June 16, 1925. 1,541,992

B. E. MORIARTY

DOOR LATCH

Filed May 5, 1924

Fig. 1.

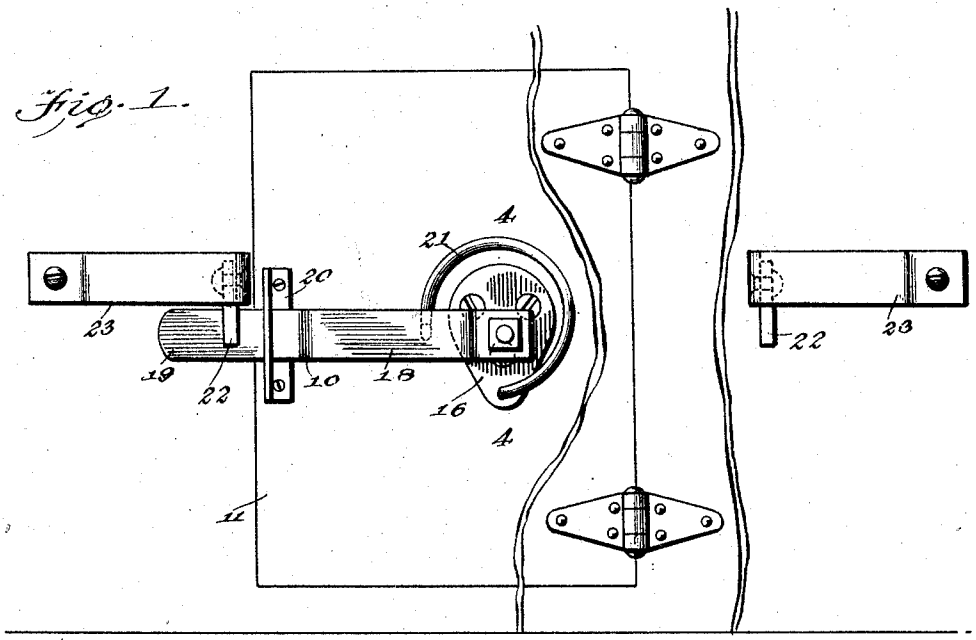



Fig. 2.

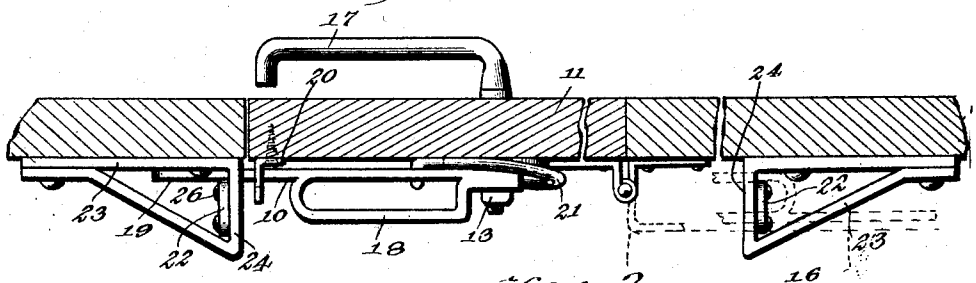



Fig. 4.

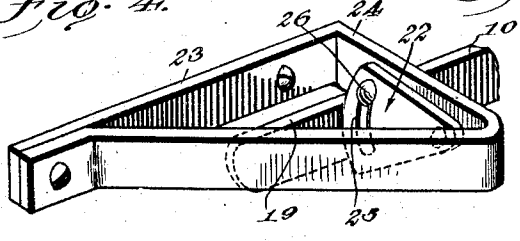
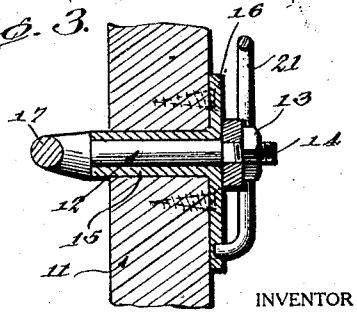



Fig. 3.




WITNESS

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# UNITED STATES PATENT OFFICE.

BENEDICT E. MORIARTY, OF HOWARD, SOUTH DAKOTA.

## DOOR LATCH.

Application filed May 5, 1924. Serial No. 711,137.

*To all whom it may concern:*

Be it known that I, BENEDICT E. MORIARTY, a citizen of the United States, and a resident of Howard, in the county of Miner and State of South Dakota, have invented certain new and useful Improvements in Door Latches, of which the following is a specification.

My present invention relates generally to door latches and more particularly to a simple effective latch for barn doors, my object being the provision of a latch including a pivoted bar and a gravity keeper, so constructed and related that the keeper may, by duplication, be utilized to engage the latch bar in both the open and closed positions of the door, so as to support the door in such positions.

My invention aims to make it necessary to construct but a single type of keeper and in this way avoid unnecessary complication and expense.

In the accompanying drawing illustrating my present invention and forming a part of this specification—

Figure 1 is a front view showing the practical application of the invention, the door being latched in closed position.

Figure 2 is a sectional top plan view, the door being shown in closed position in full lines and in open position in dotted lines.

Figure 3 is a detail perspective view of the keeper and its supporting bracket, and

Figure 4 is a detail vertical section taken on line 4—4 of Figure 1.

Referring now to these figures, the latch proposed by my invention includes a latch bar generally indicated at 10, adapted to be pivoted at one end in connection with a door such as for instance a door 11, by virtue of its connection upon a stem 12 and the clamping thereof by means of a nut 13 upon the reduced threaded outer end 14 of said stem. The stem has bearing through the sleeve portion 15 of a bearing plate 16 attached to the outer surface of the door 11, the sleeve portion of which bearing plate extends through an opening in the door. At its inner end, beyond the inner end of the bearing sleeve 15, the stem 12 may be integral with an angular inner handle 17.

The latch bar 10 has an intermediate handle portion 18 and a flat keeper engaging extension 19 at its free end beyond the handle portion 18, this extension being vertically movable in a slotted guide bracket 20 attached to the door near and parallel to the free edge of the latter, which guide bracket limits upward swinging movement of the latch bar 10 to a substantially horizontal position. The latch bar is normally held in this position by a spring 21, one end of which is anchored on the attaching plate 16 as shown in Figure 3 and the other end of which is secured to the latch bar intermediate the ends of the latter.

The keeper 22 is in the nature of a substantially triangular member pivotally connected at its smaller end within a bracket 23 intermediate the ends of the bracket arm 24 and is provided with an arcuate slot 25 through which a limiting stud 26 projects from the bracket arm 24 so that the keeper is thus permitted limited swinging movement beyond the opposite edges of the bracket arm 24, thus permitting the keeper and its supporting bracket to be mounted at relatively opposite sides of the door in the position shown in Figures 1 and 2 in order to be effectively engaged by the latch arm when the door is in fully open and closed positions. The latch arm extension 19 moves beneath the keeper bracket 23 when the door is closed as in Figure 1 and in full lines in Figure 2 while the handle portion 18 of the latch bar moves beneath the other keeper bracket 23 in the open position of the door as indicated in dotted lines in Figure 2, and it is thus obvious that when the door is either opened or closed the respective portions of the latch member press the keepers 22 upwardly until they have shifted inwardly past the keepers when the latter are free to drop by gravity and thus securely hold the door until the latch bar is swung downwardly either by depressing its outer handle 18 or its inner handle 17, sufficient to shift the latch bar below the keeper.

It is obvious from the foregoing the same keeper may be utilized at opposite sides of the swinging door, one keeper to hold the door in closed position and the other keeper to hold the door in open position, both keepers cooperating with the latch bar in substantially the same manner in their effective positions.

It is thus obvious that but one type of keeper suffices to engage the latch bar for holding the door in both the open and closed positions and that my improved construc-

tion, arrangement and cooperation of parts not only brings about this advantage in economy, but also permits of easy manipulation of the latch bar to release the same from the keeper in either position of the door and also permits the door to be readily released from both the inner and outer sides thereof when in closed position.

My invention presents a simple, economical door latch singularly free of delicate parts likely to get out of order, which may be easily applied and readily maintained in properly operating condition.

I claim:

1. In a swinging door, a stem journaled through the door, having a handle at its inner end, a latch bar secured at one end upon the outer end of said stem, keeper brackets at opposite sides of the door and of similar construction, gravity keepers swingable in said brackets and similarly cooperating with the latch bar to hold the door in open and closed positions, and a spring engaging the latch bar and controlling movement thereof and also controlling movement of the stem and the inner handle.

2. A latch bar pivotally mounted at one end to swing in a vertical plane, a spring engaging the latch bar to shift the same in one direction, a guide bracket in which the latch bar is shiftable having means to limit movement of the latch bar under actuation of the spring, a gravity keeper, and a bracket in which the keeper is mounted having an outstanding arm to which the keeper is pivoted for swinging movement beyond opposite edges of the bracket arm.

3. A pivoted vertically swingable and spring controlled latch bar, a gravity keeper, and a bracket in which the keeper is mounted having an outstanding arm to which the keeper is pivoted, said keeper and said bracket arm having cooperating means permitting limited movement of the keeper beyond opposite edges of the arm whereby the keeper and its bracket may be mounted in reverse positions.

BENEDICT E. MORIARTY.