W. J. HINDE.

SELF-ACTING DOOR-BOLT.

No. 185,534. Patented Dec. 19, 1876.

Fig. 1

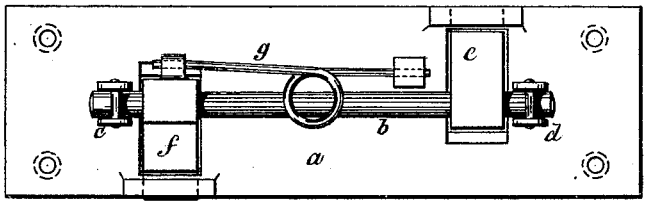


Fig. 2

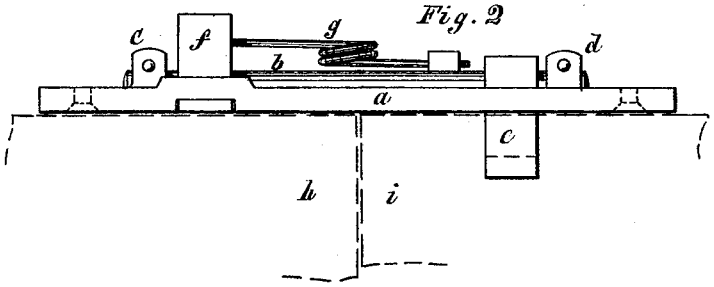


Fig. 3

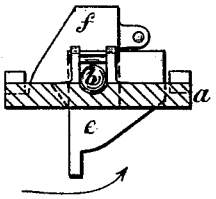
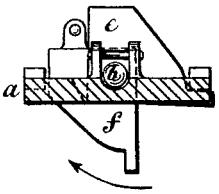


Fig. 4



Witnesses

Edmund Edwards.

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Inventor

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UNITED STATES PATENT OFFICE.

WILLIAM JOHN HINDE, OF EASTON ROAD, ENGLAND.

IMPROVEMENT IN SELF-ACTING DOOR-BOLTS.

Specification forming part of Letters Patent No. **185,534**, dated December 19, 1876; application filed May 31, 1876.

To all whom it may concern:

Be it known that I, WILLIAM JOHN HINDE, of Easton Road, in the county of Middlesex, England, have invented a new and Improved Fastening for Doors, Gates, Shutters, &c., of which the following is a description:

This invention relates to fastenings for pairs of doors, gates, or covers, designed to be operated by the master door, gate, or cover, to effect the fastening of the subordinate door, gate, or cover.

The object of the invention is to provide a fastening of this character, which immediately, upon the master door, gate, or cover releasing it, will automatically unfasten the subordinate door, gate, or cover.

To this end the invention consists in the novel combination, for use with a pair of doors, gates, or covers, and the opening which they control, of an oscillating shaft, a catch on such shaft adapted to engage with the subordinate door, gate, or covers; a tappet on such shaft, which, by the impact of the master-door, gate, or cover, in closing, will effect the engagement of the aforesaid catch with the subordinate door, gate, or cover; and a spring for effecting the disengagement of the catch from the subordinate door, gate, or cover, whenever the tappet is released from the master door, all as hereinafter more fully described and definitely claimed.

In the accompanying drawing, Figure 1 is a back view of my improved fastening. Fig. 2 is a side view of the same. Fig. 3 is a transverse section of the fastening in its normal position; and Fig. 4 is a similar section of the fastening in position for use.

Similar letters of reference designate corresponding parts in all the figures.

f designates a catch arranged on a shaft or bar, *b*, which is supported in bearings *c d* on a metal plate, *a*, so as to be free to oscillate or turn. *e* designates a tappet, which is combined with the shaft *b*, so that when moved by the impact of anything it imparts motion to the said shaft *b*, and thence to the catch *f*. Openings or slots in the plate *a* permit the catch and tappet to project through it. *g* is a spring whose office it is to readjust the catch *f* and tappet *e* to their normal positions when the master door is opened, thereby causing the fastening to automatically unfasten the subordinate door upon being released from the master door.

Preferably, when these fastenings are used in connection with a pair of doors, gates, or covers, such, for instance, as the pair of doors *h i* of a book-case, one will be arranged with its plate *a* countersunk and secured into the sill of the doorway, and the other countersunk and secured into the lintel thereof in such position that the catches *f* shall be adapted to engage with the subordinate door *h*, which has first to be closed, and the tappets *e* shall protrude in the way of the master door *i*.

The operation of the catches or fastenings is as follows: The subordinate door *h* is first closed, and then the door *i* is closed. Coming in contact with the tappets *e* the door *i* oscillates the shafts *b* and causes the catches *f* to engage with the door *h*, and secure it in place. The door *i* is then locked, and by holding the catches in place secures both doors closed.

It will be understood that by my invention the master door is made to operate the catches which secure the other door, and the springs to unfasten them, thereby obviating all the trouble now incurred in reaching up and stooping down to operate bolts or catches by hand.

When the invention is applied to street-doors, the tappet *e* projecting up from the sill may be found objectionable. If this is the case it may be so combined with the shaft *b* as to be capable of being turned down out of the way without moving the catch. This objection, however, may be obviated by arranging the catch and the tappet on the door which is to be secured by them, and adapting the sill so that the catch may engage with it.

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

The combination, for use with a pair of doors, gates, or covers, of an oscillating shaft, a catch on such shaft adapted to engage with the subordinate door, gate, or cover, a tappet on such shaft, which by impact of the master door, gate, or cover, in closing, will effect the engagement of said catch with the subordinate

door, gate, or cover, and a spring, whereby upon the release of the tappet from the master door the catch will be made to unfasten the subordinate door, and to remain in position for re-engagement therewith, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM JOHN HINDE.

Witnesses:
EDMUND EDWARDS,
CHARLES JAMES WINTERSGILL.