No. 607,386. Patented July 12, 1898.

G. R. ROGERS.

GATE.

(Application filed Apr. 1, 1898.)

(No Model.)

Fig. 1.

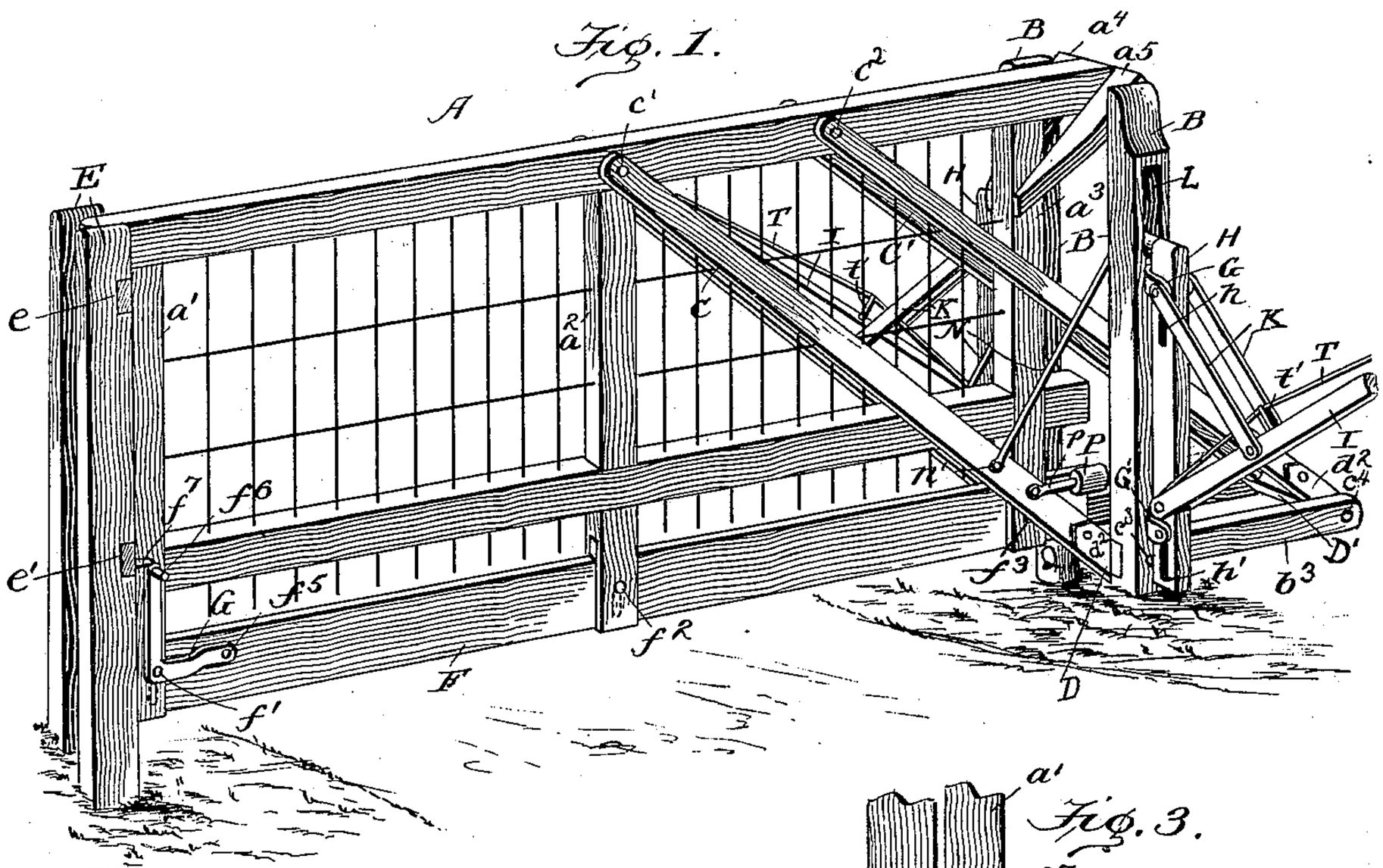


Fig. 2.

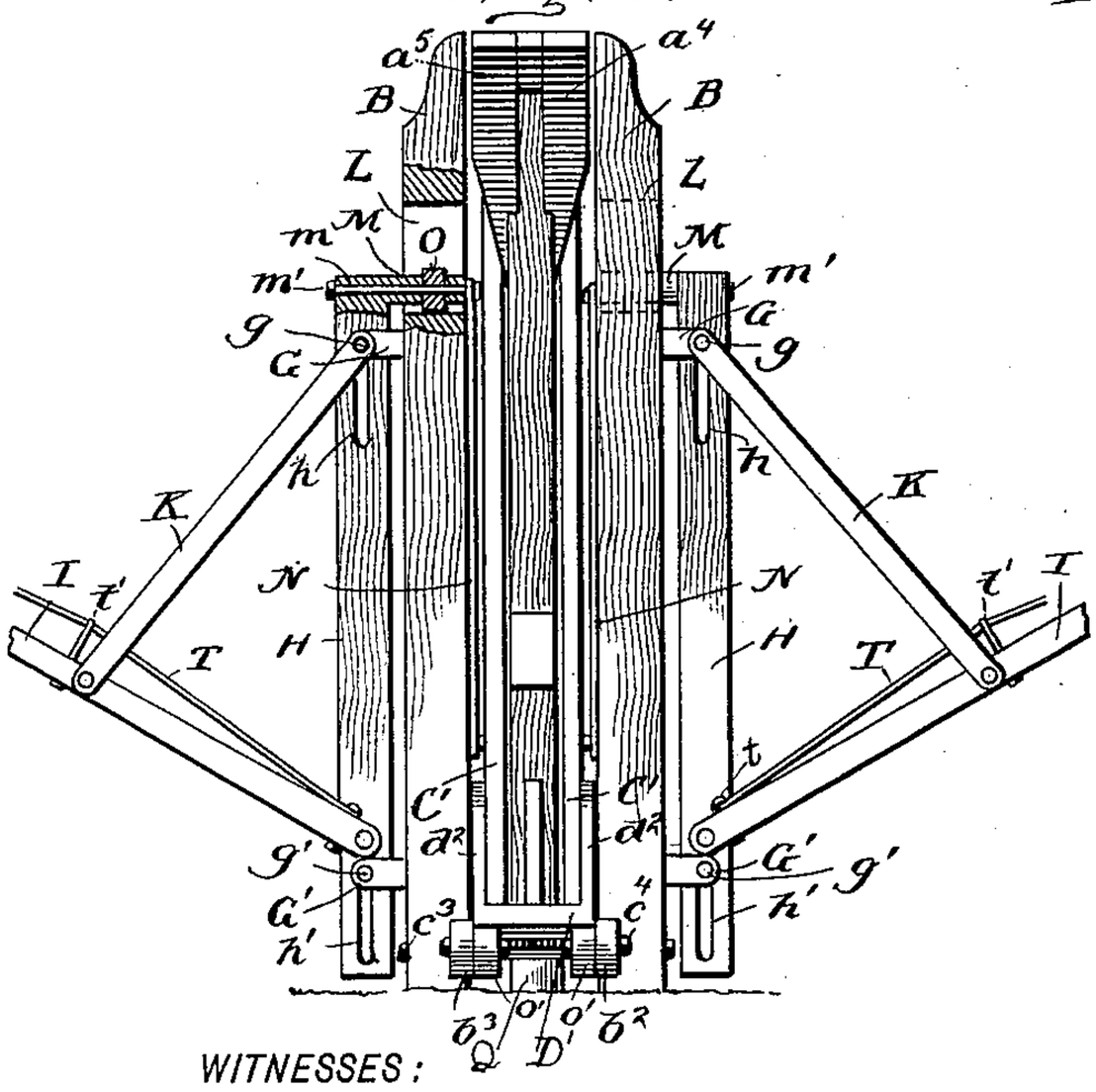


Fig. 3.

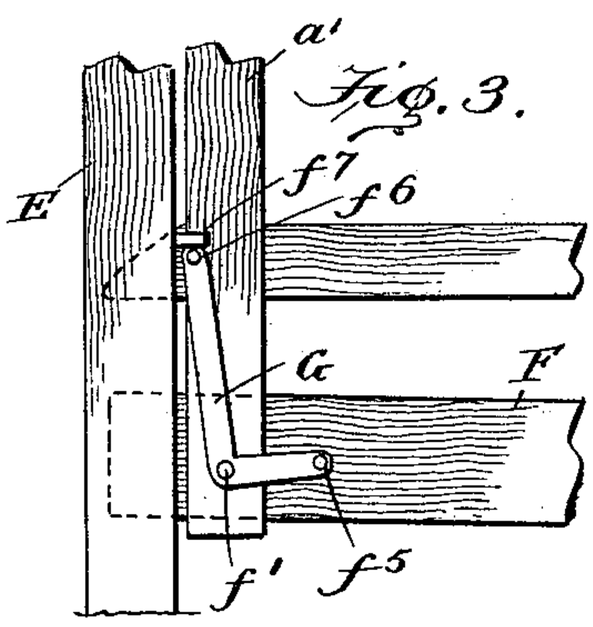
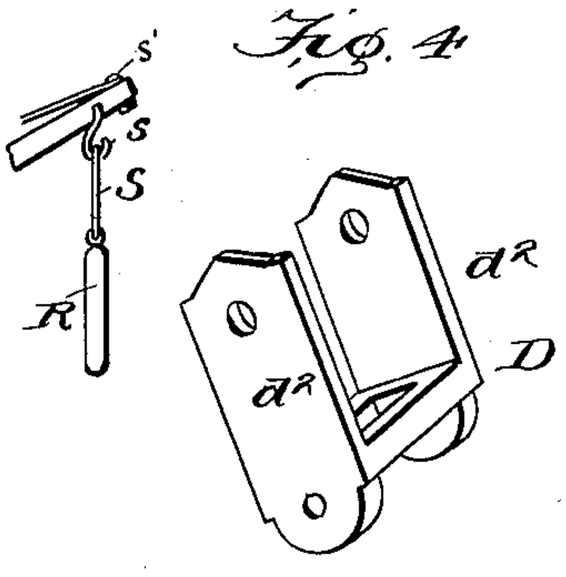


Fig. 4.



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GATE.

SPECIFICATION forming part of Letters Patent No. 607,386, dated July 12, 1898.

Application filed April 1, 1898. Serial No. 676,087. (No model.)

To all whom it may concern:

Be it known that I, GEORGE R. ROGERS, a citizen of the United States, residing at Parkersburg, in the county of Montgomery and State of Indiana, 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.

My invention relates to certain new and useful improvements in road or farm gates, and more particularly to that class known as "jump-gates;" and it consists in the novel combination and arrangement of parts constructed in accordance therewith, as hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto affixed.

The object of my invention is to provide a gate which is simple, durable, and inexpensive and one which by an arrangement of counterbalancing-weights requires but very little power to operate.

A further object is to provide a locking arrangement for this class of gates which effectually prevents the gate from being raised by hogs or other animals in attempting to get under it.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in the several views, in which—

Figure 1 is a perspective view of the complete gate closed. Fig. 2 is a rear elevation with a portion of one post broken away to show antifrictional roller. Fig. 3 is a section showing locking device in engagement, and Fig. 4 is a perspective view of the hinge to which the lever-arms are attached.

In the drawings, A represents the gate, which is preferably constructed of a top and bottom rail connected by vertical stays a', a^2, and a^3. Said stays extend a short distance below the bottom rail and have their ends slotted a suitable distance to receive the latch-operating bar F, more fully hereinafter described. The body of the gate is preferably constructed of wire. The ends of said rails and latch-bar project beyond the vertical front and rear stays a' a^2 and extend between the posts E and B for the purpose of securing the gate against lateral movement, for which purpose strips a^4 a^5 are also attached to the rear end of the top rail and stay a^3, of sufficient width to come nearly in contact with the posts B on each side thereof.

Vertical posts B are planted in the ground parallel to each other and such a distance apart as to allow the gate to oscillate freely between them. The posts are connected near their bottoms by tie-rods and are provided with rearwardly-extending arms b^2 b^3, mortised in their inner faces a short distance above the ground. The upper ends of levers C C′ are hinged to the upper rail of the gate a short distance apart by means of bolts or rivets c' c^2, while the lower ends of said levers are secured to hinges D D′, working on bolts or rivets c^3 c^4, arranged in the ends of said rearwardly-extending arms b^2 b^3. The hinges D D′ are constructed of one piece of metal and have extensions or wings d^2, to which the levers C C′ are secured. The bolt or rivet c^3, on which the hinge D works, extends through the posts B as well as the arms b^2 b^3, thus serving as a brace for the posts.

When the gate is closed, the forward vertical stay-rod a' abuts against the cross-bars e e', mortised in the posts E. The lower ends of said posts are planted in the ground similar to the posts B and have tie-rods connecting them under ground. The posts E are placed a suitable distance apart to receive the projecting ends of the rails and latch-operating bar of the gate.

The latch-operating bar F is held in place between the bifurcated ends of the stay-rods of the gate by means of bolts or rivets f' f^2 f^3. The bolts f' f^2 pass through vertical slots in the latch-operating bar, whereby said bar has a slight up-and-down movement. The latch G is in the form of a right angle and is pivoted to the lower end of the stay-rod a' by means of the bolt or rivet f'. One arm of the latch is attached to the latch-operating bar by rivet f^5, while the other arm remains free and has extending laterally therefrom a lug f^6, which lug, when the latch-operating bar F is raised, engages the pin f^7 on the post E, thus preventing the further raising of the gate. When the latch-operating bar is relieved of its upward pressure, weight will re-

store it to its normal position, (shown in Fig. 1,) thus releasing the locking device and leaving the gate free to be operated by levers.

Secured to the outer faces of posts B and near the upper and lower ends thereof are U-shaped brackets G G′. The outer ends of each bracket are connected by rivets *g g′*, which pass through slots *h h′*, arranged in the vertical sliding bars H. The vertical sliding bars H are given an up-and-down movement by means of operating-levers I, the lower ends of said levers being pivoted at *i* near the lower ends of the bars H and connected at an intermediate point to the brackets G by means of links or rods K. Near the upper ends of posts B are arranged slots L, through which project arms M of the vertical sliding bars H. The said arms M are somewhat smaller in circumference than the width of the slots and have apertures through their sides adjacent to the inner faces of the slots to permit the insertion of antifrictional rollers O, said rollers being held in place by bolts *m*, which pass longitudinally through said arms and rollers and are secured by nuts *m′*. The bolts *m* also pass through eyes in rods N, which securely hold the upper ends of said rods to the arms M of the vertical sliding rods H. The other ends of said connecting-rods N are attached to the levers C by means of rivets or bolts *n′*.

Secured to one or both of the levers C C′ is a short arm *p*, holding a counterbalance-weight P. I also attach counterbalancing-weights R to the ends of the operating-levers I by means of links S and hooks *s*. These weights may also serve as handles and may be lengthened by adding more links or shortened by removing links, as required. To prevent the weights attached to the operating-levers springing or breaking the same, truss rods or wires T are secured to each end thereof by means of bolts *t* and *s*. Said truss-rods may be tightened by an upright *t′*.

In order to prevent the gate from sagging, a stump Q is placed under the rear end thereof, upon which the gate rests when closed.

In operation it will be seen that when the operating-lever I is depressed the vertical sliding bar H will be raised, and therewith the connecting-rod N and the lever C, when the gate will rise upward, supported by the levers C C′ and, counterbalanced by the weights P and R, will swing rearward, passing between the posts B and dropping in relatively the same position to the rear of said posts as it formerly occupied in front. The same operation is performed to close the gate as was required to open it.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination with a gate of the class described and oscillating levers, of slotted uprights or posts between which the gate works, the brackets on said posts, vertically-sliding rods working in said brackets, an arm extending from each of said sliding rods through slots in the posts, rods connecting said arms to the oscillating levers of the gate, and means for operating said vertically-sliding rods whereby the gate is thrown from side to side of said posts, substantially as described.

2. The combination with a gate of the class described, posts, oscillating levers and operating mechanism, of metal hinges, adapted to be attached to the said oscillating levers, and consisting of wings d^2 rigidly connected by cross-pieces, the said wings having holes arranged at their lower ends for the insertion of a bolt on which the hinge works, substantially as described.

3. The combination with a gate of the class described and oscillating levers provided with weights, of slotted posts between which the gate works, brackets on said posts in which work vertically-sliding slotted rods, each of the said rods having an arm at upper end extending through slot in the post, bolts passing longitudinally through said arms and having antifrictional rollers working thereon in said slots, rods connecting said arms and oscillating levers operating-levers provided with weights pivoted to the lower ends of said vertically-sliding rods, and links or rods connecting the said operating-lever at an intermediate point with upper brackets on the gate-posts, substantially as described.

4. The combination with a gate of the class described and suitable means for operating the same, of a locking device adapted to remain unlocked in its normal position and locked by upward pressure exerted on lower bar of gate, substantially as described.

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

GEORGE R. ROGERS.

Witnesses:
C. R. EDWARDS,
J. W. SHANNON.