 1.

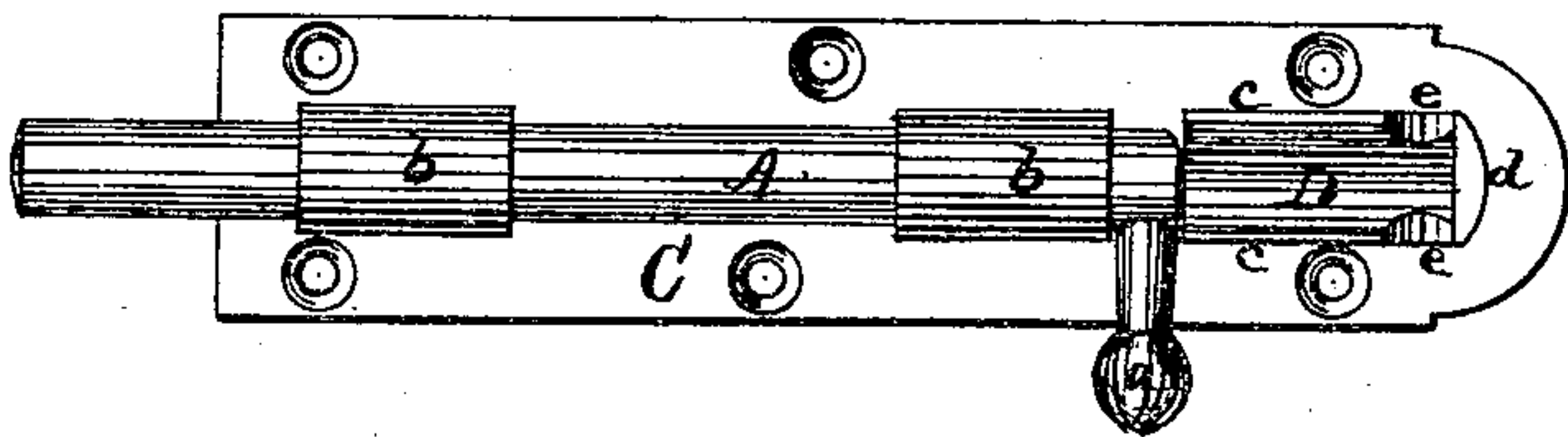


Fig. 2.

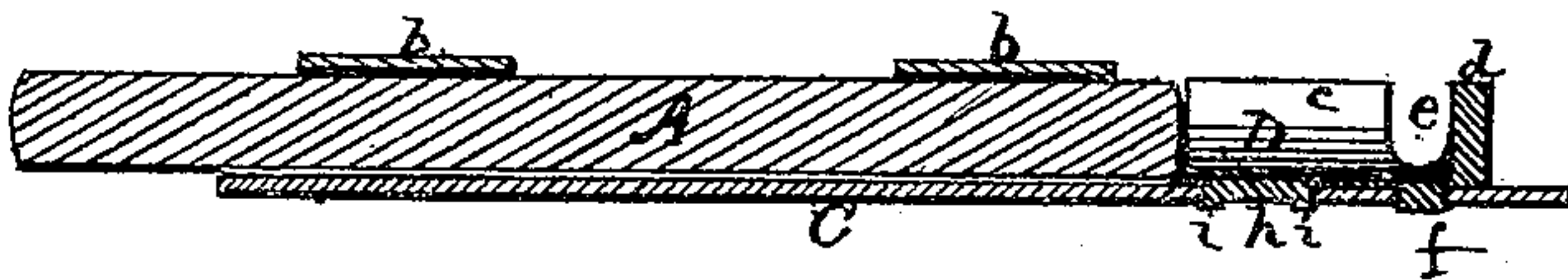


Fig. 3.

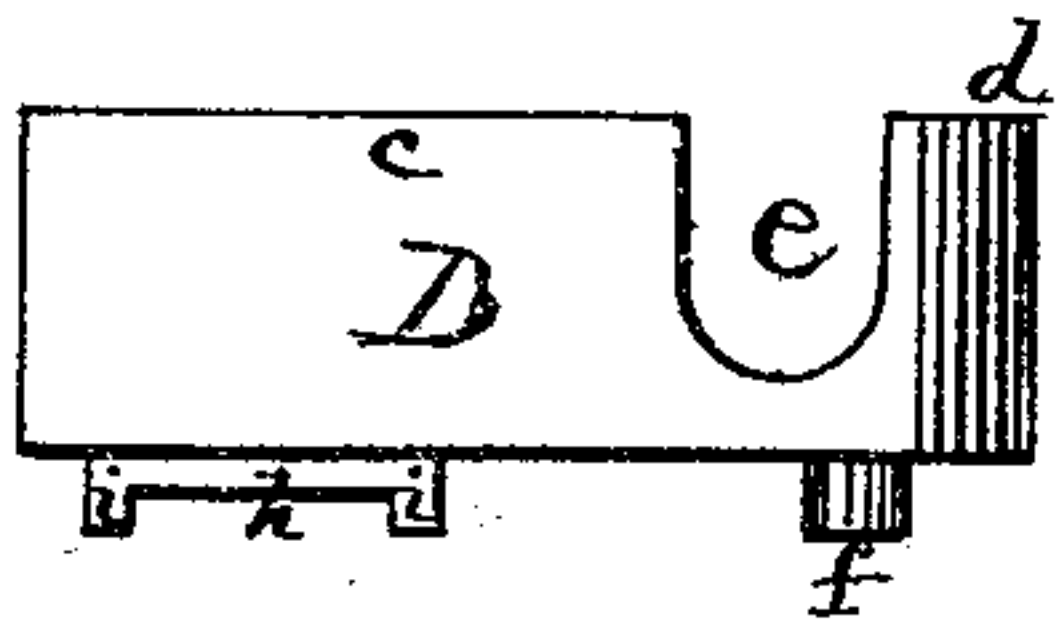
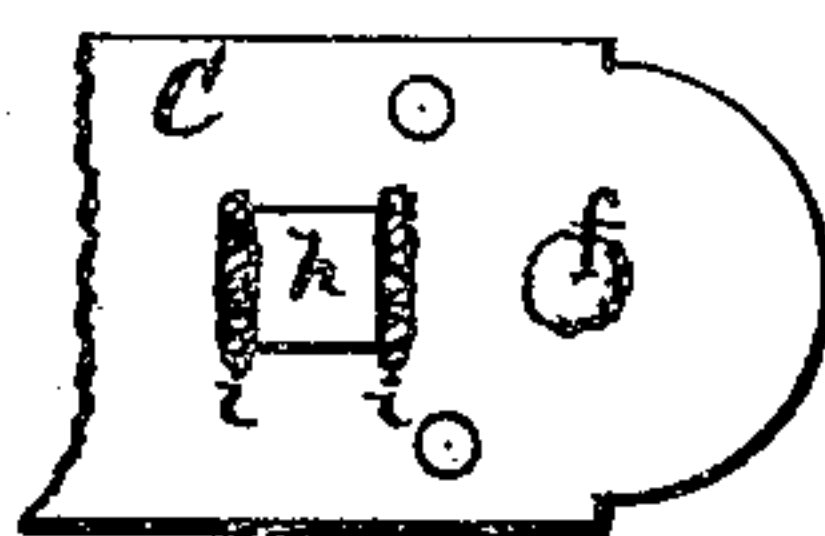


Fig. 4.



Witnesses,

Wm. G. Curtis  
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Inventor,

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By James Shepard, Atty.

# United States Patent Office.

WILLIAM H. HART, OF NEW BRITAIN, CONNECTICUT.

Letters Patent No. 103,606, dated May 31, 1870.

## IMPROVEMENT IN DOOR-BOLTS.

The Schedule referred to in these Letters Patent and making part of the same.

I, WILLIAM H. HART, of New Britain, in the county of Hartford and State of Connecticut, have invented a new and useful Improvement in Door-Bolts, of which the following is a specification.

The nature of my invention consists in the construction of the stop and guides in the rear of the door-bolt and attaching the same, in a single piece, to the flat plate to which the bolt is connected, all as more fully hereinafter set forth.

In the accompanying drawing—

Figure 1 is a front elevation of my invention.

Figure 2, a longitudinal section of the same; and

Figures 3 and 4 are detached views of the same.

A designates a common door-bolt provided with the usual arm or pin *a*, and fitted to slide in the barrels *b b*, which barrels are attached to the wrought-metal plate C in the ordinary manner.

The guides *c c* and the stop *d* are cast of one and the same piece of metal, D, a side elevation of which is shown in fig. 3.

The guides *c c* are connected to each other at the bottom so as to form a semicircular recess between them, through which the bolt A passes.

In each of said guides is formed a transverse recess, *e*, into which the arm or pin *a* can drop to hold the bolt inward, when desired.

On the under side of the piece D, I form a round tenon, *f*, and a larger square tenon, *h*, the body of which should project from the piece D, about the thickness of the plate C, while on one or both ends or sides of the tenon *h* a small ledge, *i*, is formed, which projects still further from the piece D.

Two holes are punched in the inner end of the plate C, which holes correspond in shape and size with the tenons *f* and *h*, which, after being placed in the plate C, are secured thereto by upsetting the end of tenon *f* and the ledge *i* on the tenon *h*, as shown by the back-side view in fig. 4.

The tenon *h* is made large for the purpose of forming a greater body of metal between the guides *c c*,

which metal would otherwise be too thin and weak, or so thick as to interfere with the sliding back of the bolt.

The plate C is sufficiently strong, after the necessary amount of metal to admit said tenon has been removed.

The ledge *i* is formed on the tenon *h*, to save the labor of upsetting the whole end of so large a tenon.

In ordinary wrought-iron door-bolts, the guides *c c* and stop *d* are formed of three separate pieces of sheet metal and secured by upsetting a tenon on each of the same.

To withdraw the bolt from the staple sometimes requires considerable force, as it often binds, and in such case so much force is applied that it is frequently driven back against the stop *d* so powerfully as to break or bend the same.

By casting the guides and stop in one piece these parts always bear the same relative position to each other.

A portion of the guides *c c* is left below the recesses *e e*, which have a semicircular bottom, thus giving the stop *d* a form much better adapted to strength in proportion to the amount of metal than that of the ordinary sheet metal stop.

My invention also saves a large amount of labor by reducing the number of parts to be handled in the construction of the article, thus producing a better article at a less cost.

I claim as my invention—

The metal plate D, made of one piece of metal, forming the two guides *c c*, the semicircular bottom upon which the bolt slides, and the back stop *d*, in the rear of the openings *e e*, and connected to the plate C by the prongs, which pass through slots in the plate, all substantially as set forth.

WM. H. HART.

Witnesses:

WILLIAM PARKER,  
JAMES SHEPARD.