(No Model.)

F. A. RAENHART.

GATE LATCH.

No. 602,520. Patented Apr. 19, 1898.

Fig. 1.

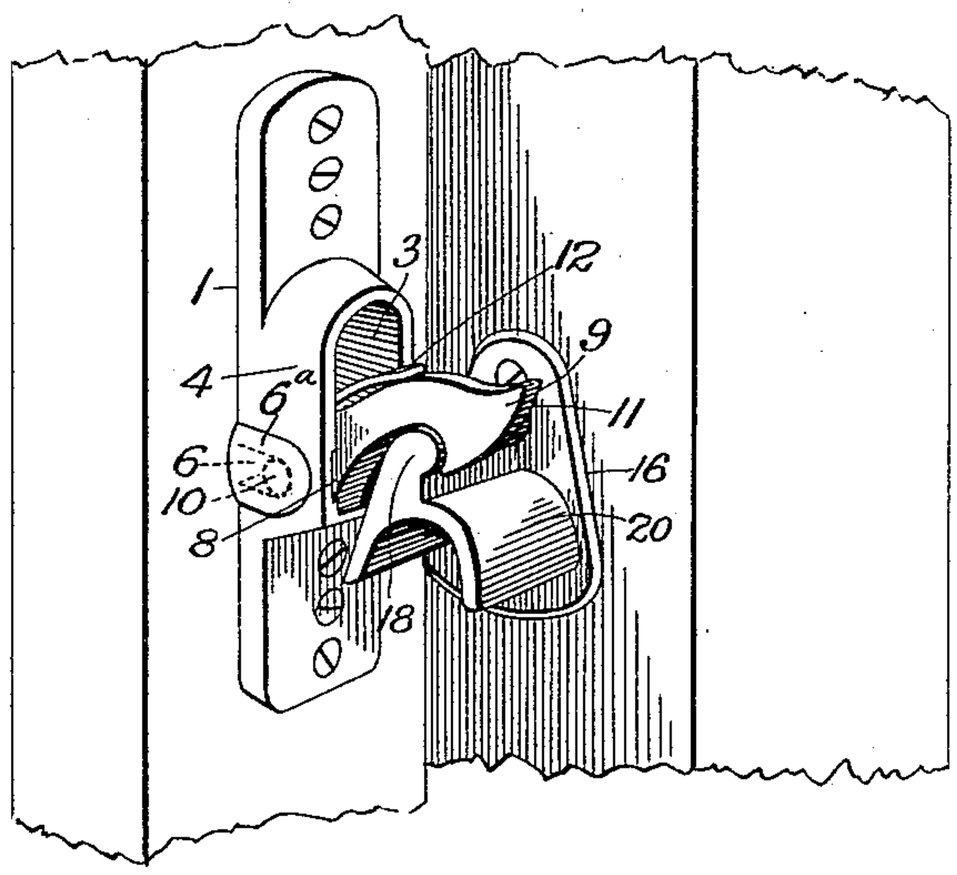


Fig. 4.

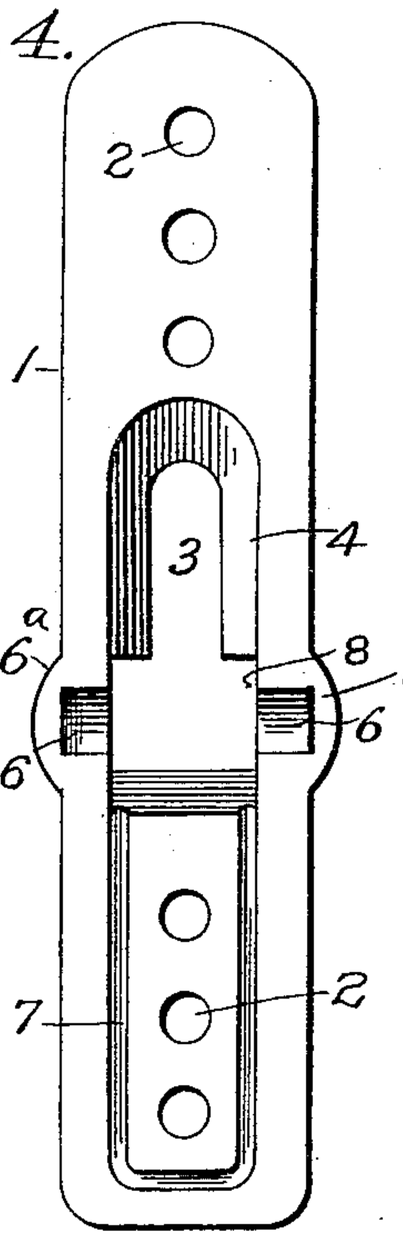


Fig. 3.

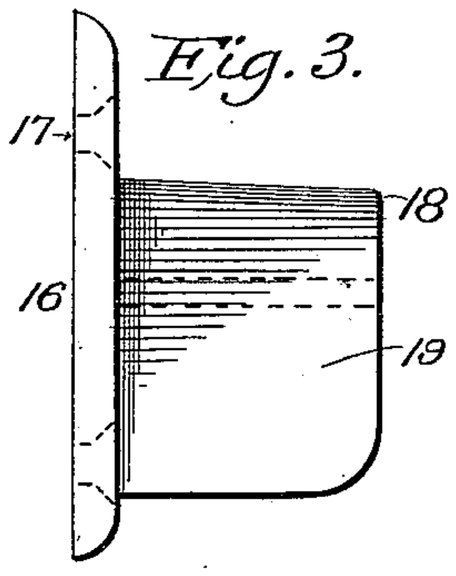


Fig. 2.

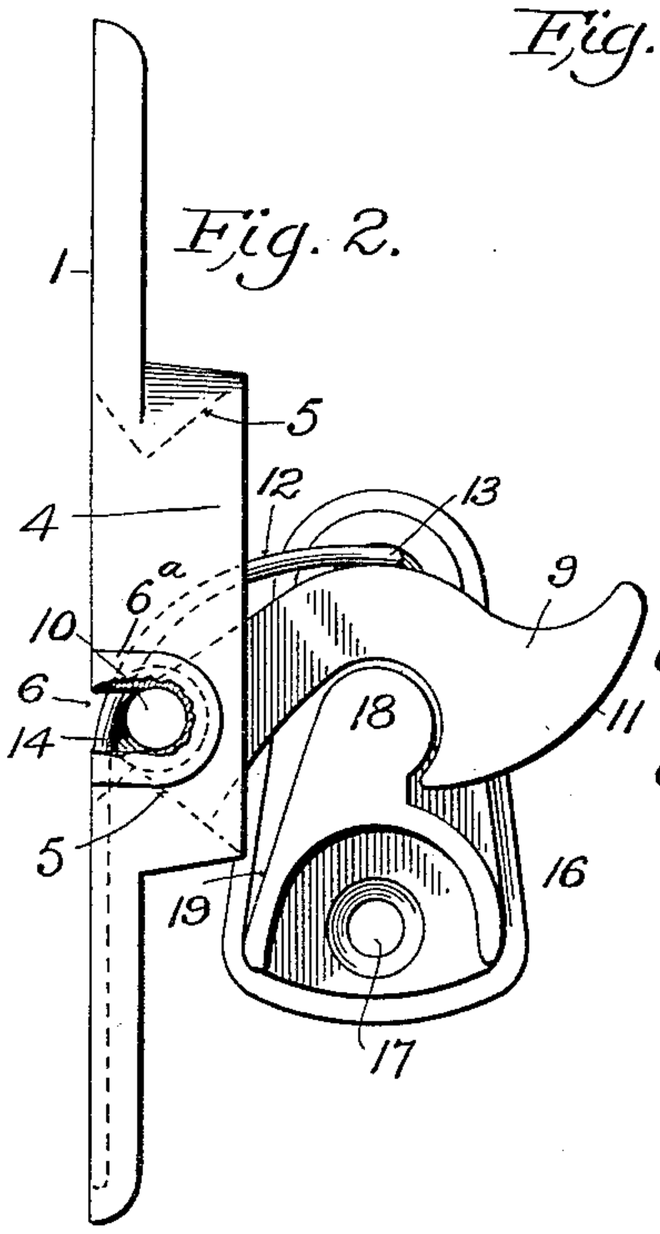
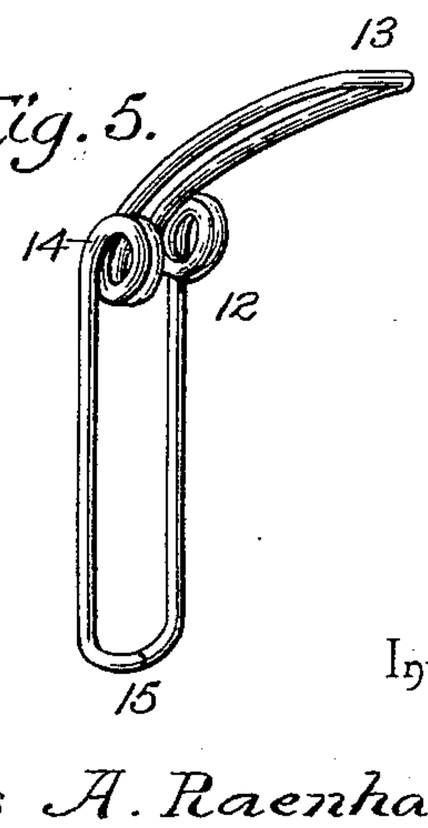


Fig. 5.



Witnesses
James F. Duhamel.
Edwin Cruse.

Inventor
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By his Attorneys,
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UNITED STATES PATENT OFFICE.

FRANCIS AUGUSTUS RAENHART, OF HELENA, ARKANSAS.

GATE-LATCH.

SPECIFICATION forming part of Letters Patent No. 602,520, dated April 19, 1898.

Application filed April 23, 1897. Serial No. 633,489. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS AUGUSTUS RAENHART, a citizen of the United States, residing at Helena, in the county of Phillips and State of Arkansas, have invented a new and useful Gate-Latch, of which the following is a specification.

This invention relates to gate-latches, its object being to provide a simple, cheap, and efficient device of this character which will be positive in its action and cannot be readily disengaged by the shaking of the gate by cattle or other animals.

With these and other objects in view the invention consists in the several details of construction and combination of parts, as will be hereinafter fully described, and particularly pointed out in the claim.

In the drawings, Figure 1 is a perspective view showing my improved latch applied to a gate. Fig. 2 is a side view of the latch, latch-plate, and catch in locked position. Fig. 3 is a rear view of the catch. Fig. 4 is a rear view of the latch-plate. Fig. 5 is a perspective view of the spring detached.

Similar reference-numerals indicate similar parts in the several figures.

1 indicates the latch-plate, which is provided with suitable holes 2 for the passage of screws or other suitable fastening devices, by means of which the plate is attached to the gate. This plate is provided with an elongated opening 3 in its middle portion, around which is formed an outwardly-extending flange 4, the inner walls 5 of which flare outwardly. Slots 6 are formed in the plate at opposite sides of the opening 3, near its lower end, and these slots extend partially into the flange 4. Bosses 6^a are cast on the plate 1 on each edge opposite these slots to strengthen the plate. In the lower portion of the plate, at its rear side, a U-shaped groove 7 is formed, which communicates at each side with recesses 8, formed at each side of the opening 3, and into which recesses the slots open.

The latch is indicated by 9 and is provided at the rear corner of its inner end with pivot-pins 10, which engage in the slots 6 of the latch-plate. The hook end of the latch is provided with a rounded front face 11 for a purpose to be hereinafter referred to.

12 indicates a spring formed from a single piece of wire bent midway its length to form a loop 13 and having coils 14 formed in each arm and the ends of the arms bent inwardly toward each other, as indicated at 15. The coils 14 are about midway the length of the spring and are fitted over the pivot-pins 10 and project into the recesses 8 in the latch-plate. The looped end 13 of the spring is bent outwardly at an angle to bear upon the upper face of the latch 9, and the straight portion of the spring, below the coils 14, is seated in the groove 7, formed in the rear face of the plate 1. It will be seen, therefore, that when the plate 1 is attached to the gate the spring will be securely held in place in the groove 7, and the pivot-pins 10 of the latch will be held in the slots 6 by means of the coils 14 and will have no movement therein except an axial movement. The spring 12 will also tend to hold the outer end of the latch downward; but this downward tendency will be restricted by the engagement of the inner end of the latch with the outwardly-flaring wall 5 of the flange 4.

16 indicates the catch-plate, provided with openings 17 for the passage of screws or similar fastening devices. The catch is indicated by 18 and projects laterally from the plate 16. On one side it is provided with an elongated inclined straight face 19, with which the rounded face 11 of the latch 9 is adapted to engage in order that the latch may be lifted against the force of the spring to enable it to hook over the catch 18. On the other side of the catch a curved guard-plate 20 is provided, which is designed to prevent the catch from injuring the clothing of persons who may be passing through the gateway. The catches will be made right and left handed in order that they may be used on either of the gate-posts.

From the foregoing description it will be seen that I have provided a simple and efficient gate-latch which will be positive in its action and which cannot readily get out of repair and which will operate even should the gate become sagged to a considerable extent, for, by having the elongated inclined plate 19 on the side of the catch with which the hook first engages, if the curved face of the latch strikes the plate at any point the momentum of the gate will carry the latch up

and cause it to hook over the catch. It is also obvious that the spring will quickly cause the latch to engage with the catch before the gate has a chance to rebound.

It will be understood that changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what I claim is—

In a gate-latch, the combination of a latch-plate having a flanged opening in its middle portion, recesses at each side of the said opening, spaced parallel grooves in the rear face of the plate communicating at their upper end with the said recesses, slots formed in said plate at each side of said opening to form continuations of said recesses and extending into the flange, a latch projecting through said opening and having pivot-pins seated in said slots, a wire spring having substantially parallel sides with coils therein to fit over the said pivot-pins and seat in said recesses, the outer end of the spring engaging the upper face of the latch and the parallel sides of the inner end portion seated in said parallel grooves, and a catch with which the latch engages, substantially as described.

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

FRANCIS AUGUSTUS RAENHART.

Witnesses:

GEO. WALKER,

J. B. MILES, Jr.