G. W. SAUNDERS.

GATE HINGE.

APPLICATION FILED FEB. 25, 1914.

1,182,800.

Patented May 9, 1916.

2 SHEETS—SHEET 1.

Fig. 1.

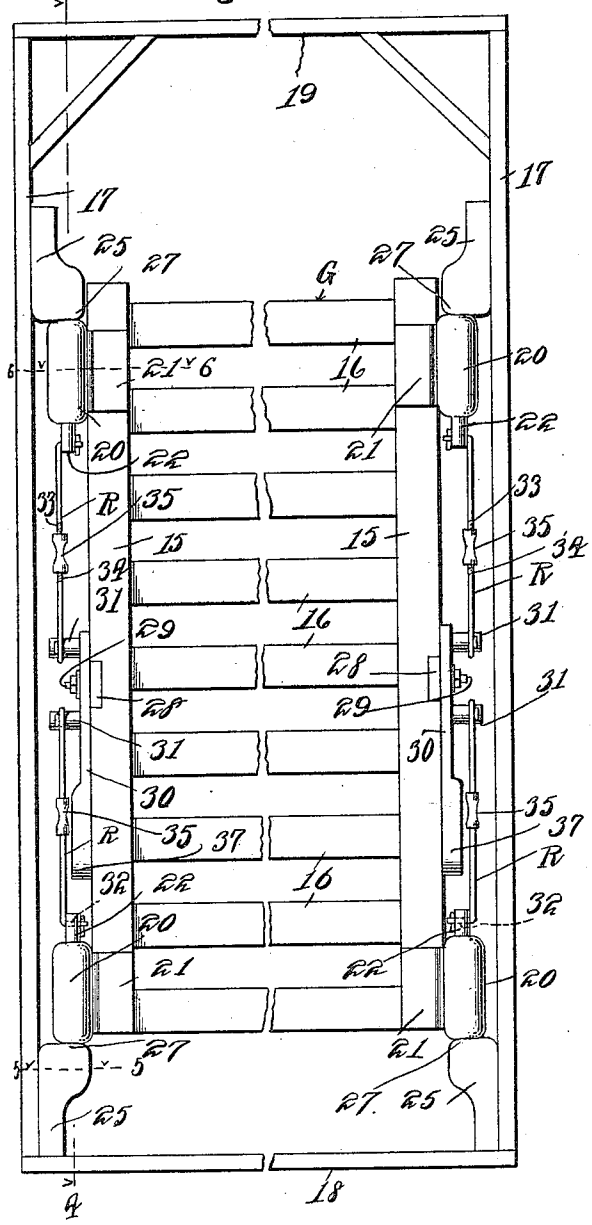
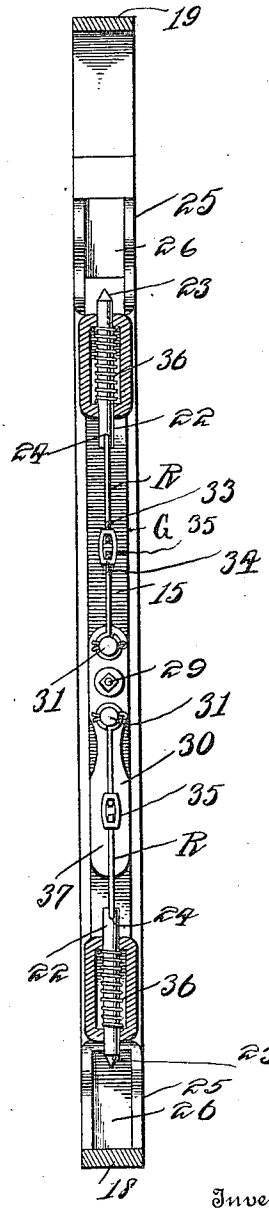


Fig. 4.



Witnesses
Frederick H Saylor
Wm. Dagger

Inventor
G. W. Saunders.

By Victor J. Evans
Attorney

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2 SHEETS—SHEET 2.

Fig. 2.

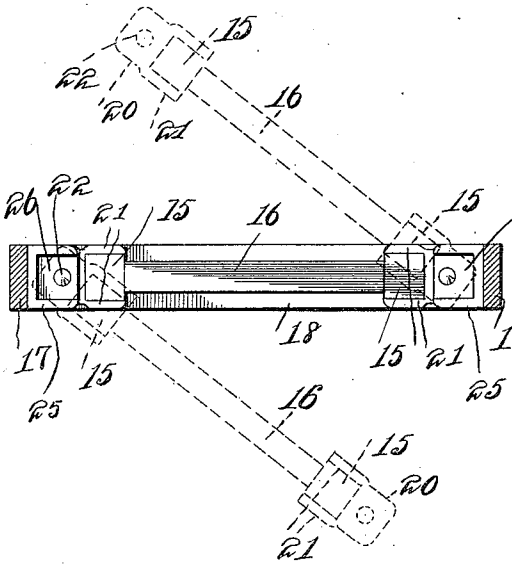


Fig. 3.

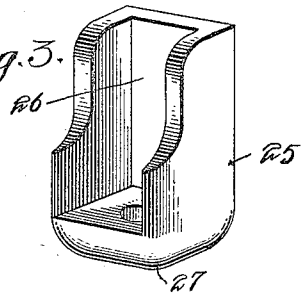


Fig. 7.

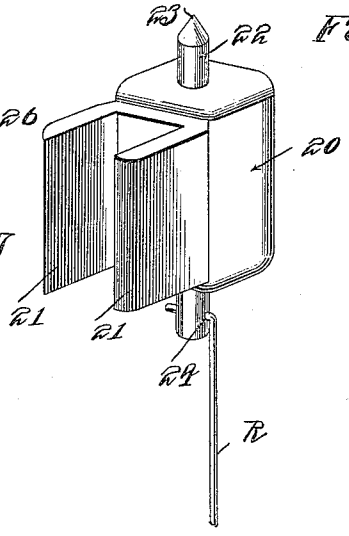


Fig. 6.

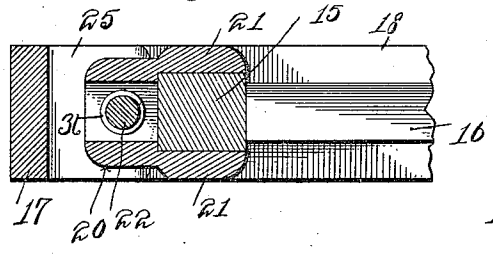
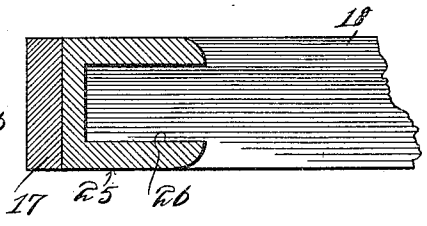


Fig. 5.



Witnesses

Frederick H. Taylor

Wm. Dagger

Inventor

G. W. Saunders.

By Victor J. Evans

Attorney

THE COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GEORGE W. SAUNDERS, OF SAN ANTONIO, TEXAS.

GATE-HINGE.

1,182,800. Specification of Letters Patent. Patented May 9, 1916.

Application filed February 25, 1914. Serial No. 820,985.

To all whom it may concern:

Be it known that I, GEORGE W. SAUNDERS, a citizen of the United States, residing at San Antonio, in the county of Bexar and State of Texas, have invented new and useful Improvements in Gate-Hinges, of which the following is a specification.

This invention relates to gates, and one object of the invention is to produce a simple and efficient hinged mechanism for a gate adapted to be advantageously used in stock yards or in any other place where a gate is needed that will open by swinging in either of two directions. The said hinged mechanism also including means whereby the gate panel may be released at one edge in order that it may swing on the hinge at its opposite edge.

A further object of the invention is to so simplify and improve the construction of parts that the means used for supporting the gate shall constitute combined hinges and latch members.

A further object of the invention is to so construct and arrange the combined hinges and latch members as to prevent the gate from being rubbed or pushed open by an animal.

In the drawings,—Figure 1 is a side elevation of a gate constructed in accordance with the invention, showing the same mounted for operation. Fig. 2 is a top plan view of a gate with dotted lines showing it swung partly open in various directions. Fig. 3 is a perspective view of one of the brackets of the gate structure. Fig. 4 is a vertical sectional view taken on the line 4—4 in Fig. 1. Fig. 5 is an enlarged view taken on the line 5—5 in Fig. 1 through one of the combined hinge and latch members. Fig. 6 is a horizontal sectional view taken on the line 6—6 in Fig. 1. Fig. 7 is a perspective view showing the parts constituting the combined hinge and latch member detached and separated.

Corresponding parts in the several figures are denoted by like characters of reference.

The door or gate G may be of any desired construction; in the drawings a panel has been shown including uprights or stiles 15 and horizontal boards or planks 16 connecting and spacing the same.

Each set of fittings comprises a barrel or housing 20 having flanges 21 adapted to receive between them the upright 15 at either end of the gate panel. The barrel or housing contains a spring actuated pin or bolt 22, one end of which is normally projected outwardly beyond the housing, said projected end being beveled, as shown at 23. The opposite end of the pin or bolt also extends beyond the housing and is provided with a transverse aperture 24. Two barrels or housings 20 are mounted on the end face of each upright 15 of the gate panel near the upper and lower ends thereof, the spring projected beveled ends of the upper and lower barrels facing, respectively, upwardly and downwardly, said spring projected beveled ends being engaged with supporting brackets 25 which are mounted on the face of the posts 17 opposed to the end faces of the uprights 15. The supporting brackets consist of plates or blocks having sockets 26 for the reception of the beveled ends of the bolts 22. The supporting brackets are, moreover, externally beveled, as seen at 27, to facilitate the engagement therewith of the beveled ends of the pins or bolts.

Firmly secured on each upright 15 of the gate panel is a bearing plate 28 having a trunnion 29 on which a lever 30 is fulcrumed, said lever being provided at opposite sides of its fulcrum and equidistantly therefrom with lugs or studs 31 on which connecting rods R are pivoted, each of said connecting rods being provided at its outer end with a hook 32 engaging the aperture 24 of one of the pins or bolts 22. The bearing plates 28 are preferably inset in the end faces of the uprights 15 so as to lie flush therewith, as best seen in Fig. 1. The levers 30 and related parts will thus be positioned between the opposed faces of the stiles or uprights 15 of the gate panel and the posts 17. Each connecting rod R preferably includes in its construction two right and left threaded members 33, 34 which are connected together by a turn buckle 25 so that proper adjustment of the length thereof may be made, thereby enabling the parts when assembled to be so adjusted that the pins or bolts 22 shall be just sufficiently projected by their respective actuating springs, which latter are seen at 36. Each of the operating levers 30 has a downwardly extending end constituting a handle 37 which may be weighted so that it will be maintained by gravity in an approximately vertical position adjacent to the end edge of the upright on which it is mounted, thus preventing such lever from being operated accidentally

and from being rubbed open by animals confined in an inclosure equipped with the gate.

When assembling the improved gate structure the barrels or housings 20 are positioned near the upper and lower ends of the uprights 15, facing the posts 17 and the supporting brackets 25 are so positioned on the posts 17 as to enable the housings to fit loosely therebetween, the pins or bolts 22 of the respective housings being projected within the sockets 26 of the supporting brackets. The gate will thus be held in position very securely in such a manner that by manipulating the lever 30 at either end thereof, the spring actuated pins or bolts connected with such lever may be retracted, thus permitting that end of the gate to swing clear of the supporting brackets, the hinges being formed by the bolts 22 at the opposite end of the gate which remain in engagement with their respective supporting brackets. Thus, it will be seen that either end of the gate may be opened and may be swung inward or outward, as may be desired. This gate construction will be found particularly useful in stock yards and similar places where it is desired to drive cattle in a certain direction, the gate being swung open in the direction which the animals are required to move. When the gate swings shut, the beveled projecting ends of the pins or bolts 22 will strike the externally beveled sides of the supporting brackets and will be thereby guided into engagement with the sockets 26, thereby securing the gate in closed position.

Having thus described the invention, what is claimed as new, is:—

A gate structure comprising a stile, brackets attached thereto, a gate panel located adjacent thereto, housings attached to the edge of the gate panel adjacent the stile, spring actuated bolts movably mounted in the housings and engageable with the brackets, a lever fulcrumed to the edge of the gate panel adjacent the stile and lying between the gate panel and stile when the gate panel is in a closed position, and rods operatively connecting the lever with the bolts.

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

GEORGE W. SAUNDERS.

Witnesses:
R. L. McGILL,
C. E. CARUTHERS.

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