

W. G. BEATTY.
GATE LATCH.
APPLICATION FILED JAN. 9, 1912.

1,032,371.

Patented July 16, 1912.
2 SHEETS—SHEET 1.

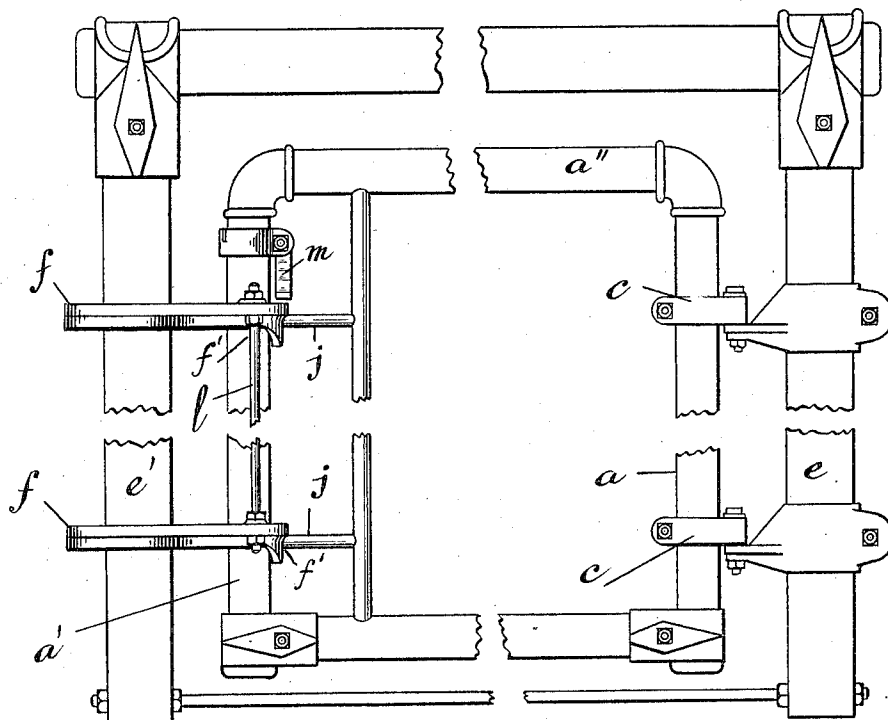


Fig. 1.

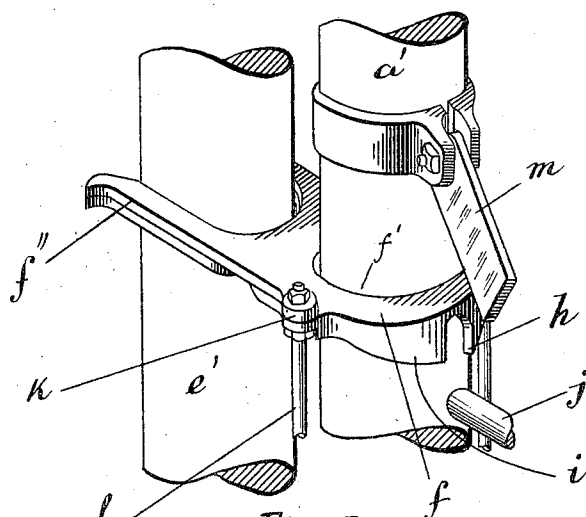


Fig. 3.

Witnesses.
R. H. Chewright
Edward Bernateiny

Inventor.
William G. Beatty
by Chas. H. Rich
Attorney

W. G. BEATTY.
GATE LATCH.
APPLICATION FILED JAN. 9, 1912.

1,032,371.

Patented July 16, 1912.

2 SHEETS—SHEET 2.

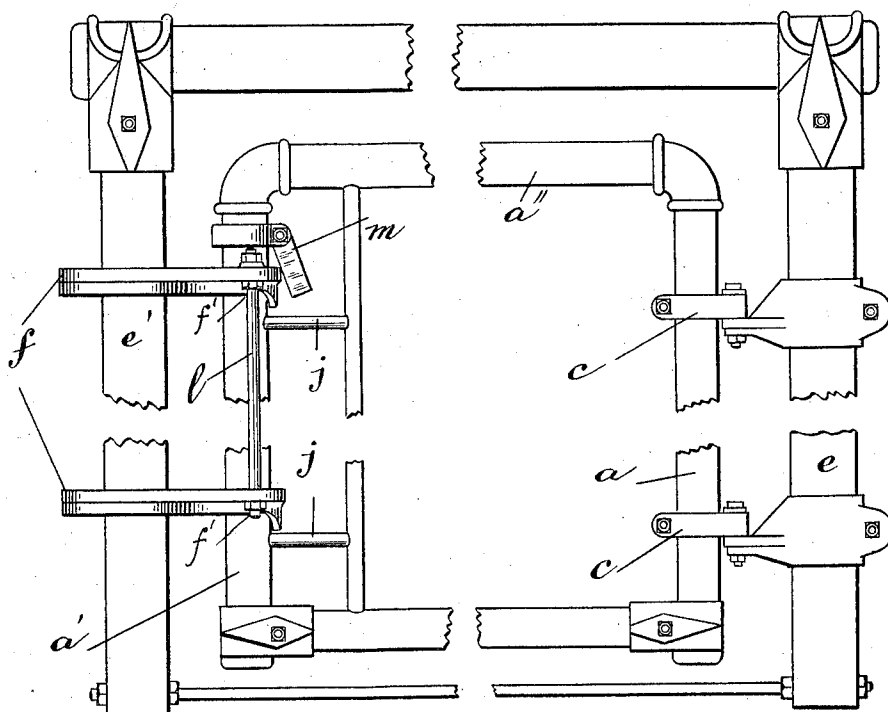


Fig. 2.

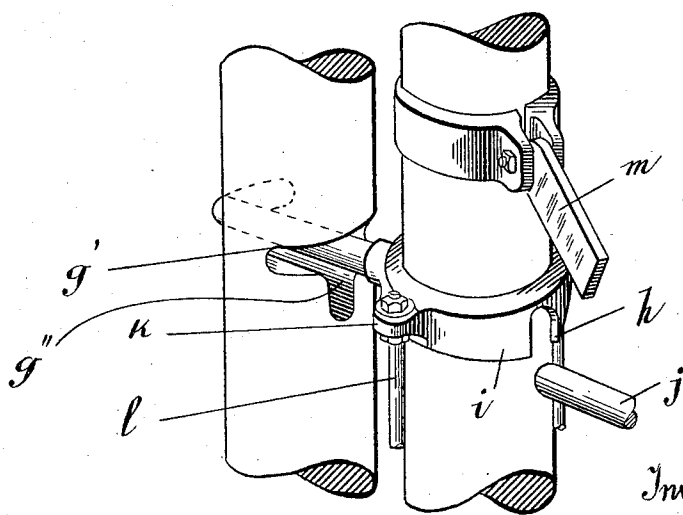


Fig. 4. William G. Beatty
by Charles H. Riches
attorney.

Witnesses.
R. H. Chas. Wright
Edward Bernstein

UNITED STATES PATENT OFFICE.

WILLIAM GEORGE BEATTY, OF FERGUS, ONTARIO, CANADA.

GATE-LATCH.

1,032,371.

Specification of Letters Patent.

Patented July 16, 1912.

Application filed January 9, 1912. Serial No. 670,297.

To all whom it may concern:

Be it known that I, WILLIAM GEORGE BEATTY, of the town of Fergus, in the county of Wellington and Province of Ontario, Dominion of Canada, have invented certain new and useful Improvements in Gate-Latches; and I hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to a suitable latch for all kinds of single and double acting doors, gates and the like, and the object of my invention is to so arrange this latch, that it will securely hold the door or gate in its closed position, that it can be easily released manually, and, that it cannot be released inadvertently. In carrying out this object, I use a latch member, the hub of which is rotatably and slidably mounted on a guiding element to move into and out of its locked position, and I hold this latch member in its locked position by means of a detent fixedly attached to the guiding element, and I provide a safety latch, to automatically engage the latch member, as it moves to its locked position and prevent its movement inadvertently therefrom until manually released.

For an understanding of my invention, reference is to be had to the following description and to the accompanying drawings, in which:

Figure 1, is an elevation of a gate, for a stall or pen, and its gate posts, showing the latch member in its locked position. Fig. 2, is a similar view to Fig. 1, with the latch member in its unlocked position. Fig. 3, is a perspective view of the latch member and its detent, and Fig. 4, is a similar view to Fig. 3, of a modification of the latch member and keeper shown in the preceding figures.

Like characters of reference refer to like parts throughout the specification and drawings.

The gate shown in Figs. 1 and 2, consisting of two uprights or standards a , a' connected together by horizontal bars a'' , is provided with hinges c by which it swings from the gate post e , and is also provided with two latch members f by which it is locked in its closed position. Each of these latch members comprises a hub f' rotatably and slidably mounted on the standard a' , and forks f'' projecting from the hub f' to engage on opposite sides of the gate post e' , the gate post in this case, constituting the keeper, and cooperating with the latch mem-

bers in holding the gate in its closed position. Each of the hubs f' is formed with a vertical slot h in line with the center of the forks f'' , and is provided with two inclined surfaces i , extending from the vertical slot h forwardly in the direction of the forks f'' , which respectively engage with the detent j , located below the latch hub, as the gate swings to opposite sides of the gate post e' . The purpose of the inclined surfaces i is to prevent the latch members returning by gravity to their closed position with relation to the detent, when the gate is in its open position. The ends of the forks f'' are slightly flared so as to readily clear the gate post e' as the gate opens and closes.

Each of the hubs f' is provided with lugs h for the connecting bolts l by which the latch members are coupled together, so as to move unitedly on the standard a' .

During the opening of the gate, the forks of each latch member, by engaging with the gate post e' , effect the rotation of the hub on the standard a' until the ends of the forks are so positioned with relation to the gate post e' that the continued swinging of the gate to its open position will withdraw the forks from engagement therewith. In this position, one of the inclined surfaces i engages with the detent j , and its engagement therewith prevents the latch member inadvertently returning to its normal position, but permits of the latch member when the gate closes, coming back to its initial position as the forks again embrace the gate post e' .

When the gate is in its closed position, the forks embrace the gate post e' , and the latch members f are then so positioned that the slots h register with the detents j . Owing to the sliding connection between the latch members and the standards a' , the former descends by gravity until arrested by the engagement of the detents j with the upper ends of the slots h . This engagement of the detents in the slotted hubs, forms a positive lock to prevent the rotation of the latch members on the standard. To prevent the inadvertent lifting of the latch members to clear the detents, I provide a safety latch m , pivoted to the standard a' , so as to drop by gravity into a position immediately above the top surface of the adjacent latch member to arrest or limit the upward movement of the latch members until the safety latch is manually displaced

from its operative position, thus preventing the latch members rising to a position where the slotted hubs will clear the detents.

In the closed position of the gate, the 5 slots by registering with the detents, permit the latch members to descend by gravity upon the standard a' until the further downward movement of the latch members is arrested by the engagement of the detents with 10 the upper ends of the slots. In this position, the latch members are prevented from rotating upon the standard, and through the engagement of the forked ends of the latch members with the gate post e' , the gate is securely held in its closed position, and in this 15 position, the safety latch member assumes by gravity, a position where it will arrest the upward movement of the latch members.

The latch members and their related parts 20 are of sufficient strength to resist any ordinary animal pressure, and the formation of the hubs and the arrangement of the detents and safety latches, prevent the latch members being ordinarily released except by 25 manual means.

When the gate is in its open position, the hub of the adjacent latch member enters between the safety latch m and the standard a' and holds the safety latch in an in- 30 operative position as shown in Fig. 2, so that, as the gate again swings to its closed position, the latch members can rotate and move vertically on the standard when the forks come into engagement with the gate 35 post e' , the rotation of the latch members being continued until the slots h register with the detents, the latch members then descending by gravity until arrested by the engagement of the detents with the upper 40 ends of the slots. The safety lock then swings back by gravity into its operative position and prevents the latch members being again inadvertently released. I can use either one latch member to effect the 45 locking of the gate in its closed position, or, if the gate is required to withstand a

heavy pressure, I can use a multiple number of latch members and unite them by connecting rods.

In Fig. 4, instead of using the forks at 50 the end of the latch members, I can form the latches with a straight bar g' to enter a slotted keeper g'' on the gate post.

Instead of fitting the latch members, detents and locking members to the standard 55 of the gate, I may fit them to the gate post e' or the part corresponding thereto and arrange them to engage with the standard of the gate or a keeper thereon.

Having thus fully described the nature 60 of my invention, what I claim as new and desire to secure by Letters Patent, is:

1. A latch comprising a guiding element, a latch member, means for holding the latch member in its locked position, the latch 65 member being slidably and rotatably mounted on the guiding element to move into and out of operative relation with the locking means, and a safety latch to normally hold the latch member in locked relation with the 70 locking means.

2. A latch comprising a guiding element and a detent, in combination with a latch member slidably and rotatably mounted on the guiding element to engage in its locking 75 position with the detent, and means to normally prevent the movement of the latch member from its locking engagement with the detent.

3. A latch comprising a guiding element 80 and a detent, a latch member comprising a hub slidably and rotatably mounted on the guiding element and slotted to engage with the detent when the latch member is in its locking position, and means for normally 85 holding the latch member in locking engagement with the detent.

Fergus, December 12th, 1911.

WILLIAM GEORGE BEATTY.

Signed in the presence of—

A. C. DEACON,

R. D. KERR.