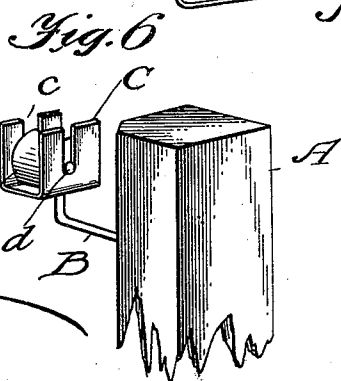
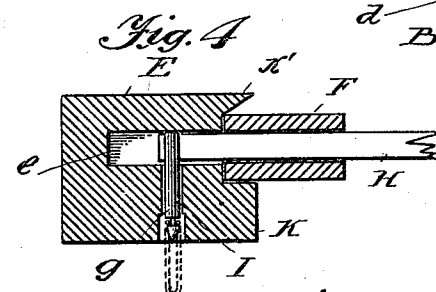
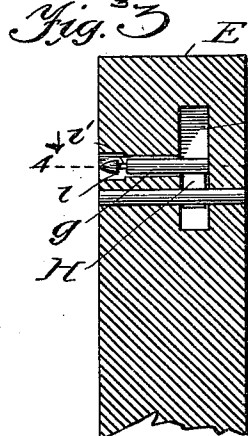
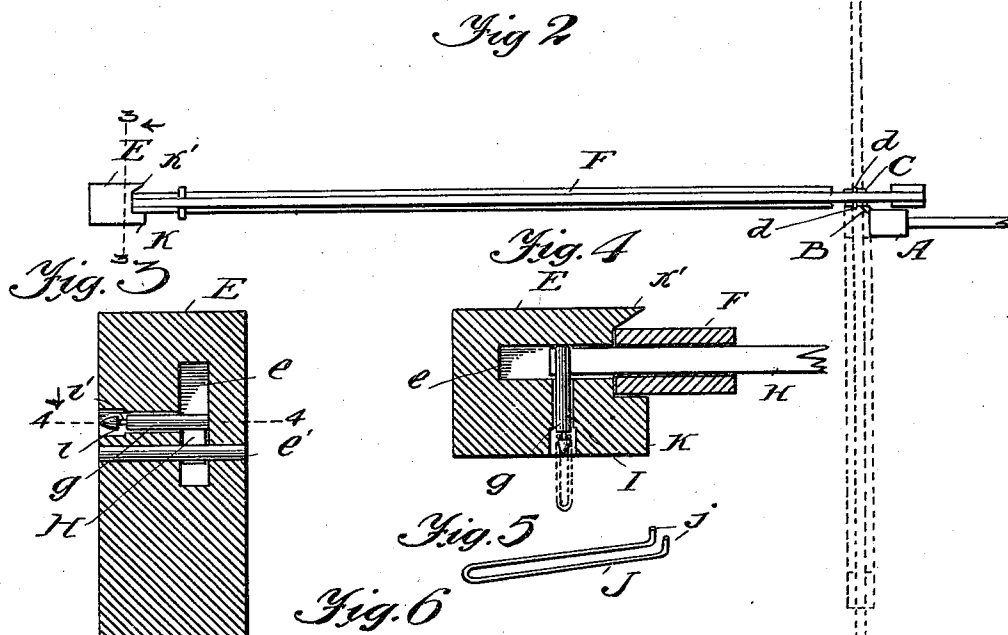
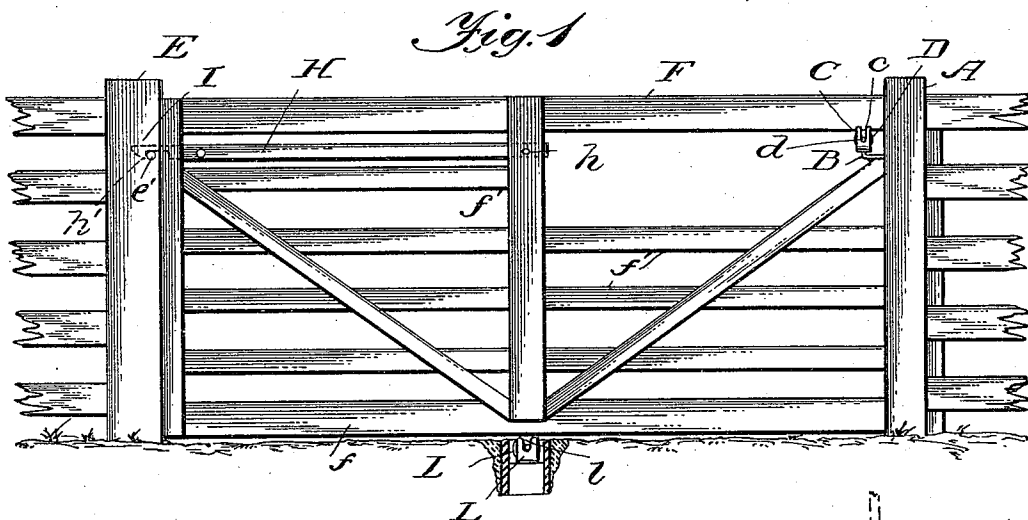


(No Model.)

J. D. THOMPSON.
GATE.

No 578,277

Patented Mar. 2, 1897.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN D. THOMPSON, OF ATOKA, TENNESSEE.

GATE.

SPECIFICATION forming part of Letters Patent No. 578,277, dated March 2, 1897.

Application filed December 17, 1896. Serial No. 616,044. (No model.)

To all whom it may concern:

Be it known that I, JOHN D. THOMPSON, a citizen of the United States, residing at Atoka, in the county of Tipton and State of Tennessee, have invented certain new and useful Improvements in Gates; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in gates of that class which are known generally under the head of "sliding" and "swinging" gates, comprising a hinge-post with a swivel roller-bracket and a gate structure mounted to slide in said roller-bracket and adapted to turn therewith to a position at right angles to the plane of its sliding movement.

The objects of my invention are to simplify the construction, promote the adjustment, and facilitate the operation of the gate, and to provide a novel means for fastening the gate in its latched position, which means shall afford security to the gate and prevent it from being opened accidentally or by small animals.

With these ends in view my invention consists in the novel combination of elements and in the construction and arrangement of parts which will be hereinafter fully described and claimed.

To enable others to understand my invention, I have illustrated the preferred embodiment thereof in the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a side elevation of the gate constructed in accordance with my invention. Fig. 2 is a plan view thereof. Fig. 3 is a vertical sectional view on the plane indicated by the dotted line 3 3 of Fig. 2. Fig. 4 is an enlarged cross-sectional view through the latch-post on the dotted line 4 4 of Fig. 3, illustrating the mode of releasing the latch. Fig. 5 is a detail view of one type of the key used for withdrawing the locking-bolt to release the latch. Fig. 6 is a detail perspective view of a part of the hinge-post with a bracket and swiveled roller applied thereto.

Like letters of reference denote corresponding parts in all the figures of the drawings, referring to which—

A designates the hinge-post, to one angle or

corner of which is rigidly fastened an L-shaped bolt or staple B. On the vertical pin-
55 tle of this bolt or staple is pivotally mounted the bracket C, so as to turn freely to a position where it will lie parallel to either of two sides of the hinge-post. This bracket is in the form of a yoke or U-shaped casting, and in the vertical walls of said yoke or casting are formed the vertical parallel slots *cc*, which
60 open through the upper ends of said yoke. In the yoke is arranged the antifriction-roller D, having trunnions *d d*, fitted in the slots *c* and resting on the lower ends of the slots *c*, so that the roller is loosely mounted or journaled in the bracket at a point about midway of the height thereof.

E is the latch-post, set in the ground at suitable distance from the hinge-post, said posts
70 A E being in line with the fence erected on opposite sides of the roadway designed to be closed by the gate F.

The latch-post is provided at a suitable distance from the ground and on a line about
75 midway between its sides with the longitudinal slot *e*, which is closed on all sides except on the inner side of the post E, and across this slot *e* is a pin *e'*, which is suitably fastened in the post. In the post is formed a
80 transverse bolt opening or passage *g*, which extends from one side of the slot *e* clear through to the adjacent face of the post, as shown by Fig. 4, and this passage *g* is arranged a distance above the fixed pin *e'* corresponding to the depth or width of the latch
85 H, which is mounted on the gate F. In this bolt passage or opening *g* is loosely fitted an endwise-movable locking-bolt I, which consists of a plain rod or pin of a suitable length
90 or diameter to slide easily in said passage *g* and to be projected across the slot *e*, in which position the outer end of the bolt is housed wholly within the passage *g*, so that it is accessible only to the person provided with a
95 key. I prefer to provide near the outer end of this slidable bolt the annular groove *i'*, forming the shoulders *i i*, and to make the key J of small doubled wire which is bent to provide the prongs *j*, said wire key being of
100 such size that it may be easily slipped into the bolt-passage *g* and have its prongs fit in the groove *i'* of the bolt, so that the key may engage with the shouldered and grooved bolt

to move it endwise and withdraw it from the slot *e* in the latch-post E.

The latch-post E is provided on one side of the slot *e* with the square-shouldered bar K, against which the gate F may rest or press, and on the latch-post, but on the opposite side of the slot *e*, is the beveled face *k'*, against which the gate may abut when closing and by which the gate is directed or guided to cause its latch to enter the slot *e* in said post E properly.

In the roadway at a point about midway between the hinge and latch posts is set the guide-bracket L, which is firmly embedded in the ground. Said bracket is a yoke with guide-slots *l* to receive the trunnions of a guide-roller L', which is loosely mounted in the bracket.

The gate structure proper consists of a series of horizontal rails *f* and the front, back, and middle stiles, all united firmly together in a substantial way. The top and bottom horizontal rails are made quite heavy, and between the top and second rails the gate is left open between the rear and middle stiles to accommodate the bracket C, which is fitted to the lower side of the top rail, so that the latter rests on the guide-roller D, on which it is free to travel, while the arms of the bracket or yoke C embrace the sides of the top rail loosely to assist in guiding the gate in its endwise movements.

The bottom rail of the gate rests upon the roller L' and is embraced by the arms of the yoke-shaped bracket L, whereby the gate is supported on rollers at the top and bottom and is guided by the two yokes. The space between the top and second rails and the front and middle stiles is occupied partly by a rail *f* and partly by the latch H, which is fitted in slots in the front and middle stiles. The heel of the latch is pivoted on a pin or bolt *h*, and the notched end *h'* of said latch projects beyond the front stile of the gate, so that it may enter the slot *e* in the latch-post.

The operation may be described briefly as

follows: To open the gate when it is locked, the operator slips the key J into the passage *g* until the prongs engage the shouldered bolt I, and then pulls the key and bolt endwise until the bolt is freed from the latch and is retracted from the slot *e*. The latch can now be raised so that its notched end *h'* is free from the fixed pin *e'*, and the gate can then be moved endwise to ride in the rollers D L' until the gate clears the bracket L, after which the gate is swung around with the swiveled bracket C to a position at right angles to a line between the posts. To close the gate, it is turned with the bracket into a position partly across the roadway, bringing its front end into position in the road-bracket L, and the gate is moved endwise, riding on the rollers at top and bottom until its front stile abuts against the latch-post and the notched and beveled nose of the latch drops over the fixed pin *e'* in the slot *e*. If it is desired to lock or fasten the gate so as to prevent small animals, such as hogs, from lifting the gate, as well as to secure it in the closed position, the locking-bolt I is forced endwise, so as to be projected across the slot *e* and to rest upon the upper edge of the latch H, whereby the latch is confined between the bolt and the fixed pin.

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

The combination with a gate, and a latch, of the latch-post having the slot *e*, the fixed pin *e'* and the bolt-passage opening into the slot above said pin, and the slidable bolt fitted in said passage and provided with the shouldered outer end, said bolt adapted to be engaged by a pronged key for moving the bolt endwise, as and for the purposes described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN D. THOMPSON.

Witnesses:

I. H. LOWENHAUPT,
A. T. McLAUGHLIN.