H. Belfield.

Latch.

No. 26,809. Patented Jan. 10, 1860.

Fig: 1

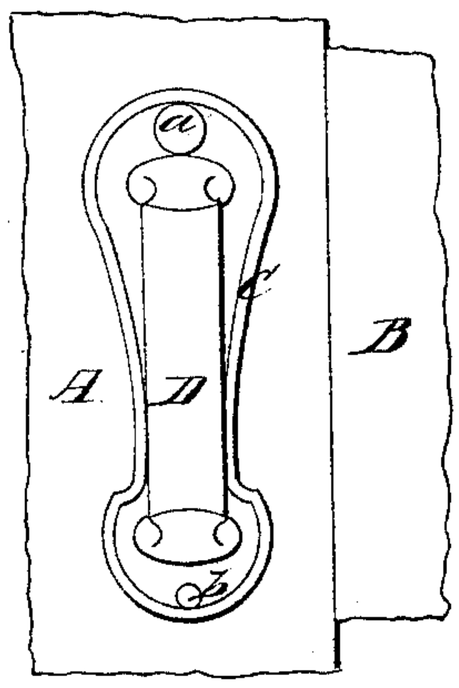


Fig: 2

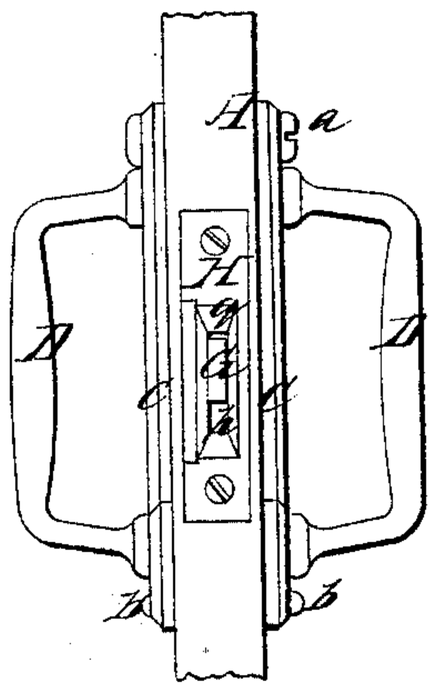


Fig: 3

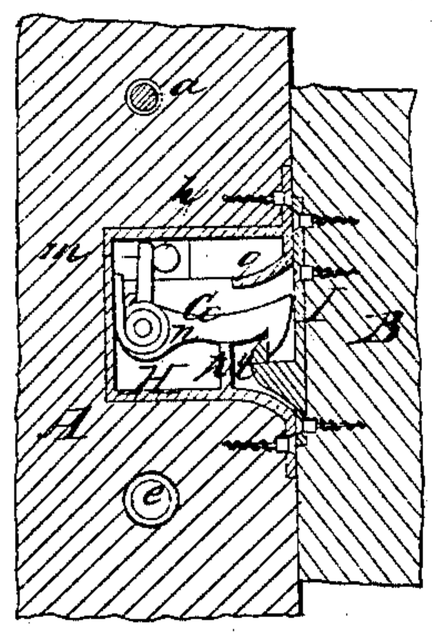


Fig: 4.

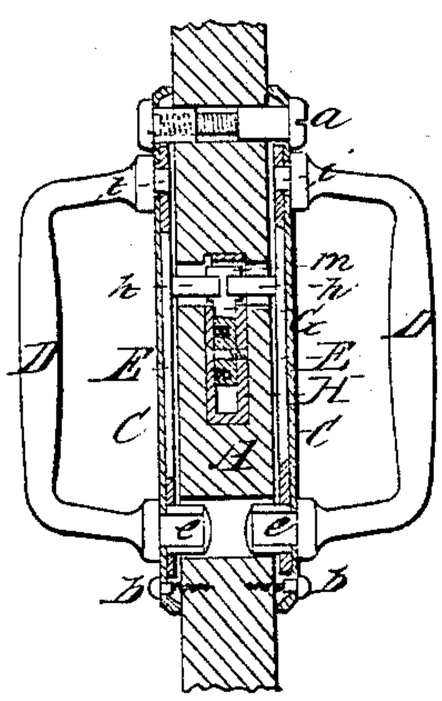
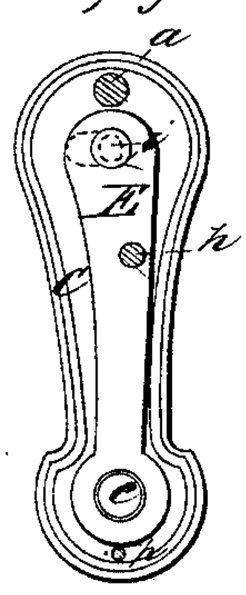


Fig: 5.



Witnesses:

Henry Howson

Horace See

Inventor:

Henry Belfield

UNITED STATES PATENT OFFICE.

HENRY BELFIELD, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND JUSTICE COX, OF SAME PLACE.

LATCH FOR SLIDING DOORS.

Specification of Letters Patent No. 26,809, dated January 10, 1860.

To all whom it may concern:

Be it known that I, HENRY BELFIELD, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and Improved Combined Handle and Latch for Sliding Doors; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon.

My invention consists in two handles, jointed to certain plates, combined with a spring latch, and the whole applied to a sliding door substantially as set forth hereafter, so that the force applied to either of the handles for sliding the door open, shall be the means of detaching the latch from the jamb, thereby avoiding the trouble and annoyance resulting from the usual latching appliances used on sliding doors which have to be constantly opened and closed.

In order to enable others to make and use my invention I will now proceed to describe its construction and operation.

On reference to the accompanying drawing which forms a part of this specification, Figure 1, represents part of a sliding door and jamb with my improvement applied to the same. Fig. 2, an edge view of the door with my improvement. Fig. 3, a sectional view of Fig. 1. Fig. 4, a sectional view of Fig. 2, and Fig. 5, a view of the inside of the door plate.

Similar letters refer to similar parts throughout the several views.

A represents a portion of a sliding door and B a part of the jamb against which the door closes.

Two plates C, C, are secured by screws *a* and *b*, one plate to each side of the door and one directly opposite to the other. To the lower end of each plate is hinged the stem *e* of the handle D, in such a manner that the said stem can turn freely in the plate, the upper stem *i* of the same handle passing through an elongated opening in the plate (see dotted lines Fig. 5) and through an arm E to which the stem is riveted or otherwise secured. This arm E is situated in a recess formed at the back of the plate and is hinged at its lower end to a projection of the plate to which the lower stem *e* of the handle is jointed.

It will now be seen that a lateral movement limited by the elongated slot may be imparted to the handle, the stem *e* turning in the plate, and that the same motion is communicating through the stem *i* to the arm E. This arm has a pin *h* projecting so far into the door as to bear against the projection *m* of the latch G which is hung to a pin in the casing H, the latter being let into the edge of the door A.

A spring *n*, one end of which bears against the end of the casing, the other being attached to the latch, serves to depress the latter which is limited in its downward movement by a projection *p* and in its upward movement by a projection *q* both projections being secured to or forming a part of the casing H.

To the edge of the jamb B is screwed a plate I from which a catch *t* projects into the casing H, the catch being adapted to receive the notched end of the latch G.

When the door, latched to the jamb, as seen in Fig. 3, has to be unlocked and slid open all that is necessary is to seize one of the handles and push it back in the direction in which the door has to slide. On applying this force to the handle it will turn with the stem *e* as its center, the stem *i* traversing the elongated slot and communicating the same movement imparted to the handle, to the arm E, the pin *h* of which bearing against the projection *m* of the latch G raises the latter, and lifts its notched end clear of the catch *t* on the plate I. The door is now unlocked, and is at liberty to slide back by a continued application of pressure against the handle D. When the door has to be closed it is slid forward by means of the handle, when the latch G, by its rounded end striking against the rounded end of the catch *t*, will be raised and its end forced by the spring *n* into the notch of the catch on the jamb.

It will be seen without further explanation that by the above described device the latching and unlatching of the door is accomplished without any manipulation other than that required for opening and closing the door, and that both sides of the door being furnished with handles, and both handles being arranged to operate the latch, the opening and unlocking, and closing and locking of the door may be effected from both sides alike.

My invention, although it is applicable to all sliding doors, is especially well adapted

to such as are used on city railway cars and other conveyances in which the doors have to be so repeatedly opened and closed as to render the latching and unlatching by the usual appliances, tedious and annoying.

Without confining myself to the precise form and construction of the parts herein described; I claim as my invention and desire to secure by Letters Patent—

The handles D D, jointed to the plates C C, combined with the spring latch G, or its equivalent, and the whole applied to a sliding door substantially as herein set forth, so that the force applied to either of the handles for sliding the door open, may be the means of detaching the latch from the jamb, as specified.

In testimony whereof, I have signed my name to this specification before two subscribing witnesses.

HENRY BELFIELD.

Witnesses:

HENRY HOWSON,

CHAS. E. FOSTER.