

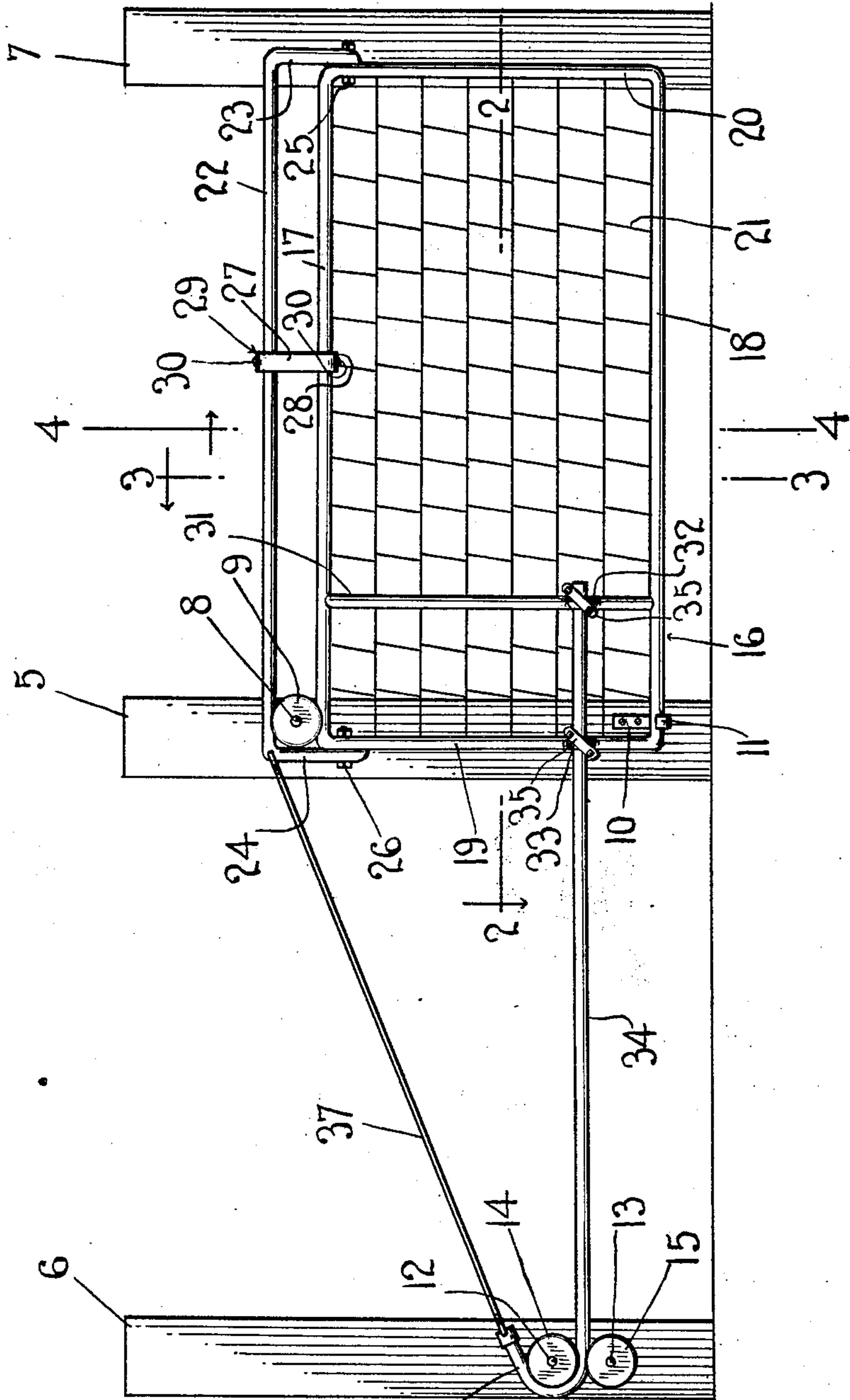
999,119.

V. C. MARTIN.  
SLIDING GATE.  
APPLICATION FILED AUG. 23, 1909.

Patented July 25, 1911.

2 SHEETS—SHEET 1.

Fig. 1.



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Witnesses

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By

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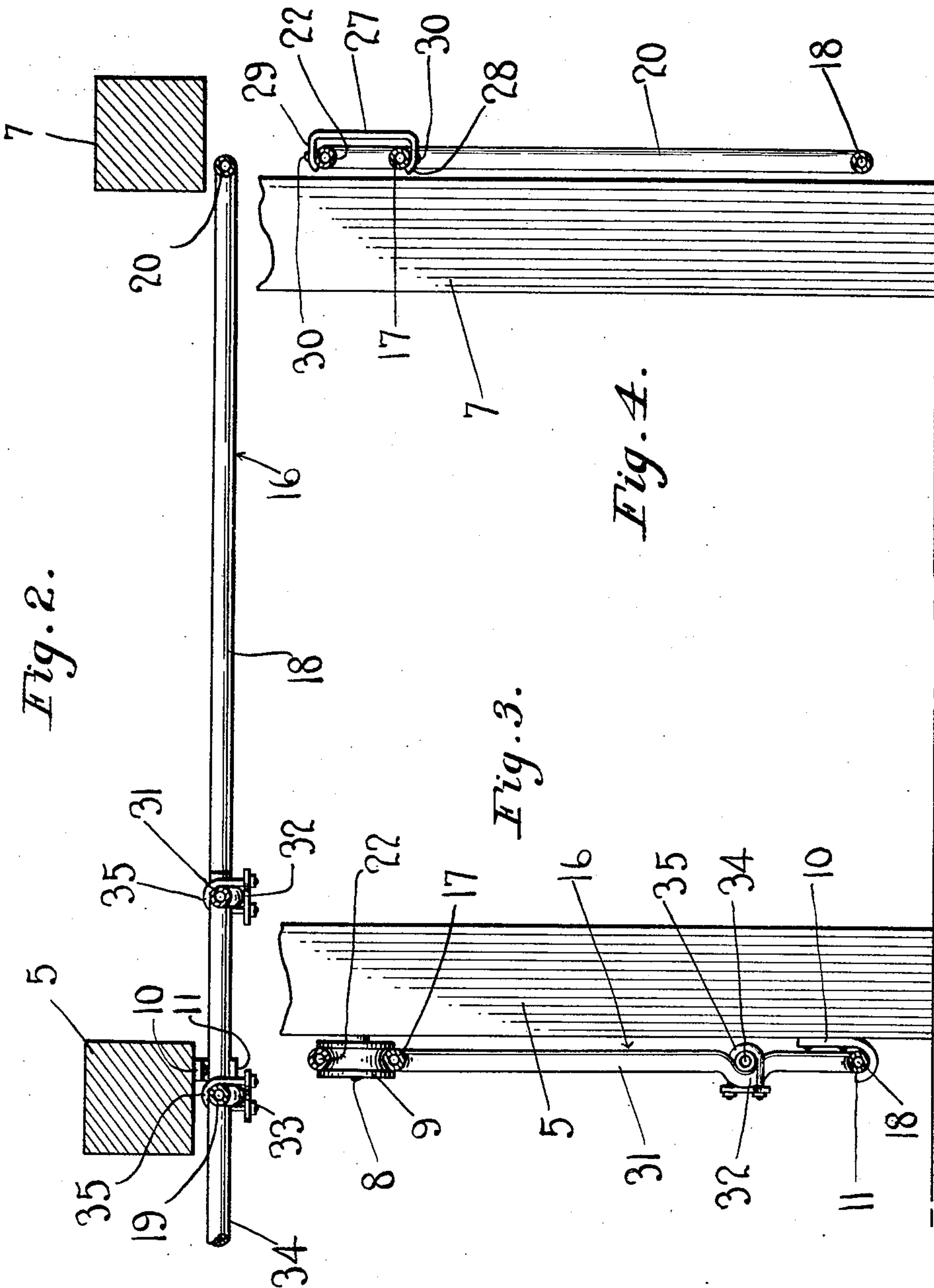
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# UNITED STATES PATENT OFFICE.

VIRGIL C. MARTIN, OF REWEY, WISCONSIN.

## SLIDING GATE.

999,119.

Specification of Letters Patent.

Patented July 25, 1911.

Application filed August 23, 1909. Serial No. 514,282.

*To all whom it may concern:*

Be it known that I, VIRGIL C. MARTIN, a citizen of the United States, residing at Rewey, in the county of Iowa, State of Wisconsin, have invented certain new and useful Improvements in Sliding 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 improvements in gates and more particularly to that type of gates known as horizontal sliding gates.

An object of the invention is the provision of a device by means of which any tendency of the gate to sag at one end may be corrected.

With this and other objects in view as will more fully hereinafter appear, the present invention consists in certain novel details of construction and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings and more particularly pointed out in the appended claims; it being understood that various changes in the form, proportion, size and minor details of the device may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings forming part of the specification:—Figure 1 is an elevation, showing in closed position, the gate embodying my invention. Fig. 2 is a sectional plan view approximately on the line 2—2 of Fig. 1 and disclosing the lower guide. Fig. 3 is a sectional end elevation on the line 3—3 of Fig. 1 and looking toward the left-hand end of the gate. Fig. 4 is a similar view on line 4—4 of Fig. 1 but looking in the opposite direction and disclosing the brace connecting the upper side with the track.

Similar numerals of reference are employed to designate corresponding parts throughout.

A pair of bearing or supporting posts are designated by the numerals 5 and 6. These members are arranged parallel and are spaced apart for a distance corresponding approximately to the length of the gate.

A latch post is designated by the numeral 7 and is spaced from one of the bearing posts for a distance corresponding approximately to the length of the gate.

Extending laterally from the bearing post

5 or that adjacent to the latch post 7 and located at the upper end portion thereof is a shaft 8. Journaled on this shaft is a grooved sheave 9. Fixedly secured to the bearing post 5 and adjacent the lower end thereof and in a vertical plane with the sheave or pulley 9 is a guide 10. This member is preferably formed of a single piece of metal substantially rectangular in contour and cross section, and the upper end of which is fixedly secured to the bearing post 5 while the lower end portion curves outwardly and upwardly as shown at 11 and in a plane with the outer face of the pulley 9, or substantially so. Extending laterally from the bearing post 6 or that farthest removed from the latch post 7 are a pair of shafts 12 and 13. These shafts are located a trifle above the horizontal plane of the guide 10 on the adjacent bearing post 5 and have journaled thereon a pair of grooved sheaves or pulleys 14 and 15 similar to the pulley 9. Owing to the disposition of the shafts 12 and 13 and the diameters of the pulleys or sheaves 14 and 15 the peripheries of these pulleys will not bear one upon the other whereby a space will exist between said pulleys.

The gate frame is designated in general by the numeral 16 and is preferably formed of metallic tubing. The frame is a rectangular shaped structure, the opposite sides of which constitute the upper and lower sides of the gate, and are indicated by the numerals 17 and 18 and the opposite ends by the numerals 19 and 20. The space flanked by the sides and ends is covered with a wire netting 21, whereby what is known as a net gate is provided.

A rail 22 is carried by the upper side portion of the gate. This rail is preferably formed of a single piece of metallic tubing, the opposite end portions of which are bent downwardly and at right-angles as shown at 23 and 24 and are fixedly secured adjacent the upper corners of the frame 16. With this construction it is obvious that the body portion of the track 22 is spaced from, parallel, and in a vertical plane with the upper side 17 of the frame. The downturned end portions 23 and 24 are secured to the upper corners by means of bolts 25 and 26, extending through alining openings in the bent portions and frame 16. The space between the opposed faces of the side 17 and track 22 corresponds approximately to the diame-



ter of the groove of the sheave or pulley 9, thus it will be seen that the latter when arranged in the space between the upper side 17 and track 22 will bear on the said upper side and track and by virtue of the flange caused by the formation of the groove displacement of the upper side and track on the pulley will be prevented.

It might here be stated that the distance between the lower side of the sheave or pulley 9 and outwardly curved portion 11 of the guide 10 corresponds approximately to the distance between the upper and lower sides 17 and 18 of the gate frame so that when the upper side and track bear on the sheave or pulley as before described, the lower side 18 will be arranged in the curved portion 11 of the guide 10.

With this construction it is obvious when the parts are in position as shown in Fig. 1, or the gate moved to bear on the latch post 7 that a force applied to the end 16 adjacent the latch post 7, and directed toward the bearing posts 5 and 6 will result in the gate sliding toward the bearing posts 5 and 6. It will be understood that the upper side 17 of the frame will not bear sufficiently hard on the pulley 9 to prevent rotation of the latter when the gate is sliding; in fact this upper side 17 will be slightly spaced from the wall of the groove but not sufficiently far to prevent it from performing its function of guarding against displacement of the gate upon the pulley 9. The track 22 and upper side 17 are held against spreading by means of a clamping strap 27. This member is preferably formed of metal and has portions adjacent its opposite ends curved laterally as shown at 28 and 29 in Fig. 4. These curved portions bear on the upper and lower sides of the track 22 and upper side 17 of the frame, and are so curved that the body portion of the strap will be spaced from the sides of the track and upper side 17, whereby the passage of the gate over the pulley 9, will not be prevented. The clamping strap is secured to the intermediate portions of the track 22 and upper side 17 by means of bolts or rivets 30.

In order to correct any sagging of the gate frame and at the same time to hold the latter braced at all times the following construction is employed:—By referring now to Fig. 1 it will be seen that carried by the gate frame 16 and adjacent that end of the latter farthest removed from the latch post 7 is a brace 31 parallel with and spaced from the end 19. The lower end portion of the brace 31 is bulged outwardly as shown at 32 and aligns with a similarly bulged portion 33 on the end 19. A supporting arm is designated by the numeral 34 and is preferably formed of metallic tubing. What will subsequently be termed

the inner end portion of the supporting arm bears in the bulged portions 32 and 33 and is detachably secured therein by means of a pair of clevises 35. The clevises straddle the brace 31 and end 19 and also the inner end portions of the brace rod 34 and at their outer ends are provided with the usual plates which are clamped to the opposite faces of the bulged portions by means of the usual nuts. The portions 32 and 33 are bulged outwardly sufficiently far so that the inner end portion of the brace rod 34 will be coincident with one face of the side 19 and brace 31 when arranged in the bulged portions, as clearly shown in Fig. 3. The brace rod extends in the direction of the length of the gate and is of a length somewhat greater than the distance between the bearing posts 5 and 6. It might here be stated that the bulged portions 32 and 33 are in direct alinement with the space between the sheaves or pulleys 14 and 15 carried by the bearing posts 6 so that the outer or free end of the brace rod 34 is arranged in the space between said pulleys 14 and 15 and is disposed in the grooves of the latter. The free end portion of the brace rod 34 terminates in an upwardly curved extension 35, which projects beyond the upper pulley 14 and connection between the extremity of this upwardly curved portion 36 and the adjacent end of the track 22 is established by means of a connecting rod 37, the opposite ends of which are fixedly secured to the said track and extremity of the extension 36. With this construction it is obvious when that end of the gate bearing on the latch post sags the same can be taken up by first loosening the clevises 35 and then moving the arm 34 toward the sagging end. This movement of the arm will draw on the connecting rod 37 and the stress on the latter will bring the gate to its normal horizontal position. It is evident when the opposite end of the gate sags a movement of the arm 34 in the opposite direction will result in correcting the sag at the said opposite end.

From the foregoing it can be seen that I have provided a device which is comparatively simple in structure and inexpensive to manufacture, embodying few parts and these so arranged that the danger of derangement will be reduced to a minimum.

What is claimed as new, is:—

1. The combination with a gate having a pair of stiles at one end, said stiles being crimped near their lower ends, of a brace bar having a hook at one end and having its opposite end bearing within said crimps, clevises carried by said crimps encircling said bar and adjustably securing the bar to said stiles, and an inclined truss rod terminally secured to the hook end and to said gate above said bar.



2. In fence construction, gate posts, a post  
in alinement with said gate posts and carry-  
ing spaced sheaves near its lower end, a gate  
mounted for sliding movement between the  
5 gate posts, said gate having spaced stiles at  
one end provided with alined crimps, a  
brace bar having an end adjustably secured  
within said crimps and having a hook end  
supported by and working between said  
10 sheaves, said hook end contacting with the

sheaves and limiting movement of the gate,  
and a truss rod terminally secured to the  
hook bill and to the gate above said bar.

In testimony whereof, I affix my signa-  
ture, in presence of two witnesses.

VIRGIL C. MARTIN.

Witnesses:

O. G. REWEY,

G. A. KETTERER.

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

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