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J. MASON.

GATE LATCH.

APPLICATION FILED OCT. 25, 1907.

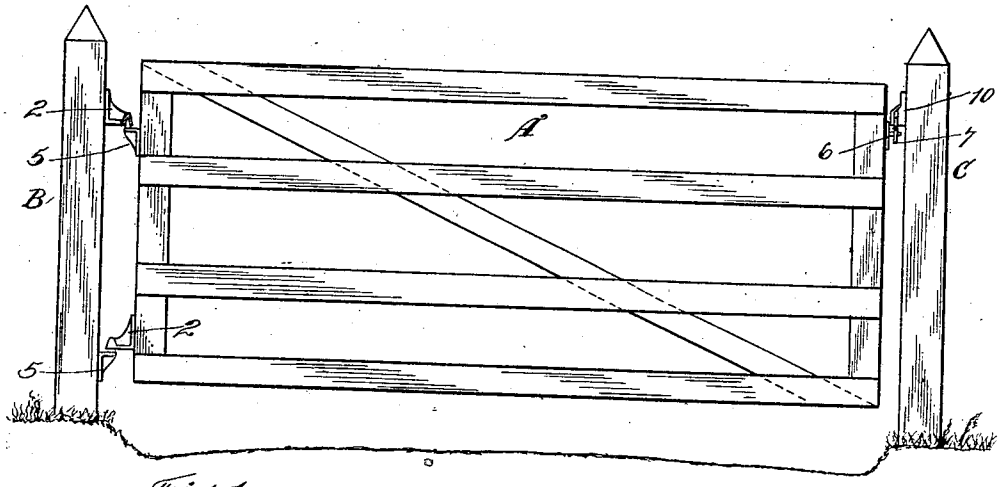


Fig. 1.

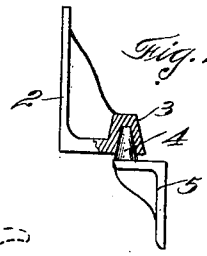


Fig. 2.

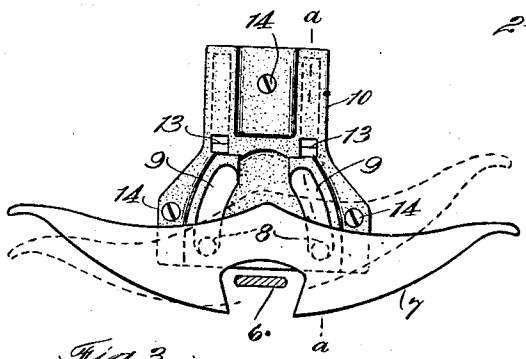


Fig. 3.

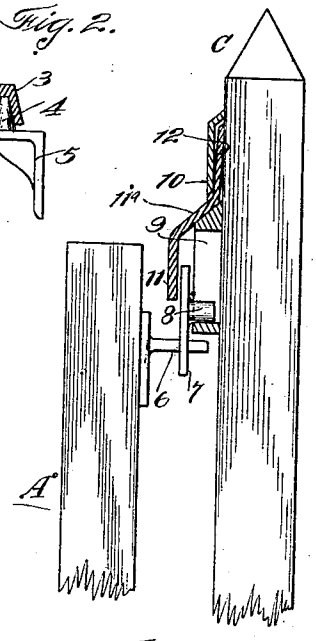


Fig. 4.

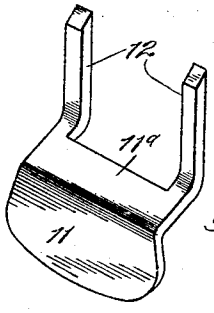


Fig. 5.

Witnesses:

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GATE-LATCH.

No. 898,247. Specification of Letters Patent. Patented Sept. 8, 1908.

Application filed October 25, 1907. Serial No. 399,147.

To all whom it may concern:

Be it known that I, JOHN MASON, a citizen of the United States, residing at Sebastopol, in the county of Sonoma and State of California, have invented new and useful Improvements in Gate-Latches, of which the following is a specification.

My invention relates to an improvement which is especially adapted for use with hand and other gates.

It consists in the combination of parts, and in details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a side elevation showing my fixtures attached. Fig. 2 is a detached view in partial section of one of the hinges. Fig. 3 is an enlarged detached front view of the latching mechanism. Fig. 4 is an enlarged view showing a section of the latching mechanism upon a fixed post and a part of the swinging post and engaging portion of the latch. Fig. 5 is an enlarged separate view of the catch holding device.

It is the object of my invention to provide an automatically closing and easily opened gate, and especially to so construct the metal fixtures therefor that they can be easily and cheaply produced and applied.

A represents a gate, B the hinge post fixed in the ground, and C the latch post. The gate is adapted to swing between these posts.

The hinges consist of metal plates or brackets 2, here shown as having a vertical side and a base portion extending at right angles therewith. At the outer end of this base portion is cast the conical socket 3 which is adapted to fit upon a similarly shaped pin 4 which is cast upon the upper end of a bracket 5. The bracket 5 is constructed similarly to the bracket 2, with a vertical and right angle portion. The bracket 2 has a longer base than the brackets 5. All the brackets are cast or formed with screw holes in the vertical plates, by which they may be readily secured to the posts. One of the brackets 2 is secured to the top of the post B, and the corresponding bracket 5 is secured to the upper part of the gate, so that the cone-shaped socket 3 of the bracket 2 will rest upon the cone-shaped pin 4 of the bracket 5. At the bottom of the gate is fixed another of the brackets 2 projecting towards the post B, and upon the post B is fixed a bracket 5, so that the cone of the bracket 5 enters the cup 3 of the bracket 2. It will be seen from this arrangement that the pivot point at the top of the gate is nearer to the gate than the pivot point at the bottom, and the result of this will be that when the gate is opened it will turn about a line diagonal to the vertical sides of the post and gate. The gate will thus, when opened, also swing upwardly, and will thus be in position so that when released it will close by gravitation.

In the arrangement heretofore described, it will be seen that the upper socket 3 being inverted over the pin 4 which is carried by the gate, and the lower socket carried by the gate being inverted over the pin 4 which is carried upon the fixed post B, the gate cannot be lifted from its hinges, and is thus locked in place. By inverting the upper socket of the upper brackets, attaching the pin bracket to the post, and the socket bracket to the gate, the parts will then be in position so that the gate can be readily removed from its hinges.

Upon the post at the swinging end of the gate is fixed a plate having a projecting latch 6, and this is adapted to engage with the segmental notched catch 7. This catch has pins 8 projecting rearwardly from it, and these pins are movable in curved slots 9 formed in a plate 10 which is fixed to the permanent post C. These slots are curved about a center intermediate between them, said center being so located that either end of the catch may be freely raised while the pin 8 upon the other side rests in the bottom of its slot. Thus each pin forms the automatic fulcrum about which the opposite end of the catch is lifted when the gate swings to the closed position and the latch strikes the curved lower edge of the catch. As soon as the latch has passed into the central slot in the catch, the latter will immediately drop so as to rest upon both pins, so that both pins rest in the bottom of their slots, and the divergent sides of the channel which engages the latch, will prevent the catch from being lifted by any movement of the latch within this channel. The latch may be lifted by hand, or other means, when it is desired to open the gate. In order to secure this catch, I have shown a plate 11 having arms or extensions 12, and the plate is bent so as to extend outwardly from these arms, as shown at 11^a. The arms 12 are passed through slots or openings 13 made in the face of the upper part of the plate 10, and extend upwardly in channels formed in the rear and upper portion of the

plate 10. When these parts are assembled the arms 12 extend upwardly in the channels, as plainly shown in Figs. 3 and 4, and the outward bend 11^a is of such width that the lower front portion of the plate 11 extends down over the catch 7, thus preventing the pins 8 from being withdrawn from the slots in which they move, but at the same time allowing the freest possible movement of the catch, without the employment of any fixed pivot. In order to hold this guard-plate 11 in place, the upper ends of the arms 12 project a little from the channels in which they lie in the plate 10. This plate 10 being attached by screws, as shown at 14, it will be seen that when these screws have been driven into the post, they will press the plate 10 closely against the post, and this will cause the upper ends of the arms 12 to be pressed into their channels, thus locking these arms and the guard-plate 11 firmly to the rest of the structure.

This construction provides a simple, inexpensive device which is easily cast, without particular finish, and no moving part is liable to become rusted or clogged by exposure to the weather, while all parts are firmly locked in place.

It will be understood that the fixtures herein described are equally applicable to gates made of iron or of pipe, by shaping the fixtures to fit the parts to which they are applied.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. In a gate, the combination with a latch, of a convexed plate having a convergent notch in the lower surface to receive the latch, a plate fixed to the gate post, having segmental slots contiguous to its opposite edges, pins projecting from the convexed plate and movable loosely in said slots, and a guard plate carried by said slotted plate, having one portion to project in front of the catch and having another portion to extend up in rear of the slotted plate.

2. The combination with a latch, of a catch having a convexed lower surface and a convergent notch in the bottom and center to engage the latch, a plate having segmental slots at opposite edges, pins projecting from the catch and movable loosely within said slots, and a guard-plate extending downwardly outside of the catch, said guard-plate being bent, having one portion to extend down over the front of the catch and having another portion extending to the rear of the slotted plate and upwardly along the same, and secured to said plate.

3. In a latching device for gates, a latch piece carried upon the outer swinging gate-post, a plate having segmental slots near its edges, means for securing said plate to the fixed post near which the gate swings, said plate having vertical channels made in the rear face and openings through the plate from the bottom of said channels, a catch having a notch in the lower part with which the latch is engageable, pins extending into the curved slots of the fixed plate, about which pins the catch is tiltable, and a guard-plate having the lower part extending in front of the catch, thence bent inwardly and having arms extending through the openings in the fixed plate and upwardly within the channels thereof.

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

JOHN MASON.

Witnesses:
J. A. WILLIAMS,
W. J. LYMAN.