

June 5, 1934.

J. L. WILSON

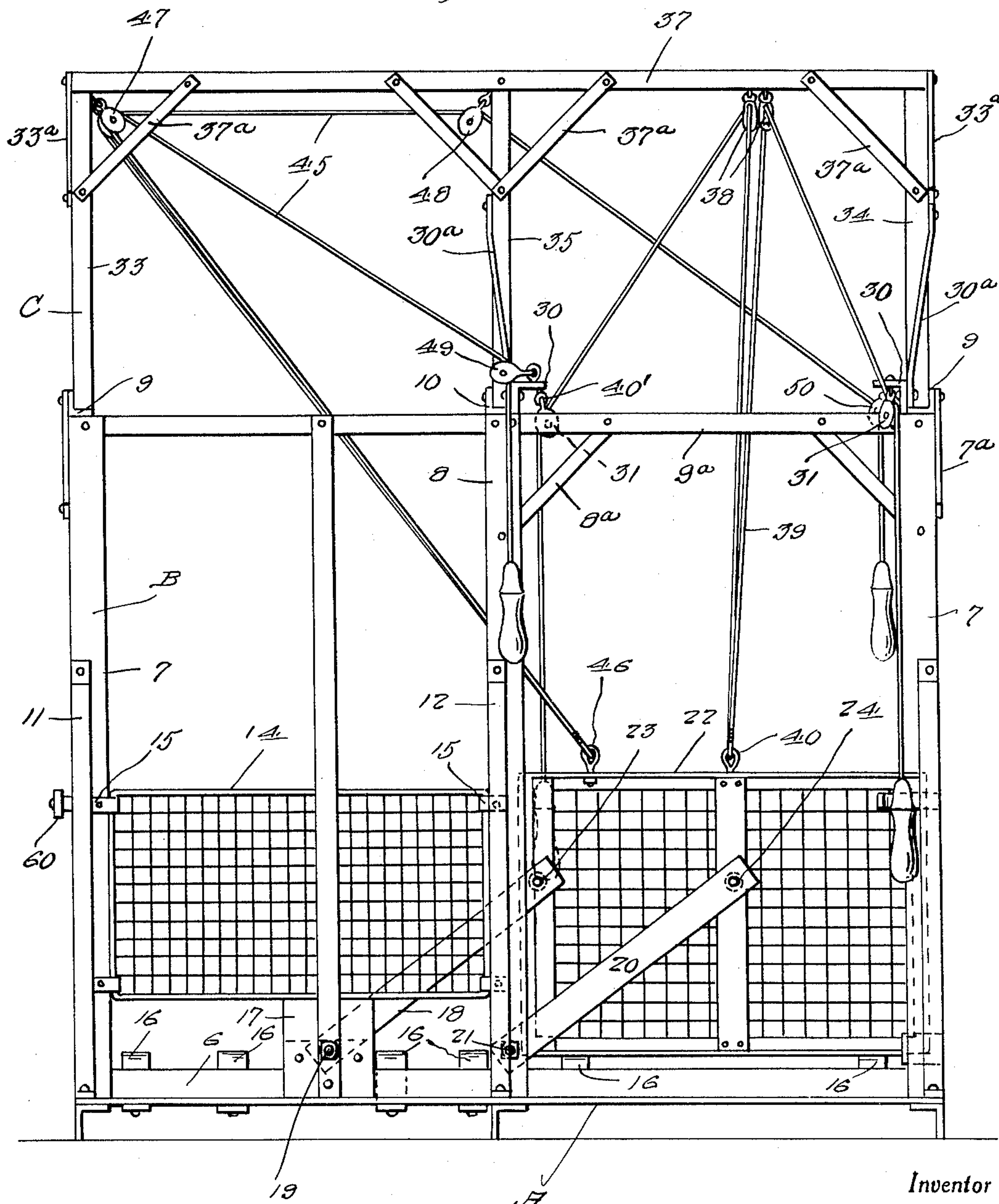
1,961,680

GATE

Filed June 30, 1933

3 Sheets-Sheet 1

Fig. 1.



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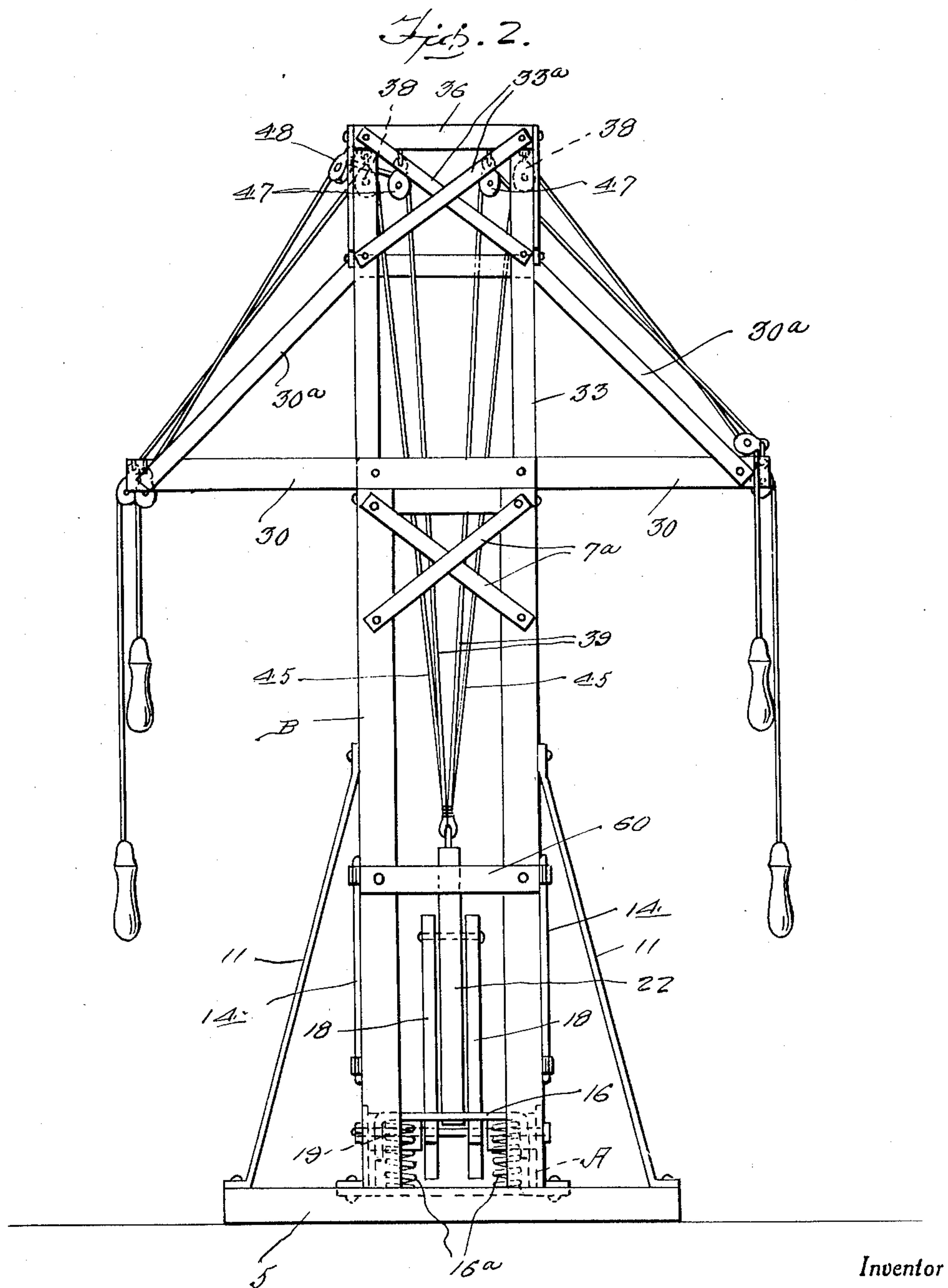
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3 Sheets-Sheet 2



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Fig. 3.

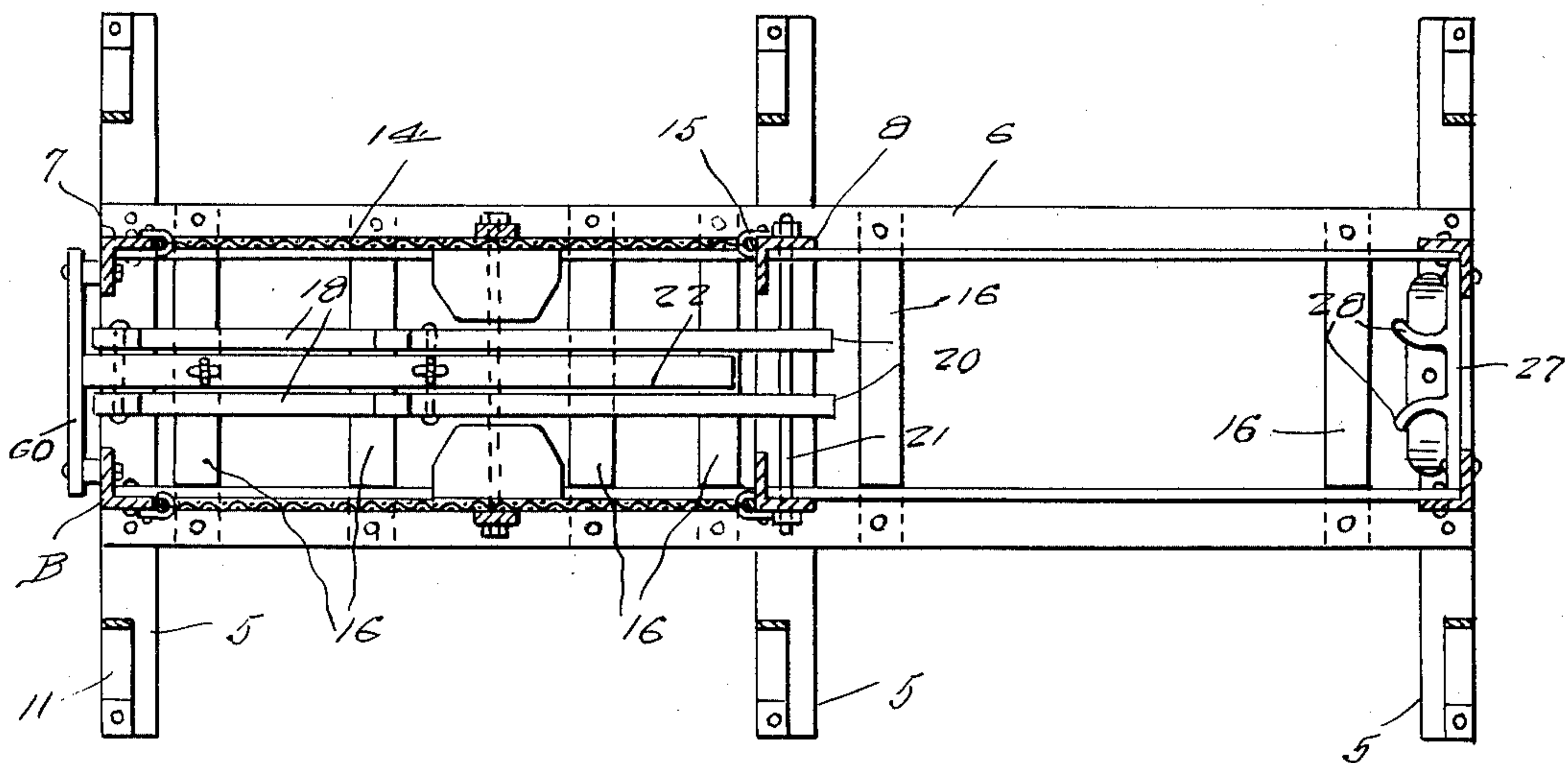
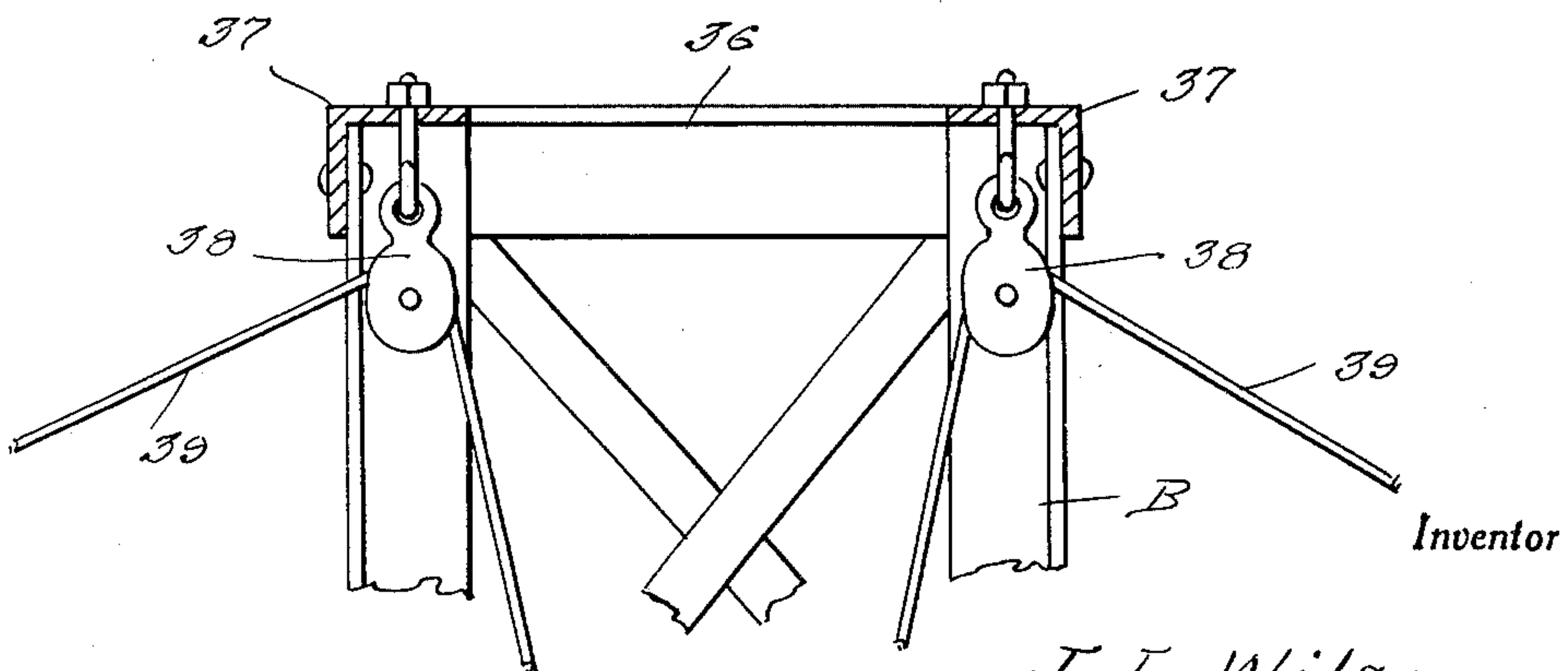


Fig. 4.



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UNITED STATES PATENT OFFICE

1,961,680

GATE

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Application June 30, 1933, Serial No. 678,492

1 Claim. (Cl. 39—64)

This invention relates to gates, and more particularly to gates of the type which may be opened or closed by the occupants of a vehicle without necessity of getting out of the vehicle.

It is an object of the present invention to provide in a gate of the character above mentioned a structure which is comparatively simple, compact and convenient in its arrangement of parts, easy to manipulate, practical, and thoroughly efficient and reliable in use and operation.

The invention together with its numerous objects and advantages will be best understood from a study of the following description taken in connection with the accompanying drawings wherein is illustrated a preferred embodiment of the invention.

It is to be understood at the outset that it is in no wise intended to restrict the invention to the precise details of construction, combination and arrangement of elements as herein illustrated and described, other than may be necessary to meet the requirements of the prior art and scope of the appended claim.

In the drawings:

Figure 1 is a side elevational view of the gate involving the features of the present invention.

Figure 2 is an end elevational view thereof.

Figure 3 is a horizontal section through the gate in open position, and

Figure 4 is a detail section through the upper portion of the framework.

In carrying out the invention there is provided a base frame structure A comprising transverse angle irons 5 on which are supported spaced parallel and longitudinal angle irons 6 spaced inwardly from the ends of the bars 5.

Rising from the frame A is a vertical frame B comprising vertical posts 7 disposed adjacent the ends of the bars 6, and posts 8 rising from intermediate portions of the bars 6. The bars 7 are connected at their upper ends by end bars 9 and side bars 9a, the side bars 9a connecting the upper ends of the bars 8 with the upper ends of the bars 7. The upper ends of bars 8 are also connected together by a cross bar 10. The bars 8 are braced with respect to the bars 9a by diagonal braces 8a while the bars 7 at corresponding ends of the frame structure B are braced by crossed braces 7a. The bars 7 are also braced with respect to the frame A by braces 11, while the bars 8 are braced with respect to said frame A by braces 12.

The super-frame C comprises a pair of end uprights 33, a second pair of end uprights 34,

and an intermediate pair of uprights 35. If desired, and as may be found preferable in actual practice, the uprights 33, 34 may be formed integral with and constitute extensions of the uprights 7 while the uprights 35 may also be formed integral with and constitute extensions of the uprights 8. Each pair of bars 33, 35 and 34 is connected by a cross bar 36. Side or longitudinal bars 37 connect the upper ends of the uprights 33, 34 and 35. The bars 37 are braced with respect to the bars 33, 34 and 35 by braces 37a while each pair of uprights 33, 34 are connected by cross bars 33a.

As will be understood as the description proceeds the portions of the frames A, B and C on the right hand side of the bars 8 and 35, (viewing the structure in Figure 1), will be disposed across the roadway while the portions of said frame at the left hand side of the bars 8 and 35 be disposed laterally or to one side of the roadway.

A gate of any suitable construction may be used, in the present instance, a wire gate of the type shown in the drawings and indicated by the reference numeral 22 is shown at the right hand side of the bars 8 which is the position of the gate when in closed position. Disposed at opposite sides of the frame A at the left hand side of the bars 8 are bearing blocks 17 provided with ball bearings or similar bearing structures in which are journaled the ends of a pivot bolt or rod 19. A pair of arms 18 are rockably connected at one end with the rod 19 while at their upper ends said arms 18 pivotally engage with one end of the gate as at 23. A second pair of arms 20 are rockable on a bolt 21 supported between the lower portions of the bars 8, while the upper ends of the arms 20 are pivotally connected as at 24 with an intermediate portion of the gate 22. The pivotal connections 21, 23 and 24 will, in actual practice include ball bearings or other suitable anti-friction devices to facilitate the smooth operation of the gate. When in fully closed position the free end of the gate 22 abuts a stop member 27 supported between the bars 7 disposed at the right hand side of the bars 8, and carried by the stop 27 are spring arms 28 which straddle the gate 22 and retaining the gate in closing position.

When in a fully open position the gate 22, is as before mentioned, arranged at the left hand side of the bars 8, and the lower edge of the gate is supported on gate rests supported between the bars 6. Each of the gate rests includes an inverted substantially U-shaped bar 16 supported

at its ends by coil springs 16a. The rests 16 provide a yielding support for the gate to ease the weight of the gate down, in the operation of the gate. In its open position the gate 22 is supported by the rests 16 between a pair of spaced parallel guards 14 supported vertically in the framework B between the bars 8 and the bars 7 on the left hand side of the bars 8. When in said open position one end edge of the gate 22 engages a suitable stop 60 supported between the last mentioned pair of bars 7 as will be clear from a study of Figure 3.

Means is provided for operating the gate by the occupant of a vehicle without alighting therefrom, for the purpose of either opening or closing the gate. As will be clear an operation of the gate may be effected from either side thereof.

The operating means for the gate includes a pair of cables 39 connected at one end as at 40 to the upper edge of the gate 22 intermediate the ends of the gate. The cables 39 are trained over pulleys 38 mounted opposite each other on the bars 37. The cables 39 are also trained over pulleys 31 suspended as at 40' from cross bars 30, 30, it being noted that one cross bar 30 extends between the upper ends of the bars 8 and the other cross bar 30 extends between the upper ends of the bars 7 at the right hand side of the bars 8. On their free ends the cables 39 are provided with suitable handles and these cables are for the purpose of moving the gate from the closed position shown in Figure 1 to the open position shown in Figure 3. In this connection it will be noted that when either of the cables 39 is pulled the gate is lifted from the position shown in Figure 1 and caused to swing from the right hand side of the bars 8 to the left hand side of said bars and then to lower into the position shown in Figure 3, which is the fully closed position.

For opening the gate 22 from either side thereof there are provided cables 45 which are connected at one end as at 46 to the top of the gate 22 at the left hand end of the gate. These cables 45 are trained over pulleys 47 suitably supported in the framework B adjacent the upper ends of the uprights 33. One of the cables 45 is disposed at one side of the structure and is trained over a pulley 43 supported in the upper portion of the structure C adjacent the upright 35. This said cable 45 is also trained over a pulley 50 provided on one of the bars 30.

The other of the cables 45 is trained over a pulley 49 suitably mounted on the other of the bars 30 at that side of the device opposite to the pulley 50. Each of the cables 45 at its free end is also provided with a suitable handle and as is obvious, the cables 45 are accessible, one at each side of the structure. It will be apparent that when either of the cables 45 is pulled the gate 22 is caused to move from the fully closed position shown in Figure 1 to the open position shown in Figure 3, arms 18, 19 swinging about the pivots 19, 21 and the gate 22 swinging about the pivots 23, 24. When in a fully open position the gate 22, as before stated, is disposed between the guards 14 with the lower edge of the gate supported on the cushion rests 16 and with one end edge of the gate in abutment with the stop 60.

As will be noted the bars 30 project in reverse direction from the structure and are braced with respect to the bars 33, 34 by brace rods 30a, 30a.

Having thus described my invention, what I claim as new is:

A gate structure of the class described comprising an upright frame including a front portion bridging a roadway and a rear portion, a gate, sets of lever arms having their upper ends pivoted to the gate and their lower ends to the frame, a pair of bars having intermediate portions connected with upper portions of the front part of the frame, one bar paralleling one side of the roadway and the other the opposite side thereof, pulleys carried by the ends of said bars, a pair of pulleys carried by the top part of the front portion of the frame, a pair of cables connected to the top of the gate at the center thereof, said cables passing one over one pulley of the pair and one over the other pulley, one cable passing through the pulley at one end of one of the bars and the other cable passing through the pulley at the opposite end of the other bar, a pair of pulleys in the upper rear corner of the rear part of the frame, a pair of cables connected to the top part of the gate adjacent the rear thereof, and said cables passing through the last mentioned pulleys and through the remaining pair of pulleys carried by the bars, and a pulley for one of the last mentioned cables arranged at the top of the frame adjacent the center thereof.

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