No. 695,267. Patented Mar. 11, 1902.

I. D. BEACH.

DOOR LATCH.

(Application filed Oct. 4, 1901.)

(No Model.)

Fig 1

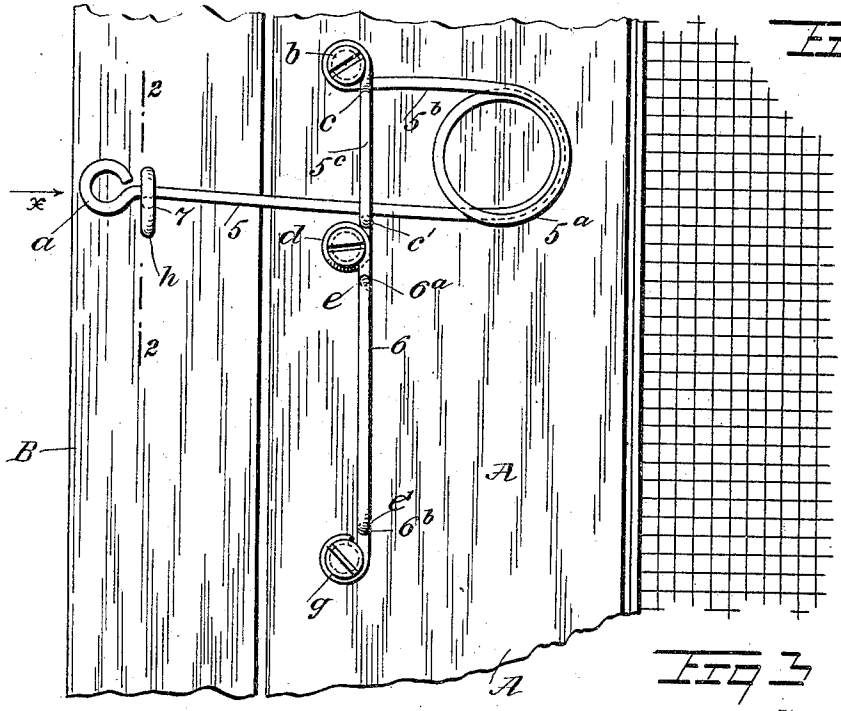


Fig 2

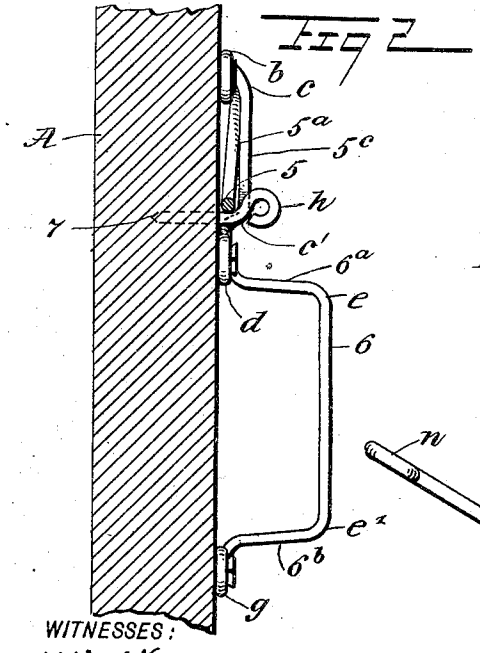


Fig 3

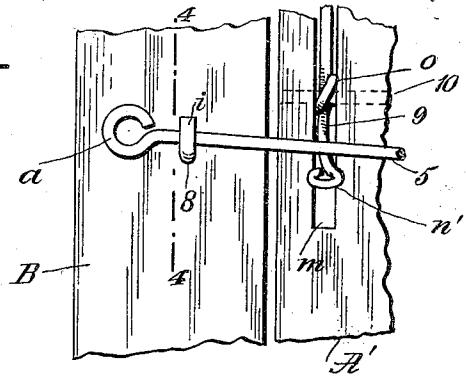
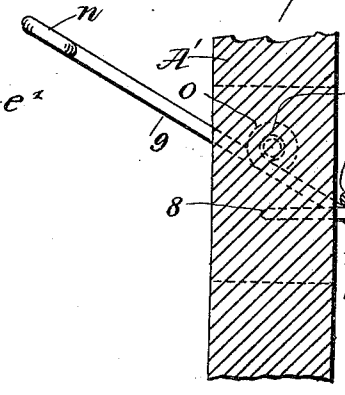


Fig 4



WITNESSES:

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INVENTOR

Isaac D. Beach

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ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ISAAC DAVIS BEACH, OF MARBLEHILL, MISSOURI, ASSIGNOR OF TWO-THIRDS TO ROBERT W. FISHER AND FRANCIS M. WELLS, OF MARBLEHILL, MISSOURI.

DOOR-LATCH.

SPECIFICATION forming part of Letters Patent No. 695,267, dated March 11, 1902.

Application filed October 4, 1901. Serial No. 77,559. (No model.)

To all whom it may concern:

Be it known that I, ISAAC DAVIS BEACH, a citizen of the United States, and a resident of Marblehill, in the county of Bollinger and State of Missouri, have invented a new and Improved Door-Latch, of which the following is a full, clear, and exact description.

This invention has for its object to provide a novel, inexpensive, and practical latch and combined door-pull formed of a wire rod bent into form and which may be applied to a screen-door or a paneled door, as may be desired, and operate efficiently.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is an inner side view, in part, of a door-casement and a screen and the improvement thereon holding the door closed. Fig. 2 is a transverse sectional view of the casement portion substantially on the line 2 2 in Fig. 1 and a partly-sectional view of the latch and handle or door-pull, seen in direction of arrow x in Fig. 1. Fig. 3 is a fragmentary inner side view of a paneled door and casement therefor and a like view of a slightly-changed construction of the improved latch, and Fig. 4 is a transverse sectional view substantially on the line 4 4 in Fig. 3.

As shown in Figs. 1 and 2, the latch-bar 5 and handle 6 are integrally formed from a single piece of resilient wire rod, the specific construction of which is as follows: Upon one end of the material a loop a is bent, from which extends the straight latch-bar 5 of suitable length. The latch-bar terminates or is merged into the spring-coil 5^a, and from said coil, at the upper part thereof, a straight limb 5^b extends substantially parallel with the latch-bar 5. An integral loop or eye b is formed at the extended end of the limb 5^b, and from said eye the rod material projects outward slightly, as at c, and then downward, as shown at 5^c, to a point just below the latch-bar 5, under which it is bent, thus affording a shoulder c', whereon the latch-bar normally rests, the portion 5^c, that intervenes between the offset bends c c', forming a keeper bar or guard for the latch-bar 5. An integral ring-eye d is formed immediately below the offset shoulder c', and from it the rod material is outwardly bent to form the upper member 6^a of the handle. At a suitable point e the material is bent downward to provide the grip portion 6 of the handle, and at the lower end of said grip-piece a bend e' is formed, from which the remainder of the rod material projects nearly at a right angle, providing the lower member 6^b of the handle, this member and the upper member 6^a occupying the same plane. The lower handle member 6^b terminates in a ring-eye g, that alines with the ring-eyes b d, and said eyes are designed to receive heads of screws that are inserted into the upright frame-bar A of a screen-door.

A wire latch-dog 7 is employed, preferably, when the improved latch is employed in connection with a screen-door, as shown in Figs. 1 and 2, and may consist of an ordinary eye-bolt.

The latch-dog 7, if employed, is screwed into the jamb B of the door-casement, leaving the ring-like head h thereof projected a proper distance from the jamb and disposed with its sides vertical, the body of said dog being below the latch-bar 5, which is adapted to ride over the rounded edge of the head h and seat upon the body of the dog, as shown in Figs. 1 and 2.

It will be seen that the latch-bar 5, being pressed upon the dog-body 7 by the spring-coil 5^a, will be adapted by its engagement with the dog to hold the door closed until the handle member 6 is pulled upon at one side of the door or the door is pushed upon at the opposite side thereof, which will obviously cause the latch-bar to ride over the rounded edge of the head h, so as to release the door and permit it to swing on its hinges.

In case the improved latch is to be used in connection with a door that must be held shut in a more reliable manner than can be effected with the latch-dog 7, a latch-dog 8 (shown in Figs. 3 and 4) may be employed, consisting of a shank having a hooked-shaped head i,

whereon a vertical shoulder i' is formed. In arranging the latch for use of the dog 8, the latter is driven or otherwise inserted into the jamb B in the path of the latch-bar 5, so that the latch-bar may ride upon the hook-shaped head i, seat upon the body of the dog 8, and engage the shoulder i', as shown clearly in Fig. 4.

Near the free edge of the door A' a vertical slot m is formed therein opposite the latch-bar 5, as indicated in Fig. 3, and in said slot a tripping-lever 9 is held to rock by a pin 10, that is inserted through an opening in the lever between its ends and into the door.

To harmonize with the construction of the latch and handle, as described, the tripping-lever 9 may be formed of wire-rod material and have eyes n n' formed at its ends. At a suitable point between the eyes n n' an eye o is produced on the lever-body by bending the same, as indicated by full and dotted lines in Figs. 3 and 4, said eye receiving the pin 10, which is driven into a perforation in the free side bar of the door, crossing the slot m, wherein the lever 9 is thus held to rock.

The end portion of the lever 9, which projects toward the side of the door whereon the latch-bar and handle are placed, projects beneath the latch-bar and is held in loose contact therewith by the weight of the other end portion of the lever, which may extend from the opposite side of the door far enough to facilitate its manipulation for lifting the latch-bar 5, so as to release it from the shoulder i' of the latch-hook i on the dog 8.

The improvements as shown and described are extremely simple and very cheaply manufactured, affording a convenient and reliable latch at moderate cost.

Having described my invention, I claim as new and desire to secure by Letters Patent—

1. A latch-bar of wire rod, an integral coiled spring on one end of the latch-bar, an outwardly-looped handle, and a keeper-bar for the latch-bar formed integral with said bar and with the spring and looped handle.

2. The spring-pressed latch-bar, the integral handle formed of a single piece of wire rod, and means to hold the latch-bar free to work on a door, in combination with a rockable tripping-lever adapted to work the latch-bar, and a dog whereon the bar may latch.

3. The spring-pressed latch-bar, the keeper-bar, and looped handle formed of a single piece of wire rod, in combination with a latch-dog comprising a shank and a ring-eye head thereon, engaging the latch-bar.

4. A latch-bar, a spring-coil on one end of the latch-bar, a limb extended from the spring-coil above the latch-bar, a ring-eye at the end of the limb, a depending keeper-bar for the latch-bar and extended from the ring-eye, another ring-eye formed at the lower end of the keeper-bar, and an outwardly-projecting handle-loop having a ring-eye at its lower end, all formed of a single wire rod.

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

ISAAC DAVIS BEACH.

Witnesses:
BEN. MCCULLOUGH,
W. F. KINDER.