

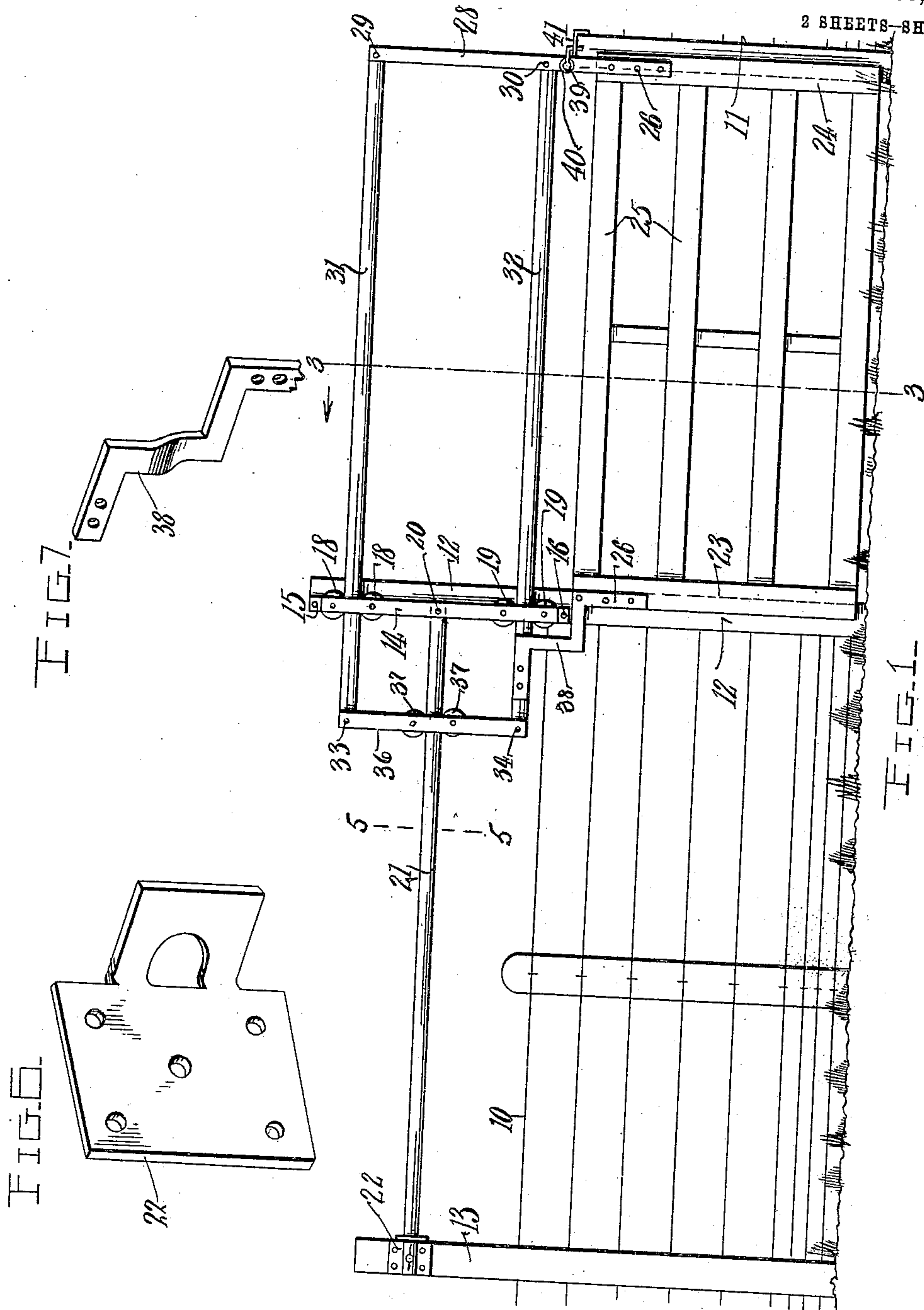
979,302.

J. HORNER.  
GATE.

APPLICATION FILED FEB. 12, 1910.

Patented Dec. 20, 1910.

2 SHEETS-SHEET 1.



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2 SHEETS—SHEET 2.

FIG. 2.

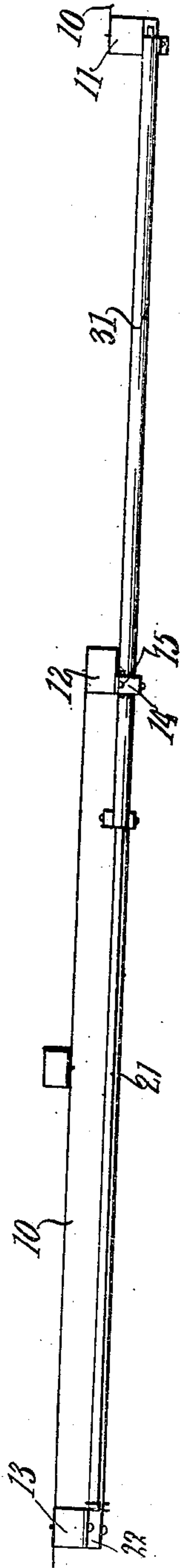


FIG. 3.

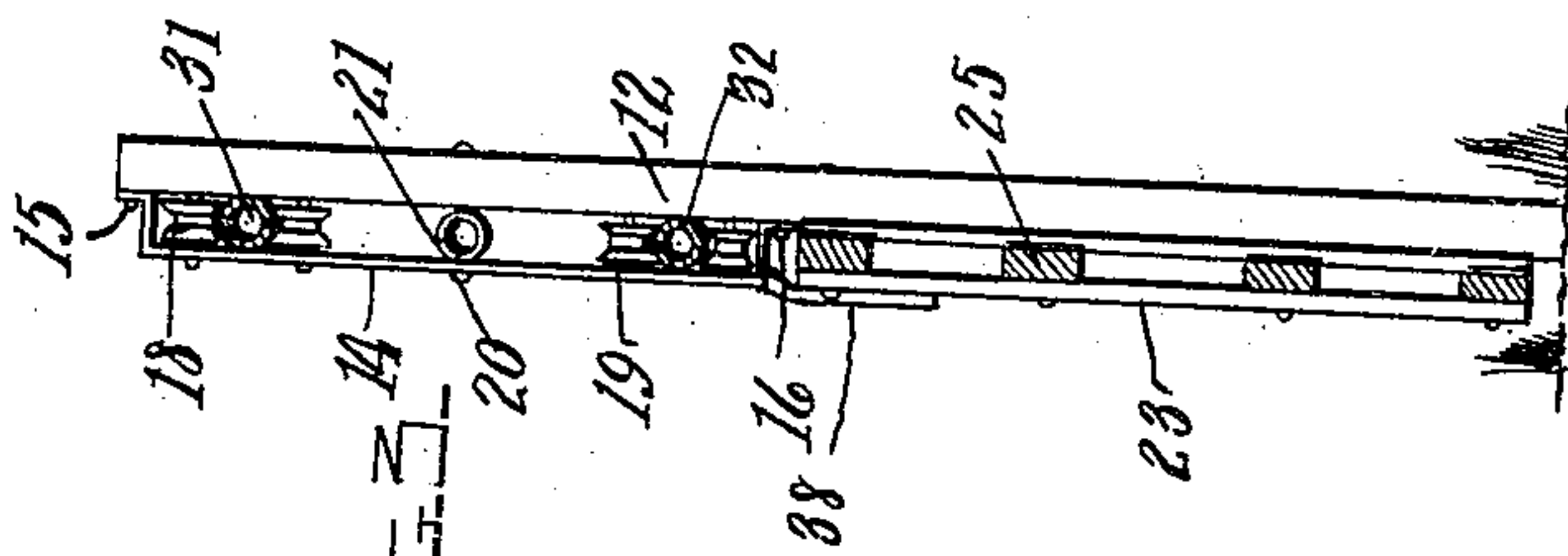


FIG. 4.

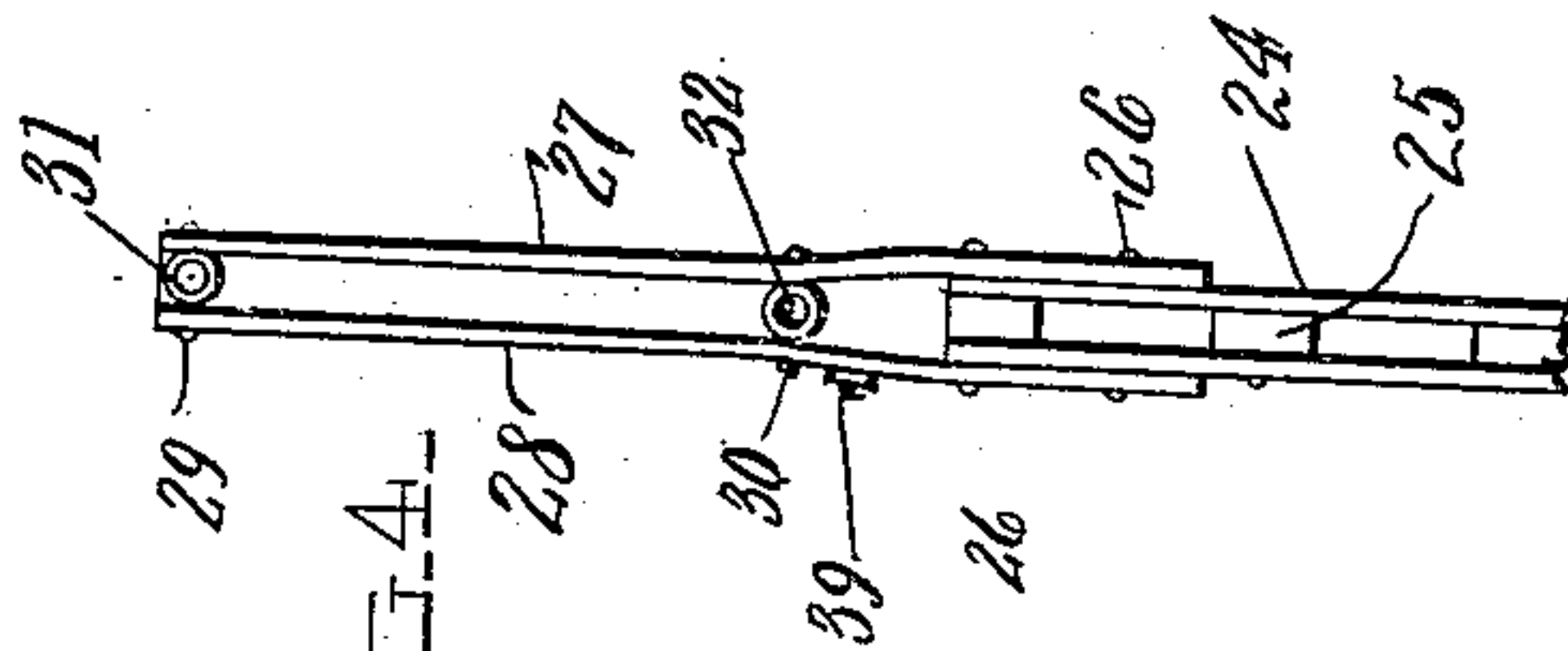
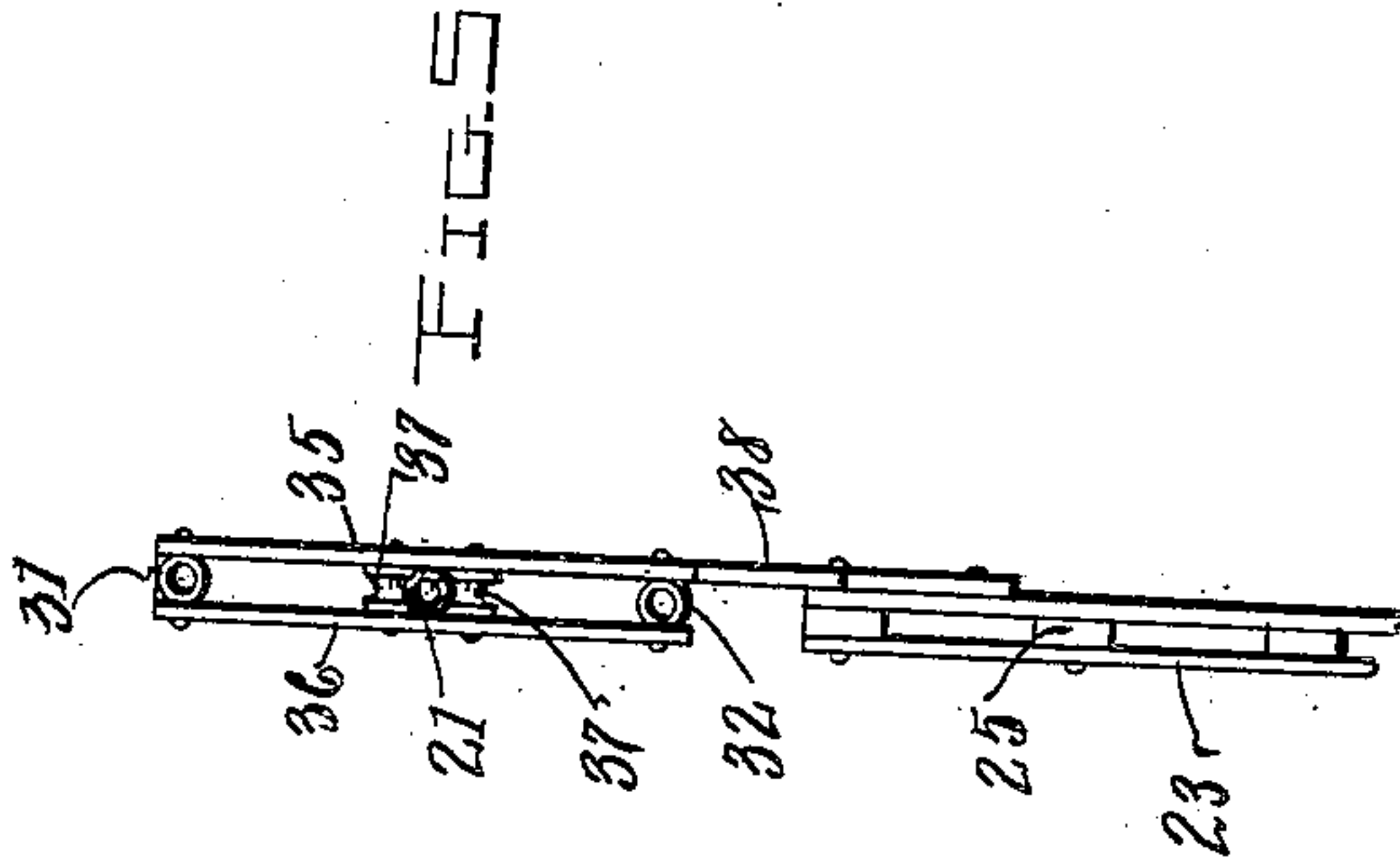


FIG. 5.



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# UNITED STATES PATENT OFFICE.

JOHN HORNER, OF FRIEND, NEBRASKA.

## GATE.

979,302.

Specification of Letters Patent. Patented Dec. 20, 1910.

Application filed February 12, 1910. Serial No. 543,463.

*To all whom it may concern:*

Be it known that I, JOHN HORNER, a citizen of the United States, residing at Friend, in the county of Saline, State of Nebraska, 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.

This invention relates to improvements in gates, more particularly to the larger class of farm gates, and has for its object to improve the construction and increase the efficiency and utility of devices of this character.

Another object of the invention is to provide a gate of simple construction and effectually "balanced" so that the labor necessary to open and close the gate is reduced to a minimum.

With these and other objects in view, the invention consists in certain novel features of construction as hereinafter shown and described and then specifically pointed out in the claim; and, in the drawings illustrative of the preferred embodiment of the invention, Figure 1 is a side elevation of the improved gate in closed position. Fig. 2 is a plan view of the same. Fig. 3 is a transverse section on the line 3—3 of Fig. 1. Fig. 4 is a view of a portion of the outer or latch end of the gate together with the guide bars and the supports therefor. Fig. 5 is a view of a portion of the inner or "hinge" end of the gate together with the guide bars and the supporting bracket therefor and the guide rail, the latter being in transverse section on the line 5—5 of Fig. 1. Fig. 6 is an enlarged perspective view of the supporting clip of the guide rail. Fig. 7 is an enlarged perspective view of the hanger which couples the gate with one of the guide bars.

The improved gate may be employed in connection with fences of various constructions, but for the purpose of illustration is shown associated with a conventional wire fence represented as a whole at 10.

In the improved gate structure two posts 11—12 are employed at opposite sides of the gateway opening, the post 11 occupying the position of the ordinary latch post, while the post 12 occupies the position of the ordinary hinge post but is higher than the usual hinge post. One of the posts of the fence at

the hinge post side of the gateway opening is higher than the ordinary post, and is spaced from the post 12 a distance greater than the "throw" of the gate, or greater than the width of the gateway opening, this latter post being represented at 13. The posts 11, 12 and 13 may be of any suitable construction, but will generally be of wood, but it will be understood that it is not desired to limit the invention to any specific material for the posts.

Connected to one side of the post 12 is a strap 14 having inwardly directed terminals and secured by bolts or other fastening means 15—16 to the post. By this arrangement the body portion of the strap is spaced away from the post 12, and mounted for rotation between the outwardly directed portion of the strap and the post are two pairs of guide rollers, an upper pair 18 and a lower pair 19. Connected at 20 to the post 12 and between the post and the strap 14 is a rail 21, the rail being extended horizontally toward and connected by a clip 22 to the post 13. The rail 21 is thus spaced above the body of the fence 10 and in parallel relation therewith, as shown.

The gate may be constructed of any suitable material and of any suitable form, but for the purpose of illustration a conventional "barred" gate is represented and constructed with vertical end members 23—24 and horizontal members 25, and is slightly greater in width than the distance between the posts 11—12, so that the gate will lap over the posts 11—12 at its ends when in closed position, as shown in Fig. 1.

Connected by bolts or other suitable fastening means 26 to opposite sides of the end member 24 of the gate are two metal straps 27—28, and extending upwardly above the gate, and connected at 29—30 between the straps 27—28 are two guide bars 31—32, the guide bars being spaced apart a distance corresponding to the spaces between the pairs of rollers 18—19, so that the bars are guided between the rollers, as shown. At their opposite ends the bars 31—32 are connected at 33—34 between two straps 35—36. The bars 31—32 are considerably longer than the gate, and mounted for rotation between the straps 35—36 are spaced rollers 37, similar to the rollers 18—19, and operating upon opposite sides of the rail 21, as shown.

Connected between the lower rail 32 and



the vertical member 23 of the gate is a hanger 38, the hanger being formed with an intermediate offset to enable it to pass the lower portion of the strap 14 when the gate is in closed position, as shown in Fig. 1.

A suitable latch device is employed between the free end of the gate and the post 11, and consists of a hook 39 mounted to swing at 40 upon the strap 27, and works through a perforation in a plate 41 connected to the post 11, so that the gate may be locked in closed position.

The gate and its suspension devices may be constructed of any suitable material, either wholly of metal or partly of metal and partly of wood, but the bar 14, the straps 27—28 and 35—36, the rail 21, and the bars 31—32 will preferably be of metal of suitable strength. The rail 21 and the guide bars 31—32 will also preferably be tubular in transverse section, to combine strength with lightness.

The straps 27—28, as before stated are rigidly coupled to the gate at one end by the bolts 26, while the bracket 38 is likewise rigidly coupled to the gate at the opposite end. The rigid members 27—28 thus form correspondingly rigid supports for the guide members 31—32, while the bracket 38 rigidly supports the lower bar 32. The bars being otherwise coupled by the straps 35—36 produce a light rigid frame to support the gate and by this means the strains are distributed over both of the guide bars and the straps 35—36 supported from movement so that the gate is properly guided upon the guide rail 21. The upper bar 31 thus serves as a brace and support and coacts with the lower bar to prevent the sagging of the gate. By this means the bars can be constructed of relatively light material as the strains are distributed over both bars, as before stated.

The improved device is simple in con-

struction, may be employed in connection with various kinds of fences and arranged to operate over openings of any width.

The improved gate structure is applicable to ordinary narrow gates for admitting the passage of persons only, or of the widest farm gates or roadway gates.

What is claimed is:—

In a gate, a plurality of posts spaced apart from each other, two of said posts being located on opposite sides of a gateway, the intermediate post being extended above the normal fence line, a bracket mounted on the upper end of the intermediate post, rollers mounted between said bracket and the upper end of said intermediate post at vertically spaced points, a gate adapted to occupy a position when closed between the posts on opposite sides of the gateway, a vertical support on one end of said gate, a tubular rod secured at one end to said vertical support and movable between the lower set of the rollers carried by the intermediate post, said vertical support being extended above said tubular rod, a tubular rod mounted at one end on said vertical support and movable between the upper set of rollers carried by said intermediate post, bars connecting the remaining ends of the tubular bars, rollers journaled between the bars last named, an L-shaped bracket connecting the lower tubular bar and one end of the gate, a tubular rod secured at one end to the intermediate post and disposed in a plane intermediate of the planes of the upper and lower tubular bars and extending away from said tubular bars and secured to one of the posts distantly of the intermediate post.

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

JOHN HORNER.

Witnesses:

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E. G. BROWN.