

J. DIEHL.
DOOR LATCH.
APPLICATION FILED SEPT. 26, 1912.

1,064,891.

Patented June 17, 1913.

Fig. 1.

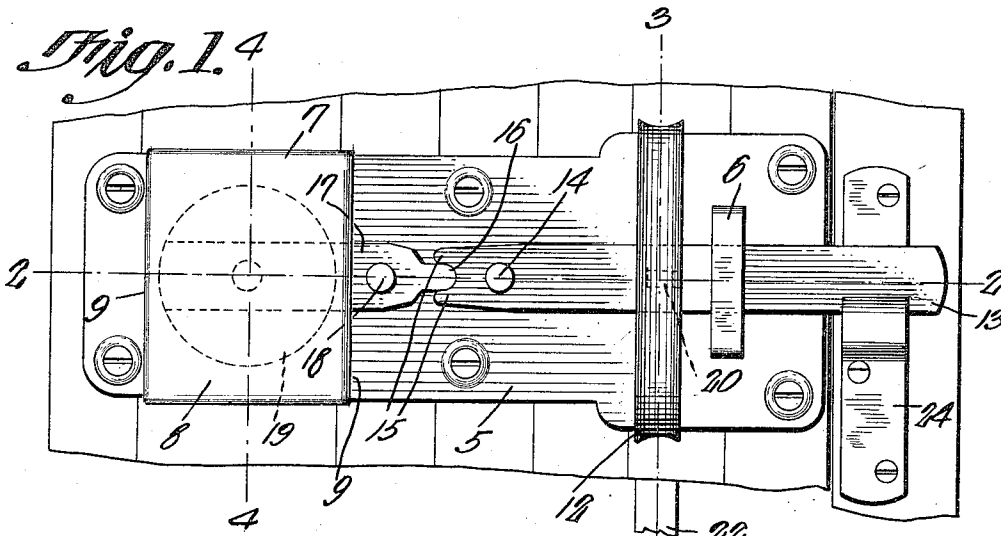


Fig. 2.

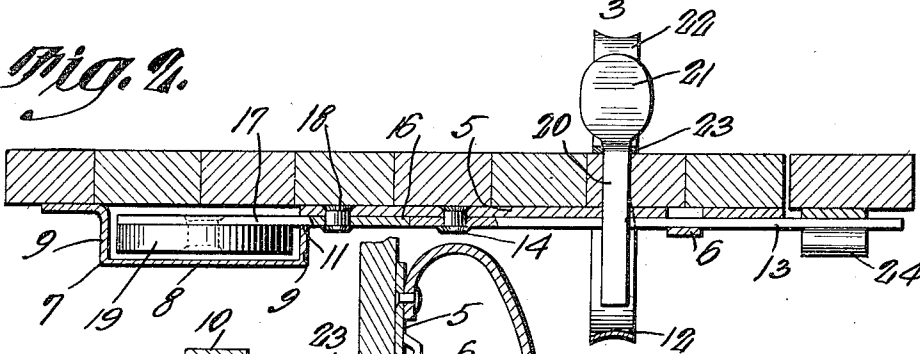


Fig. 4.

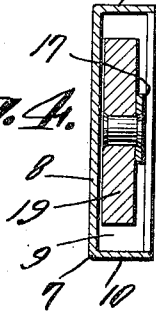
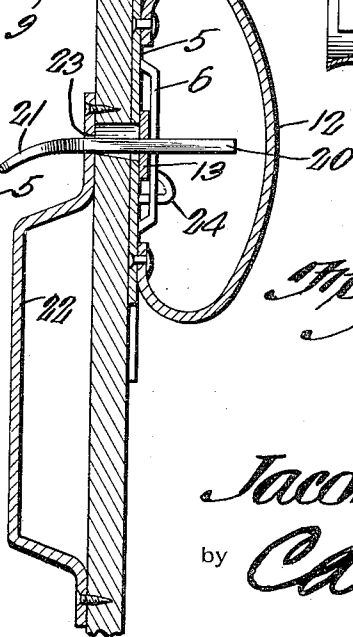


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

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DOOR-LATCH.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JACOB DIEHL, a citizen of the United States, residing at Sheboygan, in the county of Sheboygan and State of Wisconsin, have invented a new and useful Door-Latch, of which the following is a specification.

The present invention appertains to door latches, and aims primarily to provide a novel and improved gravity or springless latch.

This invention has for its object to provide a gravity latch which shall not be affected by the weather or changes in temperature, which shall be operable under all conditions to which it is subjected, and which may be reversed for use as either a right-hand or left-hand latch.

It is also the object of the present invention to provide a latch of the character indicated which shall be extremely simple, compact, durable and inexpensive in construction, as well as being convenient, serviceable and efficient in its use.

To the above and other ends, the present invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

The preferred embodiment of the invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is an elevation of the device as applied to a door. Figs. 2, 3 and 4 are sectional views taken on the lines 2—2, 3—3 and 4—4, respectively, of Fig. 1.

Referring specifically to the drawings, the present device embodies a base plate 5, which is preferably elongated or rectangular and stamped or otherwise fashioned from sheet metal or other suitable material. At its outer end, the base plate 5 has a guard 6 struck outwardly therefrom, and at its inner end, the said plate is provided with a housing or casing 7, which housing is formed by striking the plate outwardly by means of suitable dies or the like. The housing 7 comprises a side 8, the ends 9 and the top and bottom 10—10, the top and bottom being flaps, bent from the side 8, and the rear of

the housing being open. The inner end 9 55 of the housing is provided with a vertical slot 11 adjacent the body of the base plate 5.

A suitable hand hold or grip 12 is secured to the base plate 5 adjacent the guard 6, said hand hold being preferably bent from a 60 strip of sheet metal, concaved transversely, and having its ends bent back and secured by means of rivets or otherwise to the upper and lower edges of the base plate.

A lever 13 passes in rear of the hand hold 65 12 and through the guide 6, the outer end of the lever projecting beyond the base plate 5 to serve as the latch proper, and the said lever being fulcrumed into the base plate by means of a rivet or other pivot 14. The 70 lever 13 is fulcrumed adjacent its inner end, and the inner or short arm of the lever 13 is provided with teeth 15 with which a tooth 16 of lever 17 meshes. The lever 17 is fulcrumed into the base plate by means of a 75 rivet or other pivot 18 adjacent its outer end and adjacent the outer end of the housing 7, the free or inner arm of the lever 17 passing through the slot 11 and entering the housing. Thus, the levers 13 and 17 are 80 fulcrumed to the base plate at points adjacent their adjoining ends, the free arm of the lever 13 working or oscillating in the guard 6 and the free arm of the lever 17 working or oscillating within the housing 7. 85 The intermeshing teeth 15 and 16 of the two levers operatively connect the two levers so that they oscillate simultaneously in reverse directions, and a suitable weight 19 is secured to the free arm of the lever 17 within 90 the housing so as to normally depress the latch or the free arm of the lever 13. The levers are preferably fashioned from suitable bars or strips of metal. It will therefore be manifest, that the base plate may be 95 reversed so that the latch projects either to the right or to the left, the weight 19 serving to depress the latch in either case.

The base plate 5 is secured to one face of the door by means of screws or other securing members so that the latch projects beyond the free edge of the door, the base plate being preferably secured to the outer face or side of the door in practice. A latch 100 lift 20 is adapted to be inserted through 105 suitable openings in the door and the base plate so as to engage through a suitable opening provided in the lever 13 at a point

outwardly of the fulcrum of the said lever, the latch lift being inserted through the door from the inside so that the outer end projects beyond the latch 13. The hand
5 hold 12 is secured to the base plate at such a position as to pass over the outer end of the latch lift 20 in order to protect the latch lift against casual displacement by animals nosing or rubbing up against the same, and
10 preventing the accidental releasing of the latch. The other or inner end of the latch lift is provided with a thumb piece 21.

A suitable hand hold or grip 22 is designed to be secured to the inner face of the
15 door, the upper end of the said hand hold being provided with an aperture or opening 23 through which the latch lift 20 is fulcrumed. Thus, it will be apparent that the latch lift may be readily inserted through
20 the upper end of the hand hold, 22, the door, the base plate and the latch so as to project within the hand hold 12, and that the latch may be readily raised by depressing the thumb piece 21 or raising the outer or forward end of the latch lift at the respective
25 sides of the door.

Any suitable keeper or catch 24 is secured to the door jamb for the engagement of the latch, as is well understood and old in the
30 art, so that when the door is closed, the latch will be raised and then dropped into engagement with the keeper to hold the door closed, the weight 19 serving to depress the latch. The latch may be readily disengaged
35 from the keeper by swinging the latch lift 20 from either side of the door, as will be apparent from the foregoing description.

This latch is applicable for various uses, and it will be apparent that the objects
40 aimed at have been carried out in a satisfactory manner, the advantages of the device being evident and the present invention providing a desirable latch for the purposes for which it is designed.

Having thus described the invention, what 45 is claimed as new is:—

1. A device of the character described embodying a pair of levers having their adjoining ends operatively connected, the free
50 arm of one lever serving as a latch and the free arm of the other lever being weighted to depress the latch.

2. A device of the character described embodying a pair of levers having intermeshing members at their adjoining ends, the
55 free arm of one lever serving as a latch and the free arm of the other lever being weighted to depress the latch.

3. A device of the character described embodying a base plate having a housing at its
60 inner end, a pair of levers fulcrumed on the base plate and having intermeshing members at the adjoining ends, the free arm of one lever projecting beyond the plate to form a latch and the free arm of the other
65 lever projecting into the housing, and a weight secured to the free arm of the latter lever within the housing.

4. A device of the character described embodying a base plate designed to be secured
70 to one face of a door, a member designed to be secured to the other face of the door, a pair of levers fulcrumed on the said plate having their adjoining ends operatively connected, the free end of one lever projecting
75 beyond the plate to form a latch and the free end of the other lever being weighted to depress the latch, and a latch lift designed to be fulcrumed through the said member and engaged through an opening in the
80 latch.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JACOB DIEHL.

Witnesses:

EDWARD A. LUHMANN,
WILLIAM MARKWARDT.