A. L. BROWN.

DOOR LATCH.

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1,435,581.

Patented Nov. 14, 1922.

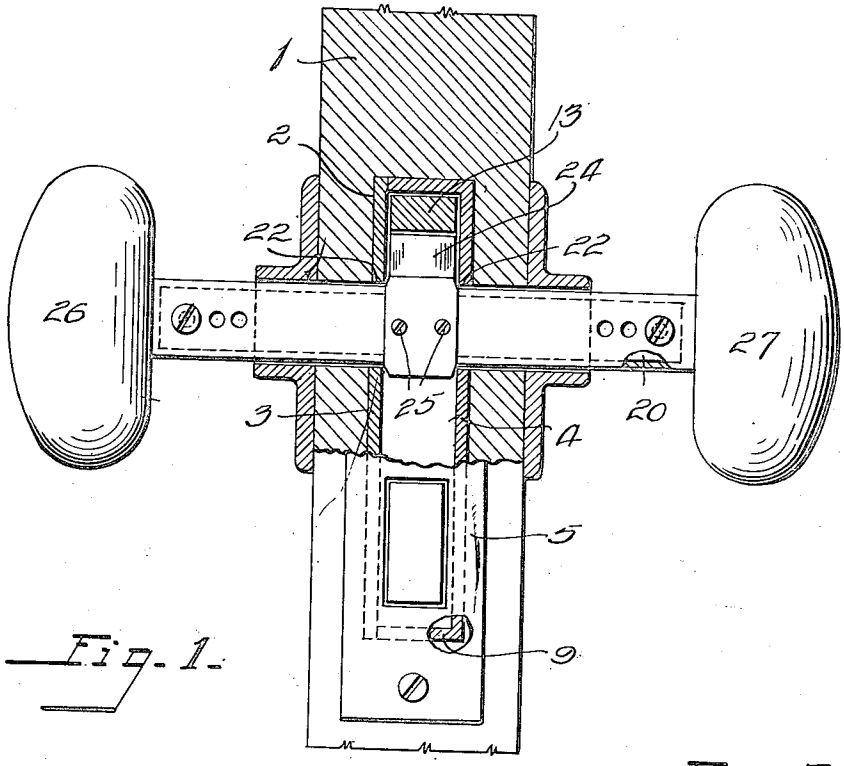


Fig. 1.

Fig. 3.

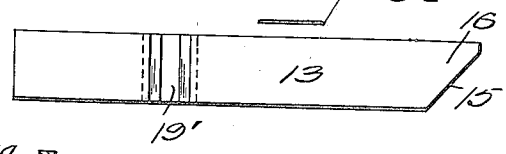
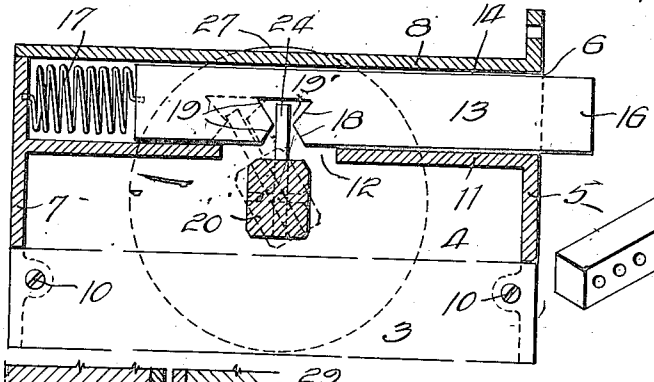


Fig. 2.



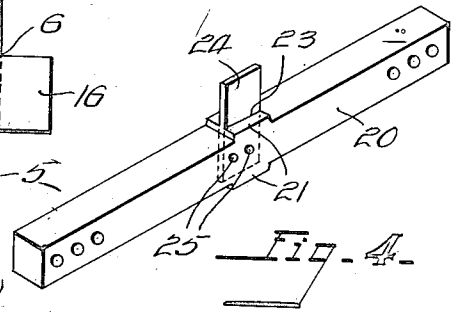


Fig. 4.

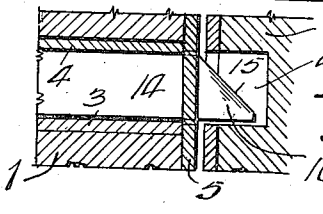


Fig. 5.

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UNITED STATES PATENT OFFICE.

ADOLPHUS LOCKETT BROWN, OF ST. LOUIS, MISSOURI.

DOOR LATCH.

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To all whom it may concern:

Be it known that I, ADOLPHUS LOCKETT BROWN, a citizen of the United States, residing in the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in Door Latches, of which the following is a specification.

My invention relates to door latches, and, has for its object, to provide a latch to overcome certain practical objections to, and defects in, the present form of door latch now in general use, and, to provide a device consisting of a minimum number of parts which will be durable, and effective for the purpose intended.

With the above and other objects in view, the invention consists in certain novel features of construction, arrangement and combination of parts hereinafter described and finally pointed out in the claim hereto appended.

Referring to the accompanying drawings forming a part of this specification wherein like characters denote similar parts throughout the several views:

Fig. 1, is an end elevation of a door provided with a latch constructed in accordance with my invention.

Fig. 2, is a side elevation of the latch, partly in sectional elevation.

Fig. 3, is a bottom plan view of the latch member.

Fig. 4, is a view in perspective of the actuating member to which the door knobs are attached.

Fig. 5, is a detail showing the end of the latch member in the receiving socket of a door frame.

Referring to the drawing, the reference character 1 designates a suitable door having a latch receiving socket 2.

In carrying out the aim of my present invention, I employ a suitable casing consisting of the side walls 3 and 4, the front wall 5 having the opening 6, the rear wall 7, the top wall 8 and the bottom wall 9. The side wall 3 is removable and is held in position by means of suitable screws 10, or like fastening devices.

The casing is provided with a horizontally disposed partition 11 arranged adjacent and below the top wall 8 and is provided with a cutaway portion, or opening 12, as shown in Fig. 2.

13 indicates a suitable latch member which is slidably mounted upon the partition 11 and in the pocket 14 formed between the partition 11 and casing top 8, as shown in Fig. 2. The forward end of the latch member 13 is beveled, as at 15, to form the socket engaging end 16.

The socket engaging end 16 of the latch member 13 passes through the front wall opening 6 and normally extends beyond the outer face of the front wall 5, as shown in Figs. 2 and 3. A suitable coiled spring 17 is disposed between the rear end of the locking member 13 and the rear wall 7 of the housing for the purpose of forcing the locking member into its normal position.

The latch member 13 is provided with a transverse socket having the V-shaped front and rear walls 18 and 19 to provide a socket which is wider at its top and bottom than at its center. The socket communicates at its lower end with the lower face of the latch member 13, as clearly shown in Fig. 2.

20 indicates an actuating member or knob shaft having an enlarged central body portion to provide the shoulders 21. The actuating member passes through the openings 22 of the side walls 3 and 4 of the casing, and, the central enlarged body portion of the knob shaft 20 is positioned between the side walls within the casing. The central enlarged body portion of the knob shaft 20 is provided with an opening 23 to receive a member 24 which is held in position by means of suitable screws 25 and which extends beyond the upper face of the knob shaft and enters the socket to serve as a keeper or push plate 24, as clearly shown in Fig. 2.

26 and 27 indicate door knobs which are suitably secured to the ends of the knob shaft 20.

28 indicates the usual socket formed in door frame 29 to receive the locking end 16 of the locking member 14.

The operation of the device is as follows:

When the latch member 13 is in its normal position, it assumes the position shown in full lines in Figs. 2 and 5. The latch member 13 normally stands in this position whether the door is open or closed, as is manifest.

Assuming that the door is closed, as illustrated in Fig. 5, and it is desired to open the door, the operator turns the knob, on either side of the door, in the direction indicated by the arrow in Fig. 2. This oper-

ation, it will be observed, moves the keeper 24 of member 20 in an arcuate path to the position shown in dotted lines in Fig. 2, thereby longitudinally moving the latch member 13 toward the coiled spring 17 compressing the same in its movement. This movement of the locking member 13, it will be observed, withdraws the locking end 16 from the socket 28 of the door frame 29, thus permitting the door to be readily opened, as is manifest. When the operator releases hold of either door knob, it is evident that the latch member 13 will be quickly pushed outward to its normal position again by means of the expanding movement of the coiled spring 17.

From the foregoing description, it is evident that I provide a door latch consisting of a minimum number of parts, thus obviating the necessity of the many small parts employed in the usual form of door latch.

The many advantages of the hereindescribed invention will readily suggest themselves to those skilled in the art to which it appertains.

I do not wish to be understood as having limited myself to the specific details of construction shown and described but desire to have it understood that the invention I have shown in the drawings, is merely illustrative, as it is manifest that various minor changes may be made in the exact construction and particular arrangement of several parts without departing from the spirit of my invention, hence I reserve the right to make any such changes, or modifications as may fairly fall within the scope of the appended claim when fairly construed.

What I claim is:

In combination with a door having a socket therein, a latch casing receivable in said socket having side walls, one of which is removable, a top wall, a front wall having an opening, a rear wall and a bottom wall, a horizontally disposed partition provided with a cutaway portion arranged adjacent the top wall, a latch member having a beveled socket engaging forward end slidably mounted upon said partition, a coiled spring disposed between the rear end of the latch member and the rear wall of the latch casing for the purpose of forcing the latch member into its normal position, a knob shaft having an enlarged central body portion having a long slotted opening and provided with lateral shoulders passing through openings in the side walls of the latch casing with the enlarged body portion positioned between the side walls of the casing, a flat push plate receivable in the longitudinal opening of the knob shaft and extending upwardly therefrom and said latch member having a transversely disposed socket formed in its lower face wider at its top and bottom than at its center for receiving the extended end of the push plate.

In testimony whereof, I have hereunto signed my name to the specification.

ADOLPHUS LOCKETT BROWN.