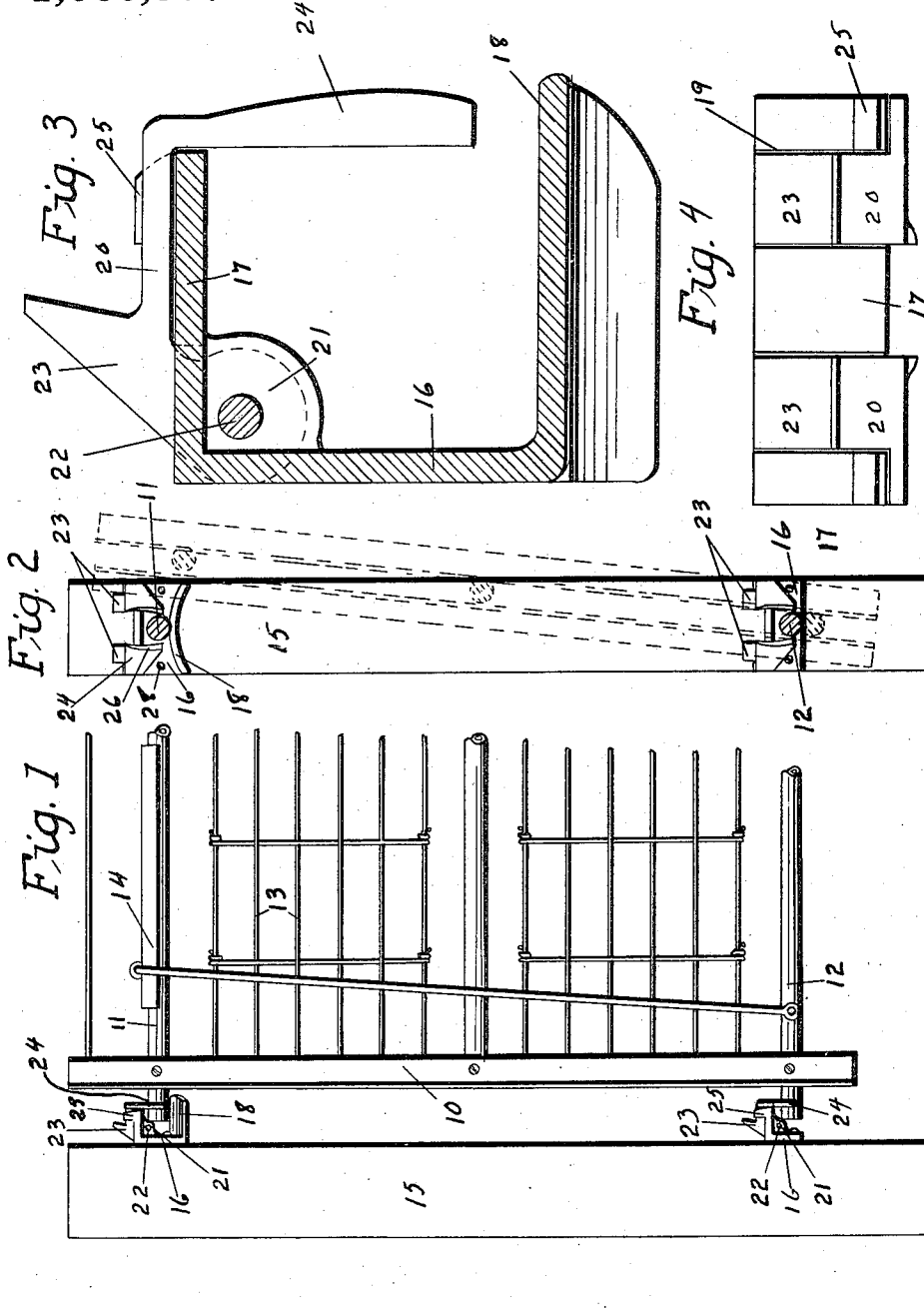


J. L. POWERS.
GATE LATCH.
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1,060,557.

Patented Apr. 29, 1913.



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UNITED STATES PATENT OFFICE.

JOHN L. POWERS, OF INDIANOLA, IOWA.

GATE-LATCH.

1,060,557.

Specification of Letters Patent.

Patented Apr. 29, 1913.

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To all whom it may concern:

Be it known that I, JOHN L. POWERS, a citizen of the United States, residing at Indianola, in the county of Warren and State of Iowa, have invented a new and useful Gate-Latch, of which the following is a specification.

The object of my invention is to provide a gate latch of simple, durable, and inexpensive construction whereby the free end of a swinging gate will be automatically engaged when the gate is moved to its closed position.

A further object is to provide a gate latch whereby both the upper and lower ends of the free end of a gate are engaged by latch members, and so constructed and arranged that the gate may be released from the latch device by manual operation of the upper member.

A further object is to provide such a gate latch so constructed that the gate is held against sagging when in its closed and latched position.

My invention consists in certain details, in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained, as hereinafter set forth, pointed out in my claim, and illustrated in the accompanying drawings, in which—

Figure 1 shows a side elevation of the free end of a swinging gate equipped with a gate latch embodying my invention. Fig. 2 shows a front elevation of the post and the gate latch mounted thereon, the horizontal gate members which engage the latch being shown in section, and the dotted line showing the position of the free end of the gate as the same is being moved away from the latch. Fig. 3 shows a vertical, sectional view through the gate latch. Fig. 4 shows a top or plan view of the latch.

In the accompanying drawings I have shown the free end of a swinging gate having a vertical member 10 and having at its top and bottom horizontal members 11 and 12 extending beyond the member 10. The gate fabric is indicated by the reference numeral 13, and the gate is provided with a device 14 for adjusting its height. Adjacent to the free end of the gate is a post 15 on which the members of my improved gate latch are mounted.

My improved gate latch comprises a frame having a horizontal, transverse flat member

16 designed to be secured to the surface of the post 15 adjacent to the free end of the gate. At its top the plate 16 is provided with a horizontal forwardly extending flange 17. At its lower edge the plate 16 is provided with a forwardly extending flange 18 which is curved from end to end as clearly shown in Fig. 2 for a purpose hereinafter set forth. The flange 17 near the plate 16 is provided with slots 19.

The swinging latch member comprises a flat member 20 resting above the flange 17 having at its end adjacent to the post, a downwardly extending bearing 21 which is mounted on a shaft 22 which is suitably mounted on the frame of the device. On the end of the plate or member 20 adjacent to the gate is a lug 23 having one surface extending upwardly and toward the gate from said end of the member 20, when the latter is in horizontal position. On the end of the member 20 adjacent to the gate is a downwardly extending triangular member 24 which drops below the edge of the flange 17 as clearly shown in Fig. 3. There are two of the swinging latch members on each of the gate latches which are slightly spaced apart from each other as shown in Fig. 2. The adjacent edges of the members 24 of the swinging latch members are substantially vertical when said swinging latch members are in normal position as shown in Fig. 2, and their outer edges are inclined upwardly and outwardly as shown in said figure, thus forming beveled edges to receive the impact of the gate members 11 and 12 when the gate is swung toward closed position.

On the upper surface of each end of the flange 17 just outside the member 20 is a lug 25 for supporting and strengthening the latch device. The members 24 are preferably provided with strengthening ribs 26 on their adjacent edges.

I mount one of my latch devices as described above on the upper end of the gate post 15 in position to receive the outer end of the member 11, and I mount another latch device on the lower end of said post in position to receive the member 12. The lower gate latch is similar to the upper gate latch with the exception that it is not provided with the flange 18.

In the practical use of my improved gate latch, assuming the gate to be open, it is swung toward its closed position. The end

members 11 and 12 engage the beveled edge of the members 24 of the upper and lower gate latches and force the swinging latch members upwardly. The members 11 and 12 pass the members 24 on one side of the latches and are then engaged and stopped by the members 24 on the other side. The lugs 23 engage the post when the swinging latch members are swung upwardly limiting the upward movement thereof, and the swinging latch members naturally drop to normal position after the members 11 and 12 have passed. The member 11 slides upwardly on the flange 18 from its end to its center and said flange prevents any sagging of the gate when the latter is closed. When it is desired to open the gate, the swinging latch member is manually raised, as for instance, by pushing on the lug 23 and the upper end of the gate is pulled sidewise, as shown by the dotted lines in Fig. 2. As soon as the member 11 slides off the center of the flange 18, the lower end of the free end of the gate drops slightly to position where the member 12 is below the members 24, and released from engagement therewith. It will therefore be seen that the gate may thus be opened by operating the upper latch member only.

My improved gate latch permits the gate to be automatically secured when I have it swung to its closed position, also to be swung to position slightly higher at its free end than it would otherwise be. On account of the construction of the curved flange 18 the latch members may be quickly and easily released by manually operating

the upper latch on the post. The parts are of simple and durable construction and may be readily and easily removed or repaired.

It will be seen that the gate latch may be mounted on the post by means of screws 28 or the like, and may therefore be readily changed from one height to another on the gate post.

I claim as my invention:

In a device of the class described, a gate latch frame comprising a vertical plate designed to be secured to a post, a horizontal flange on the upper end thereof, an outwardly extending flange at the lower end thereof curved upwardly from its ends to its middle, said upper flange being provided with slots near said plate spaced apart from each other, swinging latch members each comprising a plate designed to rest above said upper flange and having a downwardly extending bearing pivotally mounted in one of said slots and provided with an upwardly and forwardly extending lug at its rear end and with a downwardly extending triangular portion at its forward end having a beveled edge on one side, and a vertical edge on the other side, the vertical edges of the two swinging latch members being opposite each other, said upper flange being provided with lugs on the outer side of said swinging latch members.

Des Moines, Iowa, August 16, 1912.

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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."