May 31, 1927. 1,630,704

A. D. KAISER

GATE

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Fig. 1.

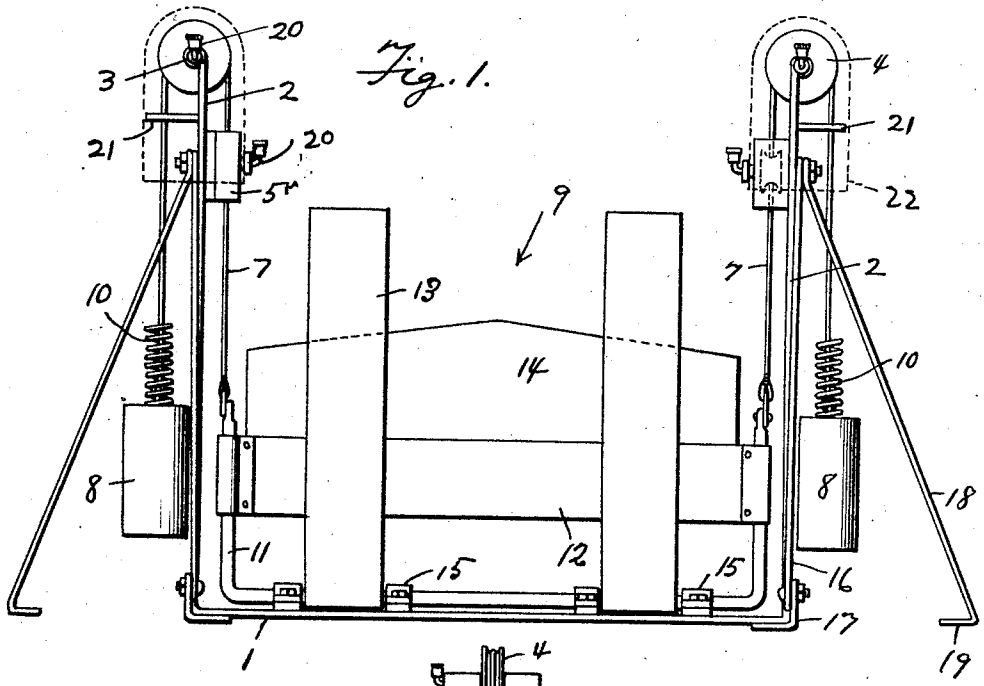
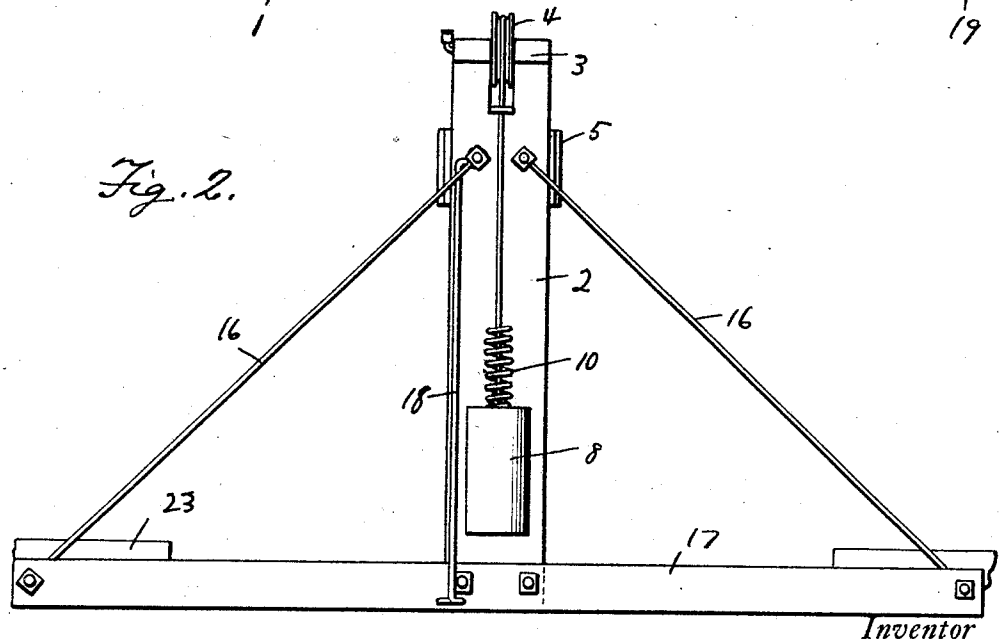


Fig. 2.



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Fig. 3.

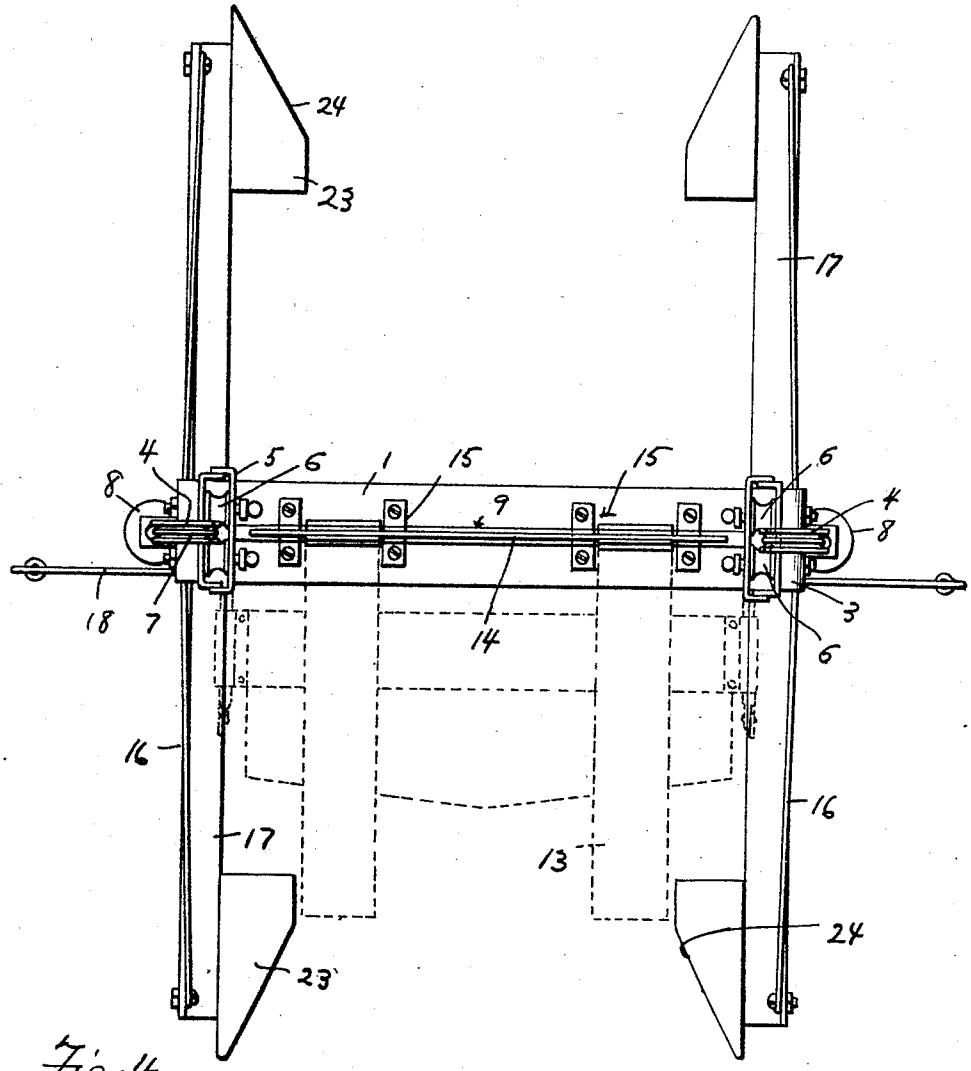
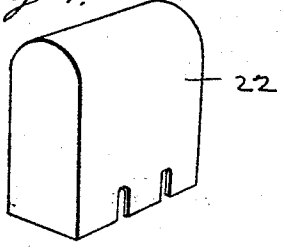


Fig. 4.



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UNITED STATES PATENT OFFICE.

AUGUSTON D. KAISER, OF MOUNTAIN HOME, TEXAS.

GATE.

Application filed July 27, 1926. Serial No. 125,232.

This invention relates to an improved gate, and it has more particular reference to one which is particularly, but not necessarily, designed for use in association with a farm fence, the same being adapted to occupy the opening now ordinarily occupied by the common forms of gates.

The invention has more particular reference to a structure of this kind wherein the gate proper is mounted for vertical swinging upon a horizontal axis, the same including plates forming rails or tracks over which the wheels of a vehicle may pass when the gate is swung down to lie upon the ground.

One feature of the invention is the novel frame for pivotal mounting, together with the parts cooperating therewith to form an efficient closure and to provide the aforesaid tracks.

Another feature of construction is the mounting frame work which is properly braced to render it sturdy.

A further feature results from the provision of counter-weights which are connected with flexible elements in turn connected with the gate for normally maintaining the gate in a vertical closing position and for automatically returning it to such position after it has been pushed down by the vehicle and the latter has passed over it.

Other features and advantages of the invention will become apparent from the following description and drawings.

In the accompanying drawings:—

Figure 1 is a front elevation of a gate structure constructed in accordance with the present invention,

Fig. 2 is a side view of the same,

Fig. 3 is a top plan view, and

Fig. 4 is a perspective view of one of the details.

In the drawings, the reference character 1 designates the base portion of the supporting frame work, and the reference character 2 designates vertical standards which rise therefrom. The upper ends of the standards are bifurcated and the furcations are bent upon themselves to provide bearings 3 for pintles of a pulley 4. Mounted on the inner side of the standard just below the pulley in each instance, is a boxing 5 which serves to accommodate a pair of smaller pulleys 6 (see Fig. 3), serving as guides for a flexible element 7, which is trained over the larger pulley 4. It will be noticed that the pulleys 4 are disposed at right angles to the smaller pulleys 6. Also, a counter-balance weight of proper size 8 is attached to one end of the element and the opposite end is connected with the gate, represented generally by the reference character 9.

At this time, attention might be directed to bumper springs 10 which surround the cords 7 and cooperate with the weights 8. Considering now the gate, per se, it will be seen that this comprises a substantially U-shaped frame 11, a cross piece 12 connected to the arms thereon, vertical pieces 13, and a second cross piece 14. The bight portion of the frame is rotatably mounted in bearing brackets 15 attached to the central portion of the base plate 1.

Attention is now directed to such supplemental details as brace rods 16 connected with the upper portion of the uprights or standards and with the end portions of angle irons 17. Additional braces 18 are employed and provided at their lower ends with eyes 19 adapted to be suitably secured to the ground adjacent the structure. Moreover, lubricating devices 20 are employed wherever necessary to facilitate free running of the pulleys. Stops 21 cooperate with the pulleys 4 and the coiled springs 10. Moreover, if desired, a suitable sheet metal housing 22 may be employed to enclose the parts as shown in dotted lines in Fig. 1. Then too, small guide blocks of suitable material represented by the reference character 23 are preferably employed, the same being disposed at the outer ends of the rails 17.

In this connection, it will be noticed that the faces 24 of these blocks are beveled for cooperation with the aforesaid tracks 13. In practice, the vehicle must necessarily approach the gate slowly so that the front wheels will substantially engage the central upper portion of the parts 13 which are then in vertical position. Then by forcing against the gate, it may be rocked down upon the ground as shown in dotted lines in Fig. 3. The guide blocks 28 will aid in approaching the gate and will also aid in leaving the rails as is obvious from the representation made in Fig. 3.

The advantage of the structure is that it obviates the necessity of getting out of the vehicle and opening the gate in the usual manner. The operator simply runs against the gate or forces it down to the ground and then runs over it. Immediately upon pas-

sage of the vehicle thereover, the counter-balance weights and flexible elements serve to swing it rapidly back to closing position in order that animals and the like in the pasture will not escape.

The parts are usually so balanced that they prevent easy opening of the gate by the mere pressure of an animal against the same. While the gate has been described as useful in connection with farm fences and the like, it is to be understood that it is of general application, and may be used wherever circumstances require a closure of this kind.

The details, construction and arrangement together with the operation are doubtless apparent from the description and drawings, and therefore a more lengthly description is thought unnecessary.

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

1. In a structure of the class described, a substantially U-shaped supporting frame, supporting means for the frame, a closure, said closure comprising a substantially U-shaped frame, a cross piece connected with the arms of the closure frame, vertical plates connected with the central portions of said closure frame and with said cross piece, and disposed at right angles thereto, said plates being adapted to function as tracks, and bearing brackets attached to the bight portion of the first named frame, the said bight portion of the closure frame being rockably connected with said brackets and yieldable means for maintaining said gate normally in a closed position.

2. In a structure of the class described, a substantially U-shaped supporting frame, supporting means for the frame, a closure, said closure comprising a substantially U-shaped frame, a cross piece connected with the arms of the closure frame, vertical plates connected with the central portion of said closure frame and with said cross piece and disposed at right angles thereto, said plates being adapted to function as tracks, and bearing brackets attached to the bight portions of the first named frame, the said bight portion of the closure frame being rockably connected with said brackets, pulleys at the upper ends of the vertical portions of the supporting frame, flexible elements connected with the arms of the closure frame and passing over said pulleys and downwardly, and counter-balancing weights connected to the lower free ends of said flexible elements.

In testimony whereof I affix my signature.

AUGUSTON D. KAISER.