

E. A. F. CARSON.
LATCH.
APPLICATION FILED JAN. 23, 1911.

997,490.

Patented July 11, 1911.

Fig. 1.

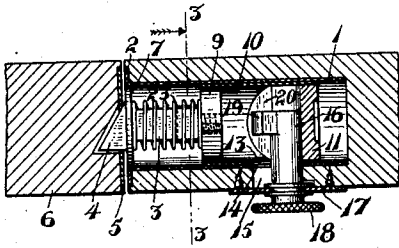


Fig. 2.

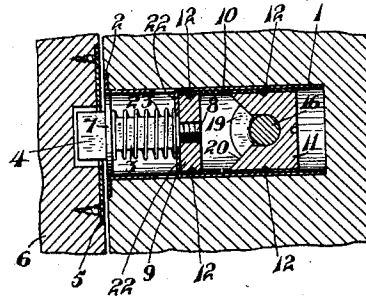


Fig. 3.

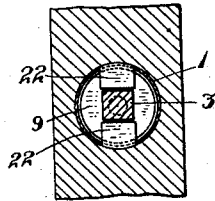


Fig. 4.

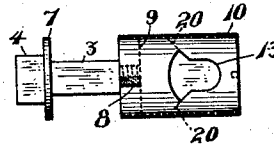


Fig. 5.

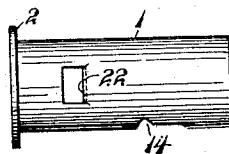
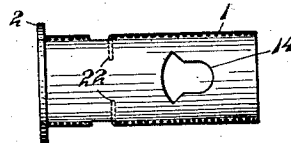


Fig. 6.



WITNESSES

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LATCH.

997,490.

Specification of Letters Patent.

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Application filed January 23, 1911. Serial No. 604,094.

To all whom it may concern:

Be it known that I, EDWARD A. F. CARSON, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented new and useful Improvements in Latches, of which the following is a specification.

The object of the present invention is to provide a latch of simple and inexpensive construction for use upon closet doors and the like.

My invention resides in the novel construction, combination, and arrangement of parts hereinafter fully specified and particularly pointed out in the claims.

In the accompanying drawing, Figure 1 is a horizontal longitudinal section of the latch; Fig. 2 is a vertical longitudinal section thereof; Fig. 3 is a vertical transverse section thereof on the line 3—3 of Fig. 1; Fig. 4 is a detail side view of the latch proper, detached; Fig. 5 is a top plan view of the casing, detached; Fig. 6 is a side view of the casing, detached.

Referring to the drawing, 1 indicates a cylindrical casing inserted in a cylindrical recess in the edge of a door and having at its outer end a flange 2 flush with said edge. In said casing reciprocates the latch proper comprising a stem 3 terminating in a beveled head 4 adapted to enter an aperture in a striking plate 5 secured to the door jamb 6, and formed with a circular disk 7 sliding snugly within said casing. The inner end 8 of said stem is reduced in thickness and is screwed into a disk 9 within one end of a sleeve 10, there being contained within the other end of said sleeve a cylindrical block 11, said disk 9 and block 11 being both secured to said sleeve by indentations 12 formed in the sleeve and entering recesses in the circumference of the disk and block. Said disk, block and sleeve are thus reciprocated in the same manner as if formed in one solid piece.

A side of the sleeve is formed with an aperture 13 through which, and likewise through apertures 14 and 15 in the casing and door, can be passed the inner end of a stem 16 having its bearing in a plate 17 secured to the door, the stem being provided

with a handle 18 by which it can be turned. The inner end of said stem 16 is formed with a wide arm 19, the ends of which are in planes through the axis of the stem, and said ends engage similarly disposed surfaces 20 on the block 11. Thus when said stem is turned in either direction in its bearing, one or the other end of said arms engages the corresponding surface, and withdraws the stem 3.

Diametrically opposite portions of the casing are punched inward, as shown at 22, and form stops against which the disk abuts when the stem moves outward, thus limiting the outward movement of said stem. A coiled spring 23 around the stem, and compressed between said stop and the disk 7, normally returns said stem to its outer position when withdrawn by means of the handle.

By reason of the provision of the radially extending ends of the arm of the stem abutting against corresponding surfaces on the block a considerable amount of movement of the latch proper can be obtained from a comparatively small movement of the handle.

I claim:—

1. In an apparatus of the character described, the combination of a casing adapted to be inserted in a recess in the edge of a door and having diametrically opposite portions bent inward to form stops, a part slidable in said casing, a stem adapted to engage said part to slide it in said casing, a latch stem passing between said stops and secured to said part, said latch stem having a latch head and a disk slidable in said casing, and a coiled spring around the latched stem and compressed between the stops and said disk, substantially as described.

2. In an apparatus of the character described, the combination of a casing adapted to be inserted in a recess in the edge of a door, a latch stem movable longitudinally in said casing and threaded at its inner end, a part for moving said latched stem comprising a cylindrical disk, a block formed with surfaces to respectively receive and be engaged by a stem and an arm on said stem, and a cylindrical sleeve secured to said disk and block and slidable in said casing, said

threaded end of the latch being screwed into
the disk, and means fixedly supported by
said casing against one side of which said
spring abuts and against the other side of
5 which the disk abuts when said latch is ex-
tended outward by said spring, substan-
tially as described.

In testimony whereof I have hereunto set
my hand in the presence of two subscribing
witnesses:

EDWARD A. F. CARSON.

Witnesses:

FRANCIS M. WRIGHT,
D. B. RICHARDS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
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