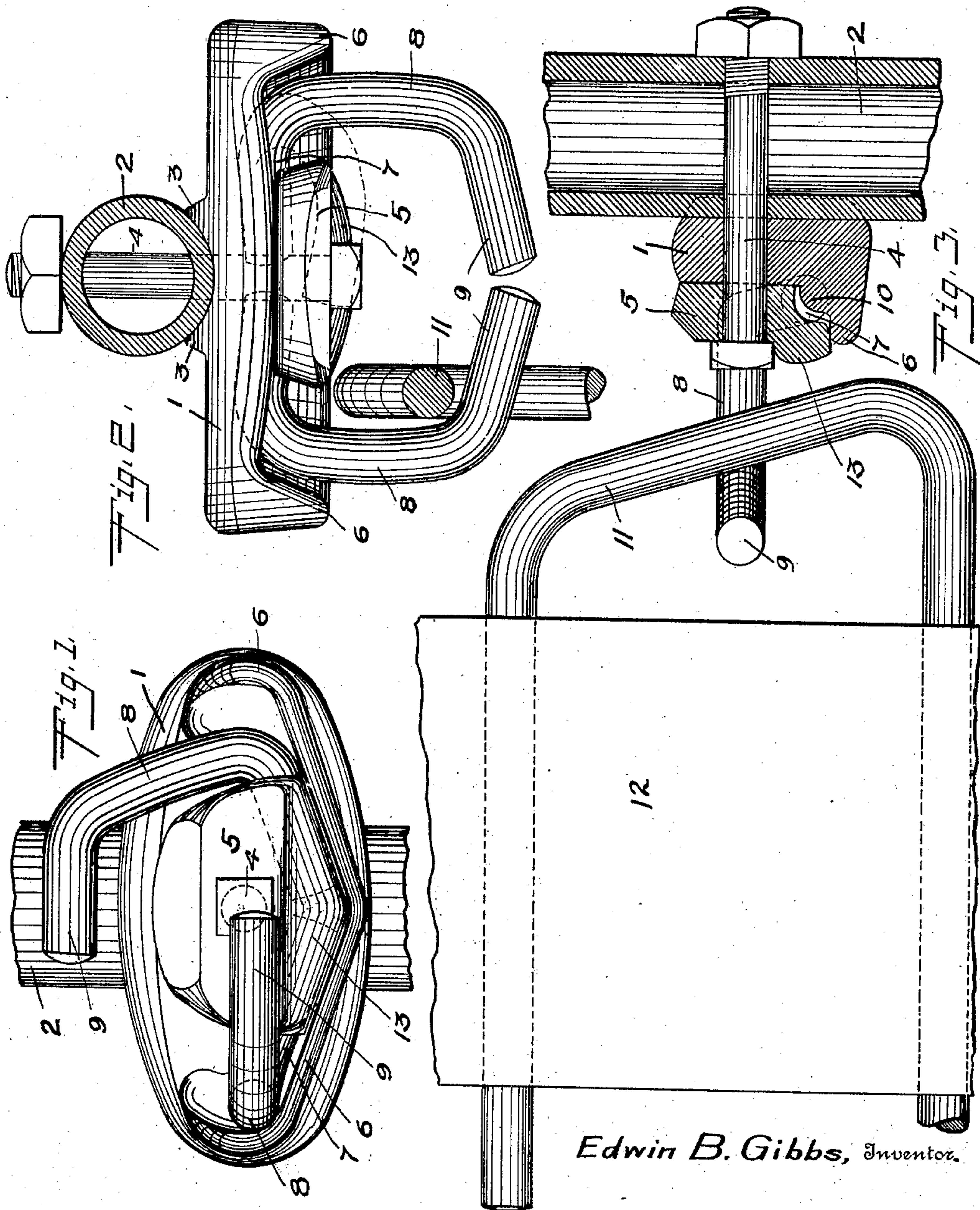


E. B. GIBBS.
GATE LATCH.

APPLICATION FILED OCT. 19, 1907.

985,157.

Patented Feb. 28, 1911.



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Witnesses

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EDWIN B. GIBBS, OF OMAHA, NEBRASKA.

GATE-LATCH.

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Specification of Letters Patent.

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Application filed October 19, 1907. Serial No. 398,269.

To all whom it may concern:

Be it known that I, EDWIN B. GIBBS, a citizen of the United States, and a resident of Omaha, in the county of Douglas and State of Nebraska, have invented certain new and useful Improvements in Gate-Latches, of which the following is a specification.

My invention relates to gate-latches and it is the object thereof to provide a cheaply constructed, strong and durable latch for use on farm gates and the like, in which it is desirable that the gate may be opened in either direction and the latch engage automatically to hold the gate when closed from either direction.

Further objects of my invention are to provide means for causing the latch-bar to be automatically adjusted to compensate variation in the distance between the gate and latch-post, and to prevent with certainty the gate being thrown past the latch-post in closing.

A construction embodying my invention is shown in the accompanying drawings in which—

Figure 1 is a front elevation of the latch, Fig. 2 is a plan view of the same showing a portion of the latch-bar, and Fig. 3 is a sectional side elevation, showing the latch-bar and a part of the latch-post.

In the construction of the latch I provide a socket-block 1 adapted for connection with the end of the gate frame, the same in the present instance being assumed to be made of pipe, the end member 2 of the frame being shown in the drawings, and the socket-block having lugs 3 on the rear face thereof fitting around said pipe, as indicated in Fig. 2. The socket-block is secured to the end member 2 of the gate frame by the bolt 4, which bolt also serves to retain the cap 5 on the front side of the socket-block. The general form of the socket-block is oval or elliptical, as shown in Fig. 1, and on the front face thereof, around the lower edge and the ends, is a horizontally extending lip 6. The lower edge of the cap 5 rests against said lip 6, and between the cap and the body of the socket-block are formed downwardly inclined recesses adapted to receive the inner arms 7 of the latch-hooks. The latch-hooks are formed by bending pieces of round iron to an approximate U-form, such that when the hooks are in the lower or normal position indicated in Fig. 2 and by one of the hooks in

Fig. 1, the central portions 8 and the outer arms 9 of the hooks lie in a substantially horizontal plane, while the inner arms 7 are inclined downwardly therefrom. The arms 9 are inclined outwardly from the socket-block, as shown. On the block 1 between the ends of the inner arms 7 of the latch-hooks is a lug 10, shown in Fig. 3, against which the said ends bear. When the latch-hooks are both in the horizontal position, resting on the lip 6 as shown in Fig. 2, the ends of the outer arms 9 have only a slight clearance between the same so that the two hooks form practically a loop extending across the front of the socket-block. The end portions of the lip 6 prevent displacement of the latch-hooks except by rotation, on the downwardly-inclined axes of the inner arms 7, to the raised position shown by the right-hand hook in Fig. 1 and by the dotted position of the same hook in Fig. 2.

The latch-bar 11 is in the form of a staple of which the ends pass through horizontal holes in the latch-post 12 and the central part is inclined outwardly and downwardly, being disposed, with relation to the gate frame 2 and the latch, in the position shown in Fig. 3. When the latch-bar is inclosed in the loop formed by the latch-hooks, as shown in Fig. 2, it will be obvious that the gate cannot be accidentally opened by lifting or pushing the same from either side, as would be done by animals.

To open the gate the same is first pulled to one side as far as permitted by the latch-hook on the opposite side, the free latch-hook on the side toward which the gate has been pulled is then raised as indicated in Fig. 1 and by the dotted lines in Fig. 2, whereupon the gate may be swung freely toward the side opposite the raised latch-hook. In closing the gate the same is merely thrown forcibly toward the latch-post. The forward latch-hook, engaging the inclined latch-bar 11, is raised thereby sufficiently to pass the bar, while the rearward hook engages the bar and stops movement of the gate. The forward hook, after passing the latch-bar, at once falls to the horizontal position, such movement being insured by the jar resulting from engagement of the rear hook with the latch-bar, and also from the fact that on account of the inclined axis of rotation of the hook the inertia of the hook when movement of the gate is stopped tends to throw the hook to the horizontal

position. The gate is thus automatically secured against movement in either direction until opened by manipulation of the latch as above described.

5 Any variation in the distance between the latch-post and the end of the gate-frame is compensated by movement of the latch-bar 11 toward or away from the post 12, such movement being effected automatically
10 by the following means: On the cap 5 below the head of the bolt 4 is an outwardly extending lip 13, one purpose of which is to prevent turning of the bolt-head. Said lip is thickest at the center and is inclined there-
15 from toward each end thereof, as shown in Fig. 2. Now should the latch-bar 11 extend too far out from the post the bar will be engaged at each closure of the gate by the inclined sides of the lip 13 and pushed
20 thereby toward the post, the ends of the bar sliding through the horizontal holes in the post until the inclined portion of the bar clears the lip 13. Should the latch-bar not extend far enough out from the post, the
25 bar will be engaged, as the gate is closed, by the inclined inner edges of the latch-hook arms 9 and moved thereby outwardly from the post until the bar is in position to be engaged by the central portions 8 of the
30 latch-hooks.

Now, having described my invention, what I claim and desire to secure by Letters Patent is:

35 1. In a gate-latch, a socket-block, two latch-hooks each having an axial portion

tiltably held in said socket-block, the hooks normally lying in a substantially horizontal plane and forming a loop across the front of the socket-block, the axial portions of the hooks held in the socket-block being down- 40 wardly inclined from the plane of the loop, each of the hooks being tiltable on the inclined axis thereof to open the loop, and a horizontally movable latch-bar adapted for engagement with the hooks, the opening to 45 the loop between the adjacent ends of the hooks being of a width less than the diameter of the latch-bar.

2. In a gate-latch, a socket-block, two latch-hooks tiltably connected with said 50 socket-block, said hooks being oppositely disposed and normally forming a loop extending across the front of the socket-block, a latch-bar connected to and movable hori- 55 zontally with relation to the latch-post, said latch-bar being adapted to tilt one of the latch-hooks when engaged thereby and enter the loop formed by the hooks, and means carried by the socket-block for moving the latch-bar with relation to the latch-post to 60 maintain the said bar in a substantially fixed relation to the socket-block and the latch-hooks.

In testimony whereof I have hereunto subscribed my name in the presence of two 65 witnesses.

EDWIN B. GIBBS.

Witnesses:

A. L. McPHERSON,
W. T. MINIER.