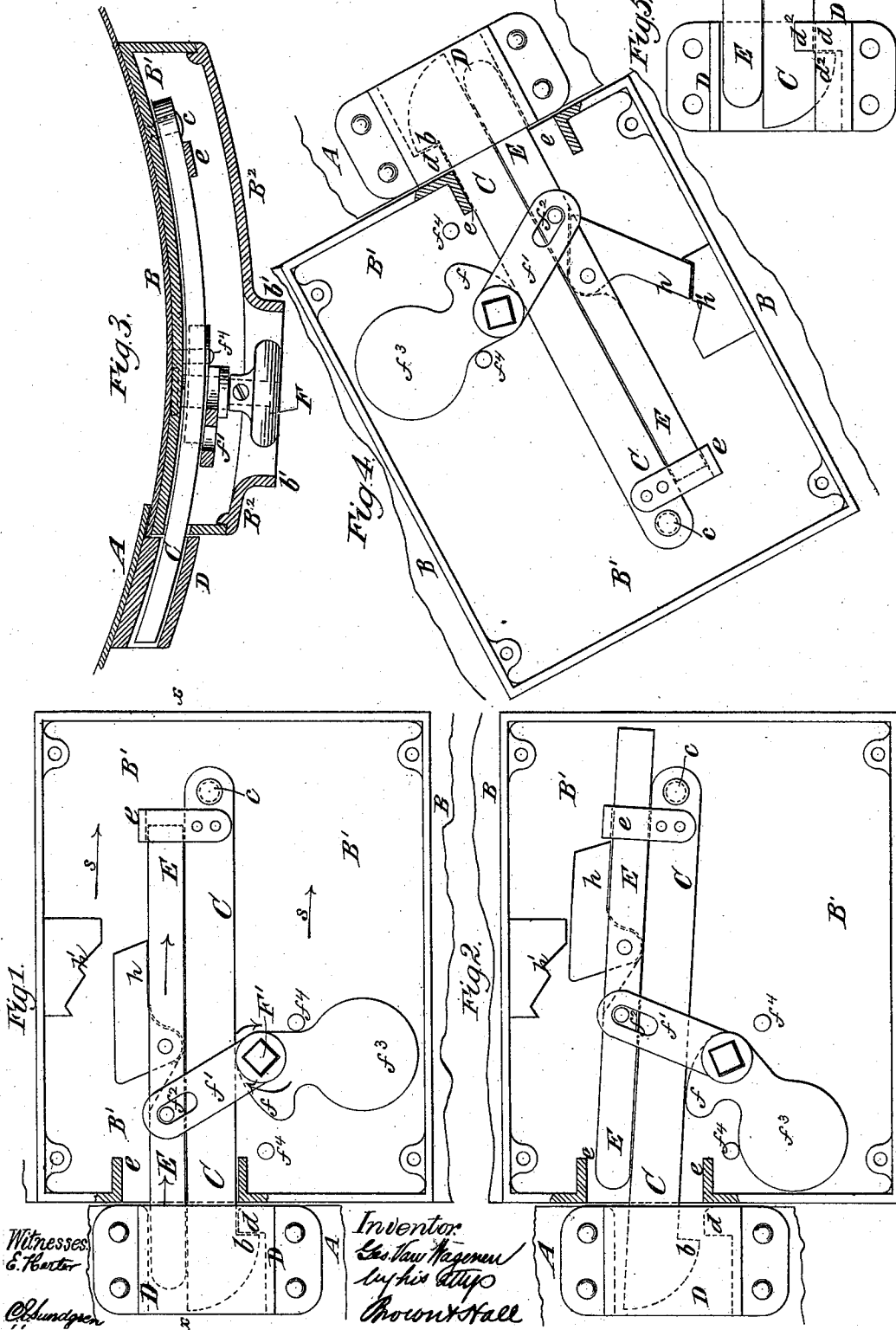


(No Model.)

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FASTENING FOR DOORS.

No. 372,829.

Patented Nov. 8, 1887.



UNITED STATES PATENT OFFICE.

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FASTENING FOR DOORS.

SPECIFICATION forming part of Letters Patent No. 372,829, dated November 8, 1887.

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To all whom it may concern:

Be it known that I, GEORGE VAN WAGENEN, of the city and county of New York, in the State of New York, have invented a new and useful Improvement in Fastenings for Doors, of which the following is a specification.

My invention is applicable to sliding or hinged doors, and is particularly advantageous for the doors of car-heating stoves, although when used in other structures it still has the advantage of security and easy manipulation.

Important objects of my invention are to provide, in connection with a hinged or pivoted latch, means whereby such latch may be securely held down or blocked in engagement with its keeper, and which are capable of easy adjustment by hand, although of such character that the latch will not accidentally be released, even when the stove to which the fastening be applied be overturned.

In carrying out my invention I employ, in connection with a door and casing, an organized mechanism for locking the door and holding it closed, consisting of a pivoted latch, a bolt arranged to slide above the latch and of such size that when slid into the keeper above the latch the latch will be securely blocked, and a guide on the latch to which the bolt is fitted and in which it may slide. I also provide a pendulum-lever weighted and connected with the locking-bolt, to produce its automatic movement in a locking direction, and a knob or handle and cam, by a single movement of which the bolt may be first retracted, the latch raised, and the door moved.

The invention consists in novel combinations of parts, above referred to and hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a front elevation of a portion of a stove embodying my invention, a cap which covers the latch mechanism being removed. Fig. 2 is a similar elevation showing the bolt withdrawn and latch raised. Fig. 3 is a horizontal section on the plane of the dotted line *xx*, Fig. 1. Fig. 4 represents the parts in an inverted position, showing how the bolt is prevented from sliding back by gravity; and Fig. 5 represents my invention as adapted for a swinging door.

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

A designates a portion of a cylindric stove, to which is fitted a door, B, adapted to slide horizontally and to which my fastening is applied.

B' is the latch casing or frame secured to the door B, and C designates a hooked latch pivoted at *c* to swing vertically and hooked at *b* to engage with a shoulder or projection, *d*, on the keeper D. Above the latch C is a sliding bolt, E, which is fitted to guides *e*, so as to lie approximately parallel with the latch and adapted to enter the keeper D and hold the latch against rising and thus becoming disengaged from the projection *d*.

F designates a rotary handle or knob, which is adapted to turn freely, and on its spindle F' is a cam, *f*, which, by turning the knob, is raised against the latch and caused to lift the hook or shoulder *b* out of engagement with the projection *d*, so that the door may be slid toward the right, as shown by the arrows *s* in Fig. 1. The knob or handle F has an upwardly-projecting arm, *f'*, having a pin-and-slot connection, *f''*, with the bolt E, and by turning the knob or handle the bolt will be moved in the direction indicated by the arrow thereon in Fig. 1. Below the knob or handle F is a weight, *f'''*, and said knob or handle, with the arm *f'* and weight, constitutes a pendulum-lever, which by gravity tends to hold the bolt E in the locked position shown in Fig. 1. Stop-pins *f''''* on the latch-frame B' limit the swinging movement of the pendulum-lever.

If it be desired to open the door B, the first turning movement of the knob or handle F in the direction indicated by the arrow in Fig. 1 will, through the arm *f''*, slide the bolt E out of the keeper D, thus permitting the raising of the latch C, and by the further turning movement of the knob or handle in the same direction the cam *f* is caused to lift the latch free of the keeper, and a push on the knob or handle will then open the door. Thus by the simple continued operation of one hand the door may be unfastened and opened.

When the parts of the fastening are left free, they gravitate to the position shown in Fig. 1, and if it then be desired to shut the door B a push with the hand is given in the right direction. The nose or beak of the hooked latch C first strikes the keeper D, and by rising

lifts the end of the bolt E in the way of the keeper, and the bolt is held back while the latch enters the keeper and drops over the shoulder or projection *d*. The bolt E is then thrown forward into the keeper D, as shown in Fig. 1, by the action of the weight *f*³, thereby locking the latch in its engaged position.

All the parts of my fastening should have a loose free fit, so as to avoid any interference with their action by rust or other causes. The several parts may be covered and protected by a cap or outer plate, B², which, as shown, is substantially coincident with the latch-frame B', but may be smaller, and the knob or handle F projects through an opening in the cap-plate B², and is shielded by a flange, b', which protects it from knocks, but through which the fingers may be inserted for turning the knob.

From the above description it will be understood that in nearly all positions which the stove or other structure on which the fastening is used can assume the weight *f*³ will hold the bolt E in locking position in the keeper D with absolute certainty; but to make the fastening more secure when the stove is inverted or thrown into the position shown in Fig. 4, I have shown the stop *h* as pivoted loosely to the bolt E, and as adapted, when the parts assume a position similar to that shown in Fig. 4, to drop into engagement with the shoulder *h'*, as shown in Fig. 4. In ordinary use the pivoted stop *h* has no function, but rests idly upon the top of the bolt E, as shown in Figs. 1 and 2; but when the stove is inverted the stop *h* drops into engagement with the shoulder *h'*, and thus prevents the retraction of the bolt E and the raising of the latch C.

In Fig. 5 I have shown a keeper, D, constructed to receive the latch of a door which is hinged to swing horizontally instead of sliding. The shoulder of the latch C may engage the projection or shoulder *d*, as before described; but the keeper D has at the front an upwardly-

projecting lip, *d*², over which the latch must be lifted to open the door. The bolt E prevents the lifting of the latch sufficiently to pass over the lip *d*², and all the remaining parts of the fastening are constructed and arranged for operation as before described.

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

1. The combination, with a door and casing, of a latch pivoted on the door, a keeper on the casing, with which the latch engages, a bolt lying above the latch and substantially parallel therewith and sliding above the latch to enter the keeper on the casing and prevent the raising of the latch, and a pivoted knob or handle having an arm connected with the bolt for sliding it and a cam for raising the latch, substantially as herein described.

2. The combination, with a door and its casing, of the latch C on the door, a keeper, D, on the casing, with which the latch engages, the bolt E, sliding above the latch, the handle F, pivoted to the door and having an arm, *f'*, which is connected with the bolt for sliding it, a cam, *f*, for lifting the latch, and the weight *f*³, for operating on the handle to return the bolt and latch to safety position when released, substantially as herein described.

3. The combination, with a door and its casing, of a latch, C, pivoted to the door, a keeper, D, on the casing, with which the latch engages, a bolt, E, sliding above the latch, a knob or handle pivoted to the door, having an arm connected with the bolt for sliding it and a cam for raising the latch, a gravity-stop pivoted on the bolt, and a projection on the door with which the stop engages for locking the bolt against movement when the parts are inverted, substantially as herein described.

GEO. VAN WAGENEN.

Witnesses:

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