Feb. 11, 1958 B. GUYER 2,822,630

TWO-WAY SWINGING GATES

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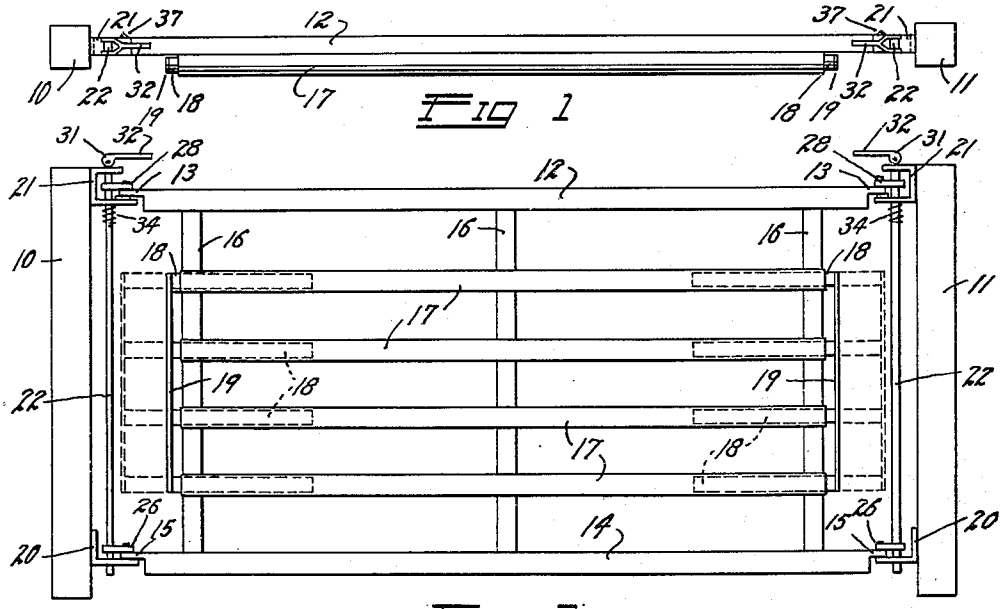


FIG 1

FIG 2

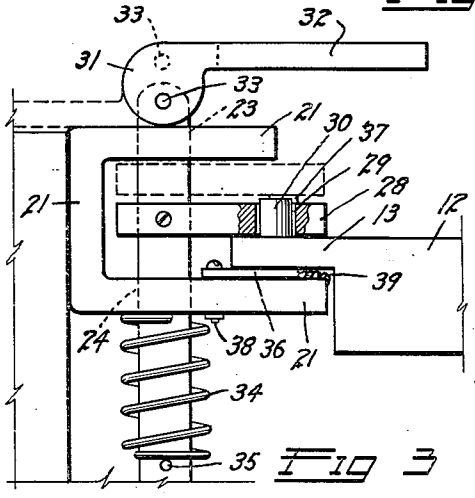


FIG 3

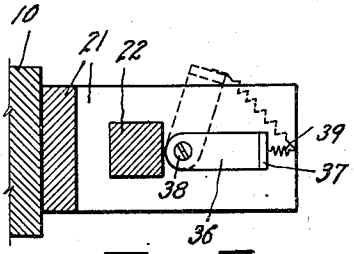


FIG 5

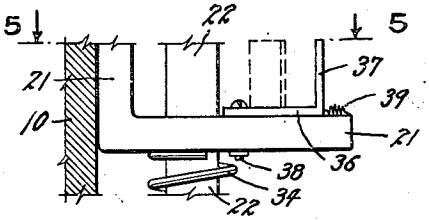
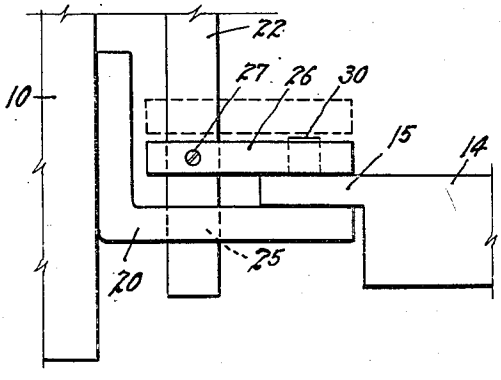


FIG 4



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TWO-WAY SWINGING GATES

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3 Claims. (Cl. 39—76)

This invention relates to a two-way gate, and has for its principal object the provision of a highly efficient gate structure whereby either side of a gate may be selectively used either as a hinge side or as a latch side so that the gate may be swung in either desired direction.

Another object of the invention is to provide a gate for use in livestock yards and the like which will enable the width of the gate to be extended when open so as to block an adjacent cattle runway, and to combine the extensible feature with the two-way feature so that a runway can be blocked to direct cattle into a pen, regardless of the direction of travel of the cattle in the runway.

Other objects and advantages reside in the detail construction of the invention, which is designed for simplicity, economy and efficiency. These will become more apparent from the following description.

In the following detailed description of the invention, reference is had to the accompanying drawing which forms a part hereof. Like numerals refer to like parts in all views of the drawing and throughout the description.

In the drawing:

Fig. 1 is a plan view of the improved gate;

Fig. 2 is a side view thereof;

Fig. 3 is an enlarged detail view, illustrating a combined hinge and latch structure employed upon the improved gate;

Fig. 4 is a similarly enlarged detail view, illustrating a latch-supporting structure employed on the improved gate; and

Fig. 5 is a horizontal section, taken on the line 5—5, Fig. 4.

In the drawing, two gate posts are illustrated and designated as a left-hand gate post **10** and a right-hand gate post **11**. The improved gate is designed to be suspended between the two gate posts **10** and **11**.

The gate comprises an upper gate rail **12** terminating at each extremity in a flat, upper pad **13**, and a lower gate rail **14** terminating at its each extremity in a flat, lower pad **15**. The upper and lower gate rails **12** and **14** are connected together by means of vertical spacing struts **16** which are fixedly secured at their extremities to the rails **12** and **14**. A plurality of vertically spaced, horizontally extending guide members **17** are secured across the struts **16** for supporting and guiding extension gate members at each end of the gate.

The guide member **17** may have any desired construction but are preferably pipes or tubes welded to the vertical struts **16**. As illustrated, the extension gate members comprise an extension tube **18** slidably fitted into each extremity of each guide member **17** with their extremities secured together by means of a vertical extension bar **19**. The tubes **18** can be of any desired length, not to exceed one-half the length of the guide members **17**.

A lower angle clip **20**, having a vertical and horizontal portion, is secured to each gate post **10** and **11**, and an upper U-shaped clip **21**, having two vertically-spaced horizontal legs, is secured to each gate post directly above

and in alignment with the lower angle clip **20** on that post.

A lift bar **22** extends vertically through guide openings **23** and **24** in the upper and lower legs of the U-shaped clip **21** and through a guide opening **25** in each lower angle clip **20** at each side of the gate. A lower bracket arm **26** is secured to the lift bar **22** in any desired manner, such as by means of a set screw **27**, immediately above the horizontal portion of each angle clip **20**. A similar upper bracket arm **28** is secured to each lift bar **22** between the horizontal legs of the U-shaped clips **21**.

Each of the bracket arms **26** and **28** are provided with a pivot opening **29** designed to receive a pivot-latch stud **30**. The pivot-latch studs are formed on or secured to the gate pads **13** and **15** and extend upwardly therefrom. It is, of course, understood that the pivot openings could be placed in the gate pads and the studs could be formed on the bracket arms **26** and **28** as an equivalent construction. It can be seen that if either one of the lift bars **22** is lifted, it will lift both of the bracket arms **26** and **28** from their respective studs **30** so as to free that extremity of the gate. The lifting of the lift bars may be accomplished in any desired manner. As illustrated, they are lifted by means of eccentric cams **31** formed on cam handles **32**, there being one of the eccentric cams **31** with its handle **32** eccentrically pivoted upon the upper extremity of each lift bar upon an eccentric pin **33**. It is preferred to bifurcate the pivoted extremity of the handle members **32** so as to form two of the eccentric cams in spaced-apart relation thereon, one cam being positioned on each side of each lift bar **22**, as shown in Fig. 1.

It can be seen that if the handle member **32** in Fig. 3 be rotated from the solid line to the broken line position, the eccentric cams **31** will ride upon the upper leg of the U-shaped clip **21** and act to pry the eccentric pin **33** upwardly so as to lift the lift bar **22**. When the handle member **32** is returned to the solid line position, the lift bar **22** would return to its lowermost or locking position under the influence of gravity. As illustrated, however, it is preferred to assist gravity in lowering the lift bars by means of compression springs **34** compressed between spring pins **35** in the lift bars and the lower leg of the U-shaped clips **21**.

It can be seen from the above description that if the lift bar at the left gate post **10** be lifted, the left extremity of the gate will be released so that the gate may be swung in either direction about the axis of the right-hand studs **30**, and it can be seen that if the lift bar **22** at the right-hand gate post **11** be lifted, the gate may be swung about the axis of the left-hand studs **30**. Therefore, the gate can be readily swung from either gate post and in either direction.

If the gate is used in a livestock yard for a stockpen gate which opens into a cattle runway, it can be seen that, should cattle be approaching the pen from the left of the gate, the latter may be swung outwardly from the right-hand gate post to extend across the runway. If its width is not sufficient to close the runway, the extension bar **19** may be pulled outwardly to increase the width of the gate to the runway width so the reverse procedure is employed, that is, the gate is swung across the runway from the left gate post **10** and extended across the runway by extending the extension bar **19** at the right extremity of the gate.

With the above structure, it is necessary to lift the lift bar **22** at the latch side of the gate when the latter swings toward the closed position so that the studs **30** may pass beneath the bracket arms **26** and **28**. Means are provided, however, if desired, to hold the lift bar at the latch side of the gate in the elevated position until the gate swings to the closed position. This may be accomplished by an

L-shaped support member having a horizontal portion **36** and a vertical portion **37**. The horizontal portion **36** of the support member is pivoted upon a pivot member **38** upon the upper surface of the lower leg of the U-shaped clip **20** and employing any suitable spring arrangement to constantly urge the support member into alignment with the lower leg of the clip **20**. For instance, a tension spring **39** could be connected between the free extremity of the horizontal portion **36** of the support member and the mid-portion of the extremity of the lower leg of the clip **21** as shown in Figs. 3 and 4.

It can be seen that if the lift bar **22** be elevated to release on extremity of the gate, the L-shaped support member **37** will swing beneath the upper bracket arm **28** as the gate opens to support the bar and its associated mechanism in the elevated position as shown in broken line in Fig. 3. When the gate swings to the closed position, the pad **13** will strike the vertical portion **37** of the support member and force it to one side, as shown in broken line in Figs. 4 and 5, to allow the upper bracket arm **28** to descend to engage the studs **30**.

The lift bars **20** may be prevented from rotating in their guide openings in any desired manner. One means for preventing rotation would be to form the lift bars from square rods so that they could not rotate in their guide openings. Another means for preventing rotation would be to bring the attached extremities of the bracket arms **26** and **28** into slidable engagement with the clips **20** and **21** to prevent rotation.

While a specific form of the improvement has been described and illustrated herein, it is desired to be understood that the same may be varied within the scope of the appended claims, without departing from the spirit of the invention.

Having thus described the invention, what is claimed and desired secured by Letters Patent is:

1. A two-way gate adapted for mounting between two gate posts comprising: a gate structure; an upper pad projecting outwardly from each extremity of said gate structure; a lower pad extending outwardly from each extremity of said gate structure; a lower angle clip secured to each gate post below each lower pad; an upper U-shaped clip secured to each gate post directly above and in alignment with the lower angle clip on that post, said U-shaped clips having horizontally extending upper and lower legs positioned to extend above and below each upper pad; a lift bar extending vertically through guide openings in said upper and lower legs of each U-shaped clip and through a guide opening in the angle clip therebelow; a lower bracket arm secured to each lift bar above the lower angle clip; an upper bracket arm secured to each lift bar intermediate the legs of each U-shaped clip and overlying the upper pad positioned therebetween; pivot means connecting each bracket arm with the adjacent pad; an eccentric cam pivotally mounted on the upper extremity of each lift bar and resting upon the upper leg of the adjacent U-shaped clip; and means for rotating said eccentric cam against the adjacent upper leg to raise and lower the lift bar.

2. A two-way gate adapted for mounting between two gate posts comprising: a gate structure; an upper pad projecting outwardly from each extremity of said gate structure; a lower pad extending outwardly from each extremity of said gate structure; a lower angle clip secured to each gate post below each lower pad; an upper U-shaped clip secured to each gate post directly above and in alignment with the lower angle clip on that post, said U-shaped clips have horizontally extending upper and lower legs positioned to extend above and below each upper pad; a lift bar extending vertically through guide openings in said upper and lower legs of each U-shaped clip and through a guide opening in the angle clip therebelow; a lower bracket arm secured to each lift bar above the lower angle clip; an upper bracket arm secured to each lift bar intermediate the legs of each U-shaped clip and overlying the upper pad positioned therebetween; pivot means connecting each bracket arm with the adjacent pad; an eccentric cam pivotally mounted on the upper extremity of each lift bar and resting upon the upper leg of the adjacent U-shaped clip; means for rotating said eccentric cam against the adjacent upper leg to raise and lower the lift bar; means preventing rotation of said lift bars; and means for maintaining each lift bar elevated until the pads adjacent that lift bar swing into pivotal alignment with their respective bracket arms.

3. A two-way gate comprising: two spaced-apart gate posts; an upper clip member mounted on each post; a lower clip member mounted on each post; a vertical lift bar extending through the clip members at each post; a gate structure positioned to extend between said posts; an upper and a lower pad member extending outwardly from each extremity of said gate structure, the upper and lower pad members being adapted to swing over and be supported by the upper and lower clip members respectively; a pivot-latch stud extending upwardly from each pad member; a lift bar extending vertically through the clip members at each post; a bracket arm secured to said lift bar immediately above each pad member, said bracket arms being provided with pivot openings for receiving said pivot-latch studs; means for lifting said lift bars to lift said bracket arms from said studs; and a support member pivotally mounted on one of the clip members at each post and positioned to move beneath the adjacent bracket arm when the latter is lifted from said stud so as to maintain the adjacent lift bar elevated.

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