

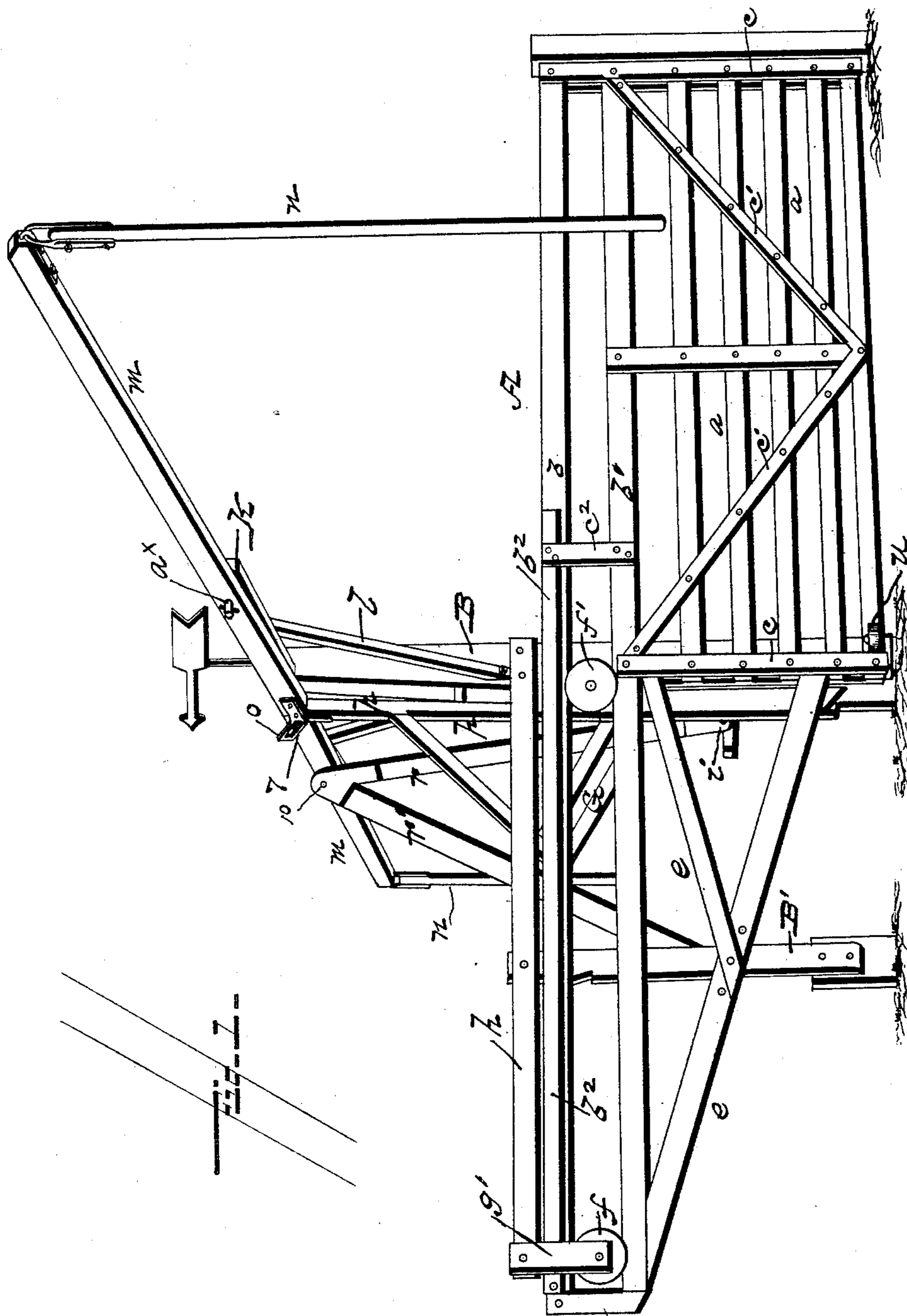
(No Model.)

3 Sheets—Sheet 1.

O. E. H. N. REICHLING.
FARM GATE.

No. 424,576.

Patented Apr. 1, 1890.



WITNESSES

Marcus L. Byng
John Smythe

INVENTOR

O. E. H. N. Reichling

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Attorney

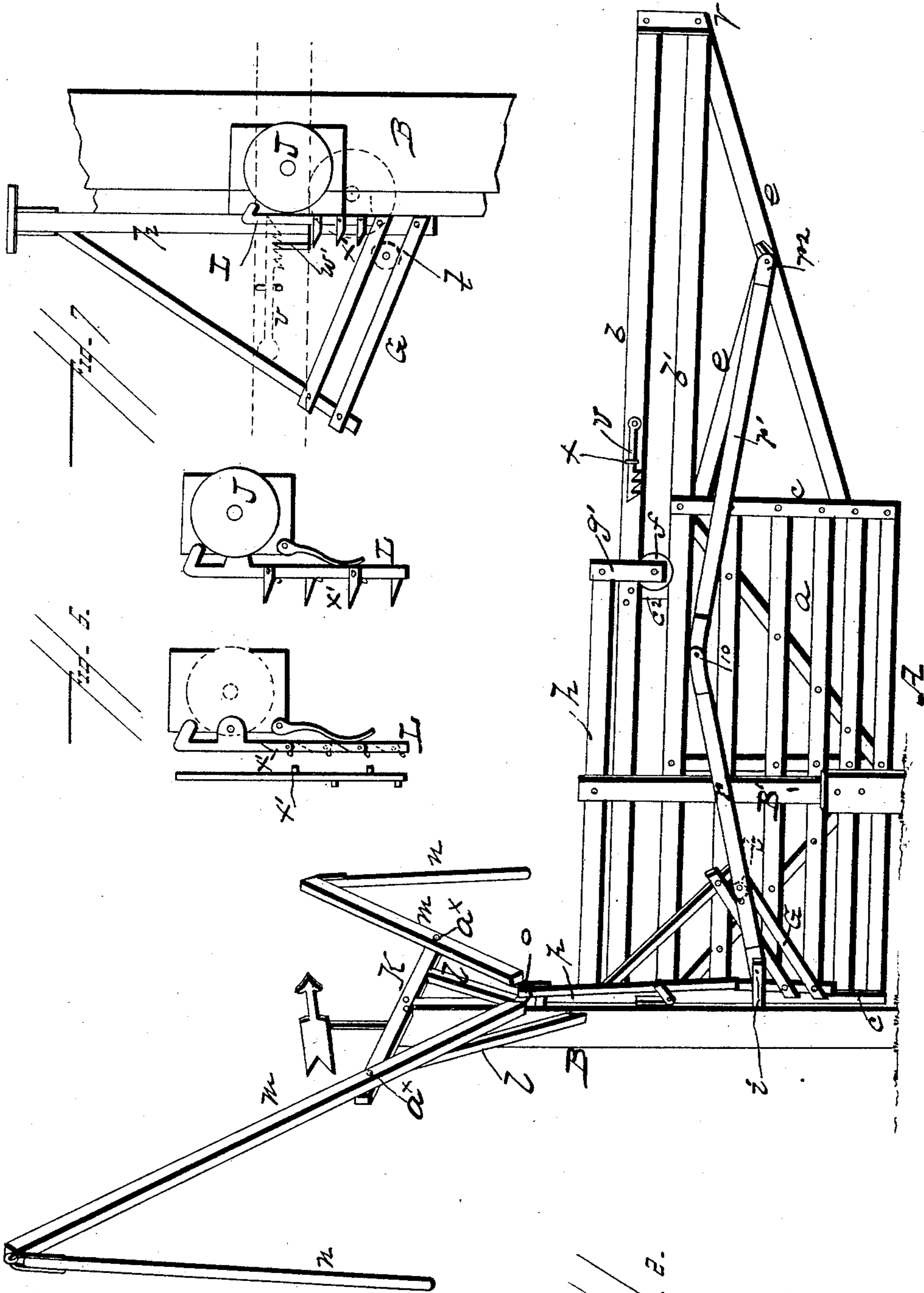
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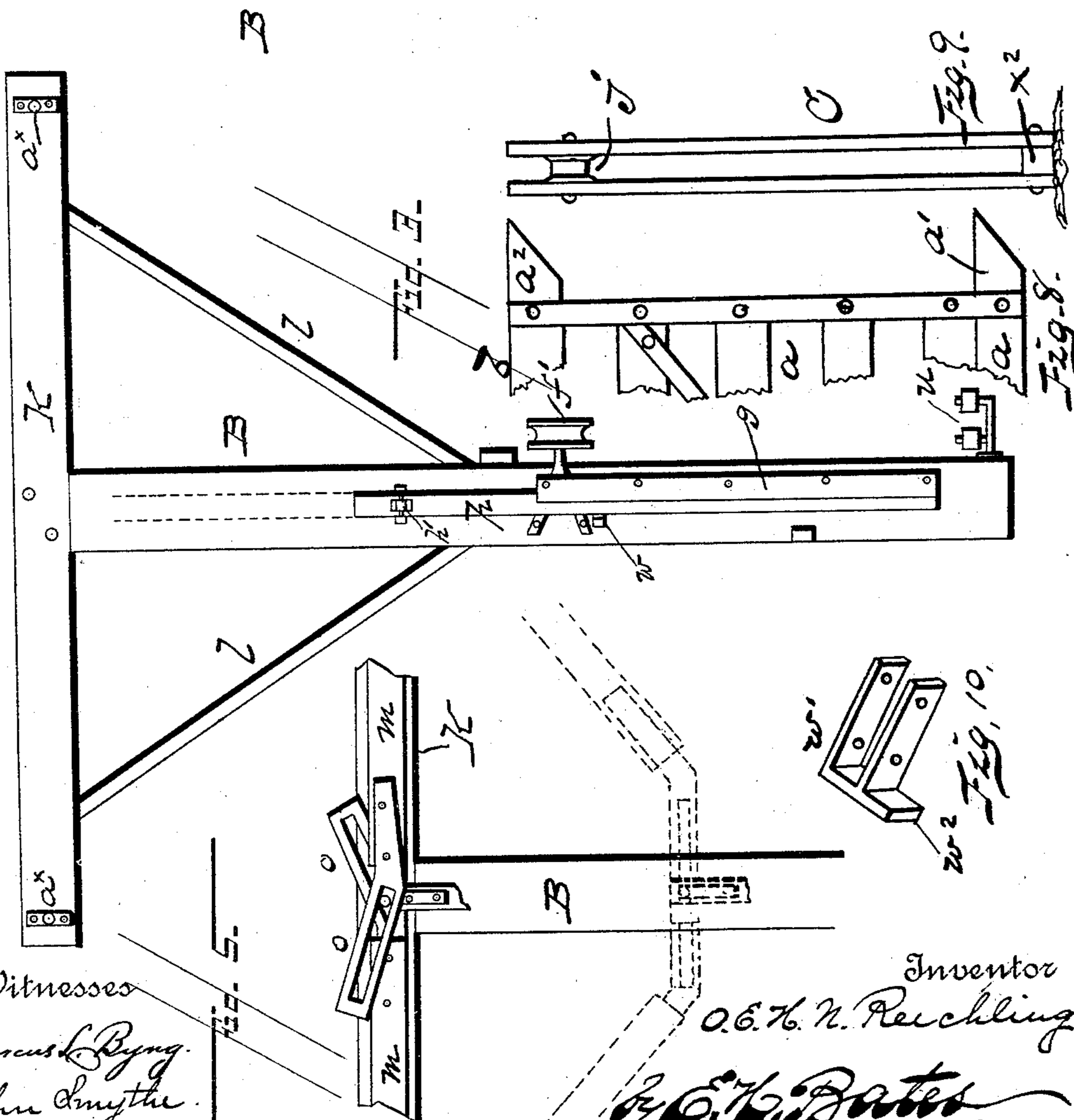
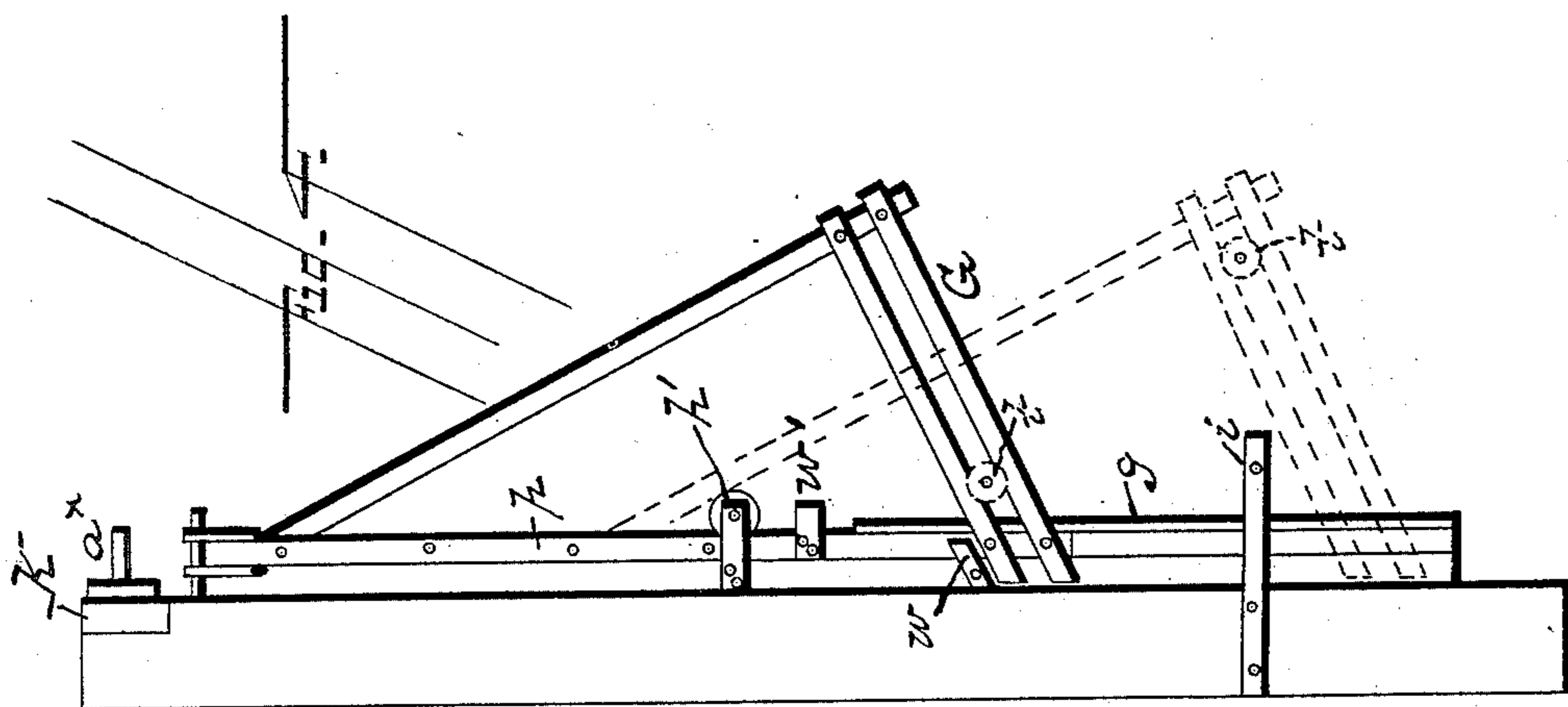
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UNITED STATES PATENT OFFICE.

OSCAR E. H. N. REICHLING, OF MARION, INDIANA.

FARM-GATE.

SPECIFICATION forming part of Letters Patent No. 424,576, dated April 1, 1890.

Application filed August 5, 1889. Serial No. 319,750. (No model.)

To all whom it may concern:

Be it known that I, OSCAR E. H. N. REICHLING, a citizen of the United States, residing at Marion, in the county of Grant and State of Indiana, have invented certain new and useful Improvements in Farm-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.

This invention relates to certain novel and valuable improvements in that class of gates for farms and other inclosures which are opened by giving the gate a longitudinal sliding movement.

The novel features of my improvements will be fully understood from the following description, taken in connection with the annexed drawings, in which—

Figure 1 represents an outside or front view of my improved gate closed. Fig. 2 is a side view also, showing the gate open. Fig. 3 is a front view of the gate-post detached from the gate. Fig. 4 is a side view of the same. Fig. 5 is a detail view of the operating-levers. Fig. 6 is a detail view of the gong mechanism. Fig. 7 is a similar view showing part of the gate and gate-post attached. Fig. 8 represents a detail view of the end of the gate. Fig. 9 is a front view of the gate-post, and Fig. 10 is a perspective view of the plate *w*'.

Referring by letters and figures to the accompanying drawings, A designates the gate proper, which I have so mounted and guided that it is opened and closed by giving to it longitudinal reciprocating movements. This gate is composed of longitudinal rails *a*, arranged at suitable distances apart, and two longitudinal top rails or bars *b b'*, considerably longer than the rails *a*. These bars *a* and *b* are secured together in a substantial manner by means of vertical bars *c c* and bracing-bars *c' c'*. In addition to the said bars and braces I employ for the extended parts of the gate the inclined bracing-bars *e e*, and use also short vertical strengthening-strips *V* and *c²*, rigidly secured to the bars *b b'*, and a reinforcing facing-strip *b²* for stiffening the upper bar or guideway *b*, as clearly shown in the drawings.

B designates the vertical central gate-post, which may be of any suitable height, and which is firmly set in the ground on one side of the roadway or entrance to the inclosure. Rigidly bolted to the upper end of this post is a horizontal cross-bar K, which is strengthened by an inclined brace *l*, secured to said cross-bar and to the post B on either side thereof. The arms of this cross-bar K extend equidistant from the post, and have attached to their extremities, by means of fulcrum pivot-irons *a^x*, two actuating overhead levers *m m*, which may be of any desired length, and which extend in line with the roadway, and have attached to their extremities, by means of coupling irons or shackles, the depending handles *n*, of such length that they can be conveniently reached by a person either walking or riding. The inner ends of the vertically-vibrating levers *m m* approach quite near each other and have obtuse angular slotted irons *o o* rigidly secured to them, the slotted portions of the irons crossing each other side by side, as shown in the accompanying drawings.

When the levers *m m* are in horizontal position, the gate being closed, the said slotted portions of the angle-irons are directed in opposite directions. These slotted portions receive freely through them a horizontal pivot 7, strapped securely to the upper end of a vertically-movable rod *p*, which extends downward on one side of the post B, and is guided in its movement by an offset-plate *g*, an anti-friction roller *h'*, and an angular strap *w*.

Near the lower end of the rod *p*, and rigidly secured to one side thereof, are two inclined arms, forming a guide G for a small grooved traveler-wheel *t*. The guide G extends from its point of attachment to the rod *p* upward, and is rigidly secured to an inclined brace, which is secured to said rod *p* near its upper end, as shown. In combination with this device I employ levers *r r'*, which are jointed together in a suitable manner, as at 10. One end of the lever *r* is suitably pivoted at *i* to an offset of the post B at a suitable height from the ground, and one end of the arm or lever *r'* is suitably pivoted at *r²* to the diagonal gate-braces *e e*, at the junction thereof.

To the lever *r* between its ends is pivoted the traveler-wheel *t*, which works in the groove

of the inclined guide G, above described, riding up and down and forward and backward, as the gate is moved in opening or closing the same.

5 It will be observed by reference to the annexed drawings that on one side of the post B, and located a suitable distance therefrom, is a post B', secured in the ground. To these posts B B', I secure a horizontal rail *h*, from
10 the outer end of which depends a short support *g'*, bearing a grooved roller *f*, and I employ a similar roller *f'*, which is applied on a stud secured to the post B. These two rollers support the gate and are arranged between
15 the two bars *b b'*, so that the gate is properly balanced and guided and can be freely opened and closed. In addition to these supporting and guiding rollers, I employ two small rollers *u*, which have their bearings in a bracket
20 secured to the post B near the ground. Between these two rollers the lower rail of the gate is guided and supported, and against them the foot of the inner vertical bar *c* abuts and has a solid bearing when the gate is
25 closed.

C represents a post, which is provided with a grooved roller *j* near its upper end, upon which rests the short beveled extension *a²* of the top rail *b* of the gate when the latter is
30 closed, thus preventing the gate from sagging at this end. The post C receives in its vertical slot the said extension *a²*, and also a similar beveled extension *a'* of the lowest rail *a* of the gate, which extension rests upon the bearing *x²* in said post.
35

In operating my improved gate a person approaching it, if it be closed, whether he is riding or walking, grasps the depending handle
40 *n* and pushes up the long arm of the lever *m*, to which said handle is shackled. This depresses the inner or shortest arms of both the levers *m m* to the position indicated in Fig. 2 by reason of their being connected by the
45 slotted angle-irons *o o*, depressing with them the vertical guided rod *p*, which acts through the medium of the inclined slotted guide G and the anti-friction traveler-wheel *t* on the extension-lever *r*. These movements cause
50 the levers *r r'* to assume a horizontal or nearly horizontal position and to push the gate open on its rolling bearings. After passing the threshold the person can shut the gate by simply pulling down on the other pendent
55 handle *n*, which causes the inner ends of the levers *m m* to rise, carrying with them the vertical bar *p* and its grooved frame G and the roller *t*, thus drawing the bar *r* to a nearly vertical position, and causing the bar *r'*, that is pivoted to it, to stand on an inclination, forming, when the gate is closed, the letter V inverted.
60

In connection with my improved sliding gate I employ a novel means for automatically fastening the gate when it is closed, and also a
65 device which will sound an alarm, and thus audibly indicate to the person operating the gate when said gate is opened. The sounding

of this alarm is useful in order to let the operator know that the gate has opened before he leaves the handle *n* if he be riding, and it also
70 serves to notify the occupants of the house when the gate is opened.

At a suitable point on the inner side of the top rail or bar of the gate I pivot a gravitating latch *v*, having one or more engaging-
75 hooks formed like saw-teeth and a beveled nose on its free end. This latch is guided by a staple *x*, fixed into the rail *b*, on which said latch is pivoted. At a suitable point on the
80 vertically-movable rod *p*, which is, as heretofore mentioned, connected to and moved up and down by the slotted angle-irons *o o* and levers *m m*, I secure a looped keeper *w'*. The
85 latch *v* and keeper *w'* are so arranged relatively to each other that at the moment the gate is fully closed the latch will drop over the keeper, and by thus engaging with it lock the gate securely. Thus locked the gate can
90 only be opened by lifting the latch free from the keeper by hand, or by moving downward the vertical bar *p* by the means above described. The gate can thus be automatically
locked and unlocked by simply manipulating either one of the overhead levers *m m*.

On a suitable support between the gate and
95 the post B, in close proximity to the locking-latch and its keeper, is arranged the alarm, which consists of a gong or bell J, a vibrating lever or pendulum L, and a hammer which is secured to the upper end of the said pendulum
100 or lever at an obtuse angle to it and in such close proximity to the bell that when the lever L is caused to vibrate the hammer will strike the said bell and notify the passenger that the gate is open, and that the keeper is dis-
105 engaged from the latch *v*. To the said lever L, I pivot a number of short tappets *x'*, which are normally held in position—that is, at right angles to the lever on which they are pivoted—and on one side of the keeper *w'* a lug
110 or boss is formed, as shown at *w²*. During the downward stroke of the rod *p* the said lug *w²* will in succession strike the tappets and cause the lever or pendulum L and its
115 hammer to vibrate, thus sounding an alarm; but during the ascending stroke of the rod *p*, or when the gate is being shut, the lug *w²* will flex the tappets, as indicated in dotted lines, and an alarm will not be sounded, thus providing means whereby the gate when being
120 opened will sound an alarm.

It will be observed that my gate is easily operated from either side, whether the person be riding or walking, and its being nicely
125 balanced upon the guide-rollers makes it move easily in its forward and backward movements. At the same time it is simple in construction, with nothing about it liable to get out of order, and is durable, as well as cheap to construct.
130

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

1. The combination, with a horizontally-

sliding gate provided with the top extended guiding-rails, braced as described, of the central post and an auxiliary frame provided with supporting and guiding rollers, and a
 5 guide and stay g' for the outer roller, the overhead levers $m m$, having pendent handles and slotted angular plates, the vertically-movable rod pivoted to said plates and provided with a slotted inclined guide-frame G
 10 and its braces, the extension-levers $r r'$, actuated by said guide, and a traveler-wheel t on one side of the lever r , the levers being pivoted to the gate-post at one end and at the opposite end to the gate-extension, all
 15 substantially in the manner specified.

2. The combination, with a horizontally-sliding gate and its three posts B , B' , and C , of the supporting and guiding rollers $f f'$, arranged between the two extended top rails of
 20 the gate, the supporting-roller at the top of the post C , the abutting rollers u at the bottom of the post B , the actuating-levers $m m$, provided with pendent handles and slotted obtuse angle-irons, the vertically-movable rod
 25 p , guided as described, and provided with the inclined braced and slotted guide G at its lower end, the extension-levers $r r'$, pivoted to the gate-extension and to the post B , and the traveler-roller t on lever r , engaging with
 30 said guide, all substantially as described.

3. The combination, with a gate-post and the sliding gate mounted on guiding-rollers, of the actuating-levers $m m$, having pendent
 35 handles jointed to their outer ends, provided on their inner ends with slotted obtuse angle-irons and fulcrumed on the cross-bar K , the vertically-movable rod p , pivoted to said angle-irons and provided with guides h' , w , and
 40 j , and a braced inclined slotted frame G , extension-levers $r r'$, pivoted to the gate-post and to the braces of the gate-extension, and the traveler-roller on one of said levers engaging with said slotted guide G , all substantially as described.

45 4. The combination, with a horizontally-

sliding gate supported and guided as described, the vertically-movable rod p , carrying the frame G and operated by means described, and the extension-levers $r r'$, of the
 50 gravitating hooked latch v , pivoted to the gate, and the looped keeper w' , secured to said rod p , all as and for the purposes specified.

5. The combination, with the rail, of a horizontally-sliding gate, the gravitating latch v , pivoted to this rail, the vertically-movable
 55 rod p , provided with a keeper w' , having a lug w^2 , a swinging lever L , provided with pivoted tappets and a bell-hammer, and arranged to be operated by the lug w^2 , and a bell arranged to be struck by the hammer,
 60 all for sounding an alarm, substantially as described.

6. The within-described improved sliding gate, consisting of the gate proper, constructed as described, the post B , provided with the
 65 top cross-piece K , and rearwardly-extended bar secured at its outer end to the post B' , the grooved wheels $f f'$, journaled, respectively, to said post B and the short bar g' , the pivoted levers $m m$, the angular slotted irons $o o$,
 70 secured to the inner ends of these levers, the latter provided with the pendent handles $n n$, the frame G , consisting of the inclined bars, forming a raceway, and the vertically-movable bar p , the guides and rollers therefor, the
 75 jointed extension-levers $r r'$, pivoted to the post B and to the inclined gate-bar e , the gravitating pivoted latch v , and keeper w' , arranged as described, and the pivoted lever L , having the tappets pivoted thereto and pro-
 80 vided with the hammer, and the bell adapted to receive the strokes of said hammer, all as specified.

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

OSCAR E. H. N. REICHLING.

Witnesses:

JNO. E. CLARK,

GEO. O. NOTTINGHAM.