F. H. DOERING.

SLIDING GATE.

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940,134.

Patented Nov. 16, 1909.

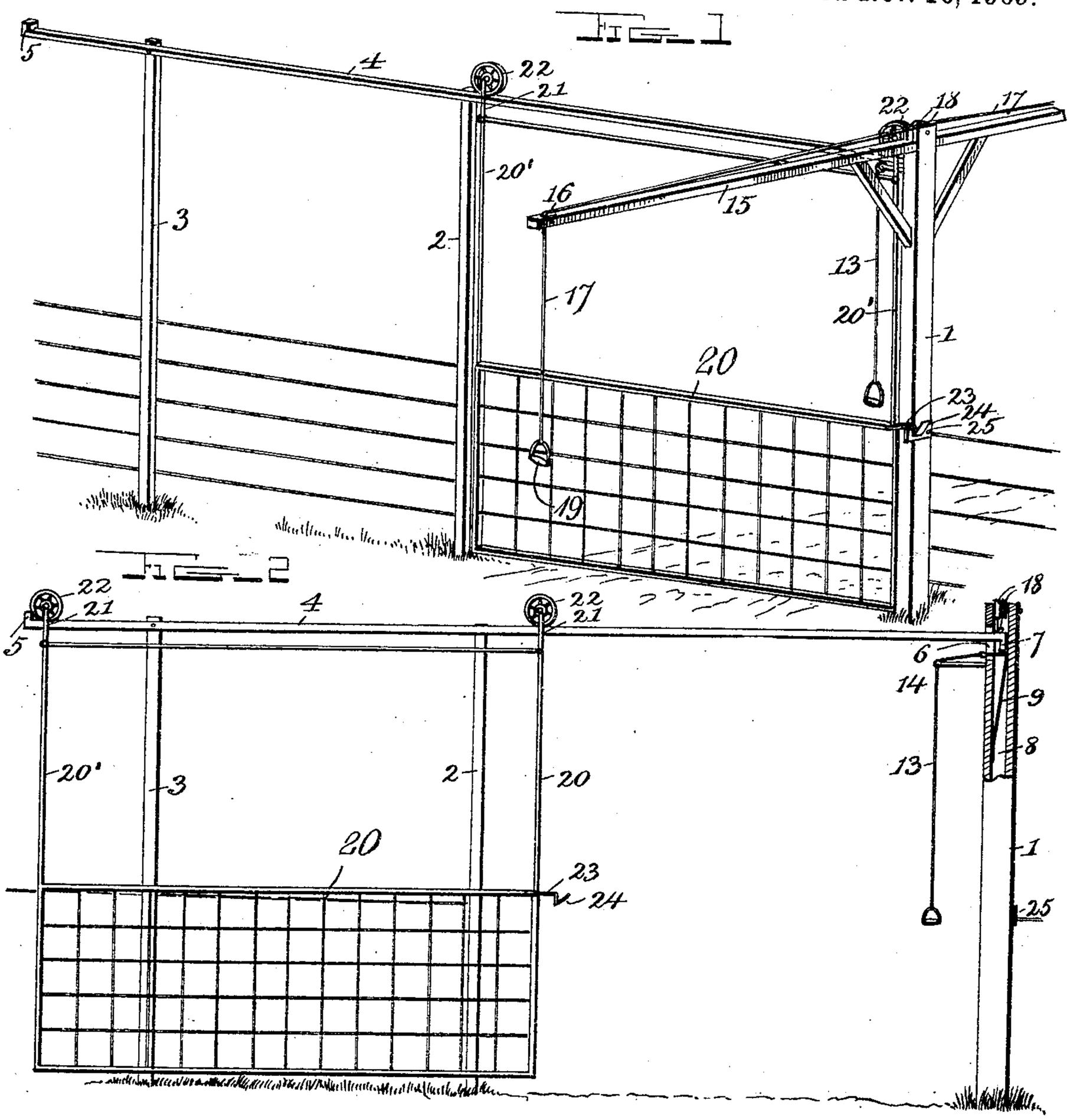

FIG. 2

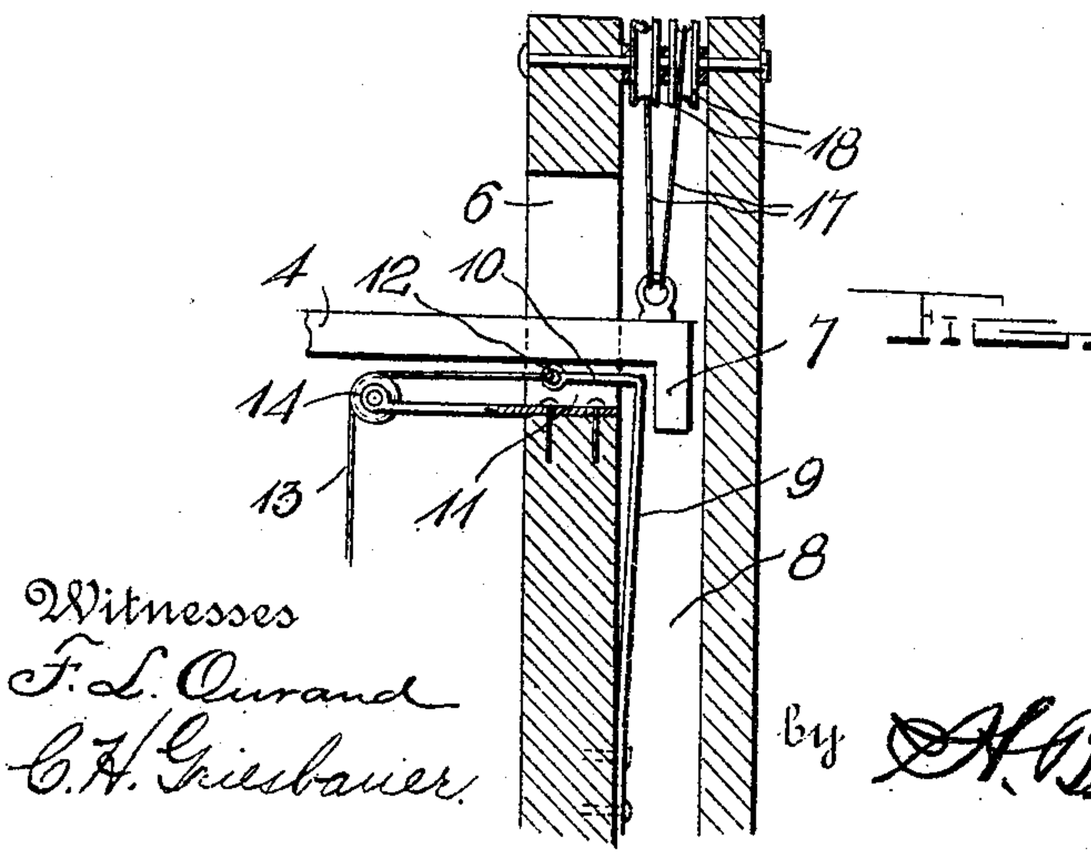

FIG. 3

Witnesses
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UNITED STATES PATENT OFFICE.

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SLIDING GATE.

940,134. Specification of Letters Patent. Patented Nov. 16, 1909.

Application filed April 5, 1909. Serial No. 488,011.

To all whom it may concern:

Be it known that I, FRED H. DOERING, a citizen of the United States, residing at Salida, in the county of Chaffee and State of Colorado, have invented certain new and useful Improvements in Sliding Gates; and I do 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 improvements in sliding gates.

The object of the invention is to provide a gate having a simple and improved operating mechanism whereby the gate will open and close by gravity and means whereby the same will be automatically fastened when brought to a closed position.

With the foregoing and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts, as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a perspective view of the gate in closed position; Fig. 2 is a side view, partly in section, showing the gate in an open position; Fig. 3 is a detail sectional view of the upper end of the latch post, showing the position of the end of the gate supporting track and its supporting spring when the gate is in a closed position.

Referring more particularly to the drawings, 1 denotes the latch post and 2 and 3 denote the track supporting posts. On the upper end of the track post 3 is pivotally mounted a gate supporting track 4. The track 4 projects a short distance beyond the post 3 and is provided on its end with a stop lug 5. The opposite end of the track 4 projects through a slot or passage 6 and is provided on its end with a downwardly projecting lug 7. The end of the track 4 having the lug 7 extends into a vertical recess or channel 8 formed in one side of the latch post 1 and is adapted to be raised and lowered in said recess 8 and passage 6 by means of an operating mechanism hereinafter described.

Arranged in the recess 8 is a flat track supporting spring 9 having a right angularly formed upper end 10 which works through an opening or passage 11 formed in the post 1 below the passage 6, as shown. In the right angularly formed end is an eye 12 with which is connected a spring retracting cord 13 which passes through a guide pulley 14 on the inner side of the post 1 and extends down to within convenient reach of a person passing through the gate.

To the upper end of the post 1 is secured a cross bar 15 which projects a suitable distance on either side of the post and is provided on its outer ends with guide pulleys 16. To the end of the track 4 within the channel or recess 8 is connected the inner ends of operating cords 17 which extend upwardly through the upper end of the track and over guide pulleys 18 suitably mounted in the upper end of the channel or recess 8 and from said pulleys 18, the cords 17 extend in opposite directions and pass through the guide pulleys 16 from which they hang down within convenient reach of a person approaching the gate and are provided on their lower ends with suitable handles 19. By means of the operating cords 17, the free end of the track 4 is raised in the passage 6 and recess 8 so that the track will be inclined from the latch post toward the pivotal end thereof. When the gate track has thus been raised, the spring 9 will spring out so that its right angularly formed upper end will lie across the recess 8 below the lug 7 of the track and thus form a support for this end of the track when in a raised position.

Slidably supported on the track 4 is a gate 20, which may be of any suitable construction and is provided with a supporting frame 20′ on the upper end of which are bearing brackets 21 in which are revolubly mounted gate supporting rollers 22 which engage and travel on the track 4, thus forming a slidable support for the gate. The pivot post 3 is of such height with respect to the other supporting post and the latch post 1 that when the free end of the track is in its lowermost position in the passage 6 of the latch post, the track will incline downwardly from the pivot post toward the latch post to a sufficient degree to cause the gate to slide down the track to a closed position, as shown in Fig. 1 of the drawings. When it is desired to open the gate, the person approaching the same from either direction, will pull upon the operating cord at the side of the gate which he is approaching thereby raising the free end of the track in the passage 6 which will permit the spring 9 to spring across the recess 8 below the lug

7 and thus support the free end of the track in its elevated position, as hereinbefore described. When the end of the track is thus elevated, the track will incline from the latch post toward the pivot post 3, a sufficient distance to cause the gate to slide down the track to an open position, as shown in Fig. 2 of the drawings. In passing through the gate, the person grasps the spring retracting cord 13 and pulls the spring back in the recess 8 thus permitting the free end of the track to drop and thus incline the track from the pivot post toward the latch post which will cause the gate to again move to a closed position.

On the end of the gate adjacent to the latch post is formed a spring latch 23 having a beveled or inclined outer end 24 which is adapted to engage a keeper 25 and automatically raise the latch until the same is in position to hook over the keeper. The latch is disengaged from the keeper when the free end of the track is raised by the operating cords 17, this movement of the track also raising the latch end of the gate, as will be understood.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention, as defined in the appended claims.

Having thus described my invention, what I claim is:

1. In a sliding gate, a latch post having formed in its upper end a passage and a vertically disposed recess, track supporting posts, a gate supporting track pivotally mounted at one end in one of said posts and having its free end engaged with the passage and recess in said latch post, a cross bar secured to the upper end of said latch posts, guide pulleys arranged on the outer ends of said bar and in the upper end of said latch post, track raising cords connected to the free end of the track and extending in opposite directions through said guide pulleys whereby the free end of the track may be raised from either side of the gate, a track supporting spring arranged in the recess in said latch post, a spring retracting cord connected to said spring and extending down to within convenient reach of the person passing through the gate, whereby said spring may be retracted to permit the free end of the track to lower after being raised by the track raising cords, and a gate slidably mounted on said track and adapted to slide to open and closed positions when the free end of the track is raised and lowered.

2. In a sliding gate, a latch post, a gate supporting track pivotally mounted at one end and adapted to loosely engage the track posts at its free end, means to raise the free end of the track in said gate post, a spring to hold said end of the track in raised position, means to retract said spring and thus permit the free end of the track to lower, a gate having a supporting frame, supporting rollers mounted in the upper end of said frame and adapted to travel on said track whereby when the free end is in raised position, the gate will open and when said end of the track is in a lowered position, the gate will close, a keeper on said latch post, and a latch on the gate adapted to automatically engage said keeper when the gate closes and to be disengaged therefrom when the free end of the track and gate are raised.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FRED H. DOERING.

Witnesses:
JAMES A. TURNER,
HARRY L. MCGINNIS.