

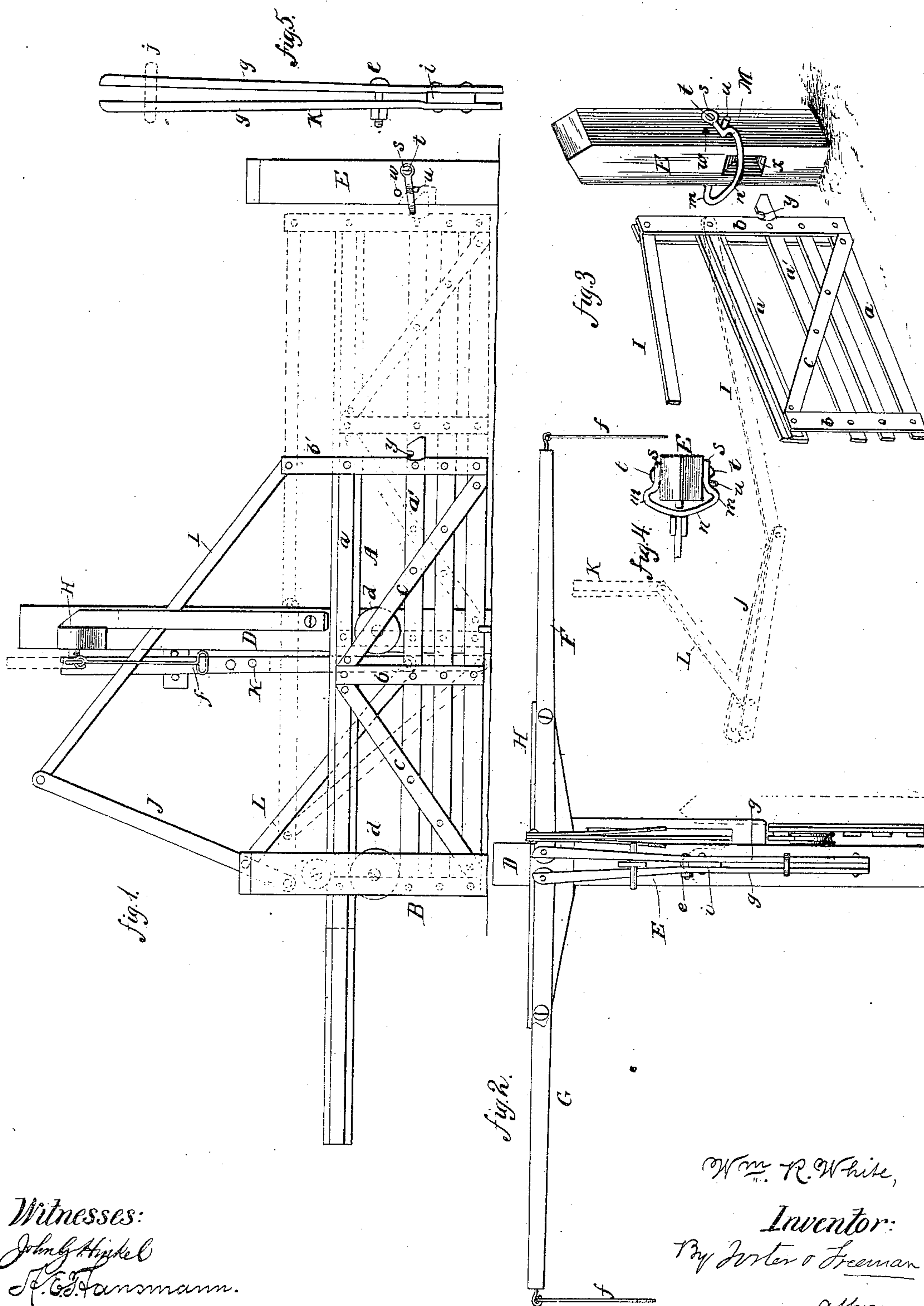
(No Model.)

W. R. WHITE.

SLIDING GATE.

No. 310,006.

Patented Dec. 30, 1884.



Wm R. White,

Inventor:

By J. Foster & Freeman

Atty.

Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM R. WHITE, NEOGA, ILLINOIS.

SLIDING GATE.

SPECIFICATION forming part of Letters Patent No. 310,006, dated December 30, 1884.

Application filed February 29, 1884. (No model.)

To all whom it may concern:

Be it known that I, WM. R. WHITE, a citizen of the United States, residing in the city of Neoga, in the county of Cumberland and State of Illinois, have invented certain new and useful Improvements in Sliding Gates, of which the following is a specification.

My invention relates to sliding gates and to devices for moving and locking the same; and it consists in combining with the operating-levers a sliding spring-bar, rod, and pivoted bars, all as fully described hereinafter, and as illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a sliding gate showing my improvements, the gate being partially open. Fig. 2 is a transverse sectional elevation of the gate, the parts being in the position shown in Fig. 1; Fig. 3, a perspective view of part of the panel, post, and latch. Fig. 4 is a plan of the post, panel, and latch, and Fig. 5 is a view showing the construction of the sliding bar.

The sliding panel A of the gate consists of longitudinal bars and upright and diagonal strips *a a' b b' c*, as shown, or is otherwise constructed in any suitable manner, the upper bar being longer than the panel, and having its bearings on rollers *d d*, supported by posts B D, as shown, the particular manner of supporting the gate being immaterial, provided the gate can slide easily back and forth across the roadway to and from the latch-post E.

In order to permit the gate to be opened and closed by persons on horseback or in vehicles, I use the following appliances: The post D is of sufficient height to support the usual operating-levers, F G, which are pivoted to the cross-bar H, supported by the post, and provided with pendants *f*.

To the forward part of the panel A is pivoted one end of a bar, I, connected at its inner end to a second bar, J, which is pivoted to the upright B or any other suitable support, so that by bringing the two bars in line, the gate-panel will be forced to the post E, while it will be retracted by elevating or depressing the bars at the point of their connection. This movement of the bars is effected by means of a sliding bar, K, and a rod, L.

The bar K is connected in any suitable manner at the upper end to the levers F G, and the rod L is connected at one end to the bar K and at the other to the bar J, near its pivotal point, on post B. As shown, the connection is such that the gate is opened by the lifting of the sliding bar K, the rod L in this instance being connected to the lower end of the bar K. The swinging of the levers F G elevates or depresses the sliding bar K, and by means of the rod L swings the bar J to or from a horizontal line, and thus opens or closes the gate. In the construction shown it is necessary to lift the bars I J in order to open the gate, the weight of the bars therefore rendering the operation difficult. To overcome this difficulty I combine with the operative parts of the gate some suitable means for counteracting this force or weight, which may be a counter-weight, but is preferably a spring. The particular mode of accomplishing this purpose which I prefer is shown in the drawings, and consists in making the sliding bar K of two spring-strips, *g g*, connecting them to a separating-block, *i*, and drawing them together above said block by a screw-bolt, *e*, which may be set to put any desired tension on the strips. One of the strips is pivoted to each of the levers F G, and as the strips have a tendency to approach each other, they tend to lift the inner ends of the levers, and thus to open the gate. This action is not sufficient actually to move the gate, but it will counteract the weight of the bars I J, so that to open the gate only sufficient power is required to overcome the friction of the panel on its rollers and set it in motion.

In Fig. 2 the gate is shown as partially open, and it will be seen that the ends of the spring-strips *g g* are nearest to each other and exert the least force; but when the gate is closed or opened to its full extent the levers F G will stand at an angle to each other; consequently their inner ends will be farther apart, and the spring-strips *g g* will exert their greatest force, tending to move the levers and to aid in starting the gate, either in opening or closing.

Instead of making the strips of spring material, they may be drawn together by a rubber

ber spring, *j*. (Shown in dotted lines, Fig. 5.)
 When the bars I J swing downward to open
 the gate, as shown in dotted lines, Fig. 3, the
 counter-balance or spring is arranged to tend
 5 to lift them. In this figure the bar I is shown
 in dotted lines as pivoted to the side of the
 gate-panel. The post E has a recess, *x*, to re-
 ceive the notched and beveled end of one of
 the bars *a'* of the panel, and to this post is
 10 hung a latch, M, consisting of a stout bar bent
 to form a cross-piece, *n*, projecting side loops,
m m, and ears *s* to receive bolts *t*, by which
 the latch is pivoted to the post, a pin, *u*, lim-
 iting its downward movement. As the gate
 15 is pushed to the post E the beveled end of the
 bar *a'* strikes and lifts the latch M until the
 same drops into the notch *y* in the bar *a'*, and
 effectually secures the gate, while the contact
 of the end of the bar *a'* with the sides of the
 20 notch *x* prevents the gate from yielding to
 side pressure. A person at either side of the
 gate can readily lift the latch by grasping the
 adjacent loop *m*.

The latch described is comparatively inex-
 25 pensive, easily applied, and, once adjusted, is
 not liable to get inoperative from shrinking
 of the wood or wearing of the attachments.
 When the gate is to be left free to be operated
 by the levers F G, the latch M is lifted and
 30 held in position by inserting a pin in a hole,
w, in the post E.

I claim—

1. The combination, with a sliding gate, of
 pivoted bars I J, one connected to the gate
 and the other to a stationary support, and le- 35
 vers F G, vertically-sliding spring-bar H, and
 rod L, directly connecting said sliding bar K
 at its lower end and the bar J near its pivotal
 point, substantially as set forth.

2. The combination of the sliding gate, op- 40
 erating-levers F G, sliding spring-bar K, so
 constructed as to exert its force to bring said
 levers to a horizontal position, bars I J, and
 rod L, as and for the purpose set forth.

3. The combination of the sliding gate, bars 45
 I J, levers F G, rod L, and sliding bar K, con-
 sisting of spring-strips *g g*, substantially as
 described.

4. The combination, with a sliding gate, of 50
 a vertically-movable bar, K, consisting of
 spring-strips *g g*, means for drawing them to-
 gether, and operating-levers, to which the
 ends of the strips are secured, substantially
 as described.

In testimony whereof I have signed my name 55
 to this specification in the presence of two
 subscribing witnesses.

WM. R. WHITE.

Witnesses:

CHARLES WOOD,
 DANIEL B. GREEN.