No. 688,385. Patented Dec. 10, 1901.

E. CAPPS.

GATE.

(Application filed Apr. 18, 1901.)

(No Model.)

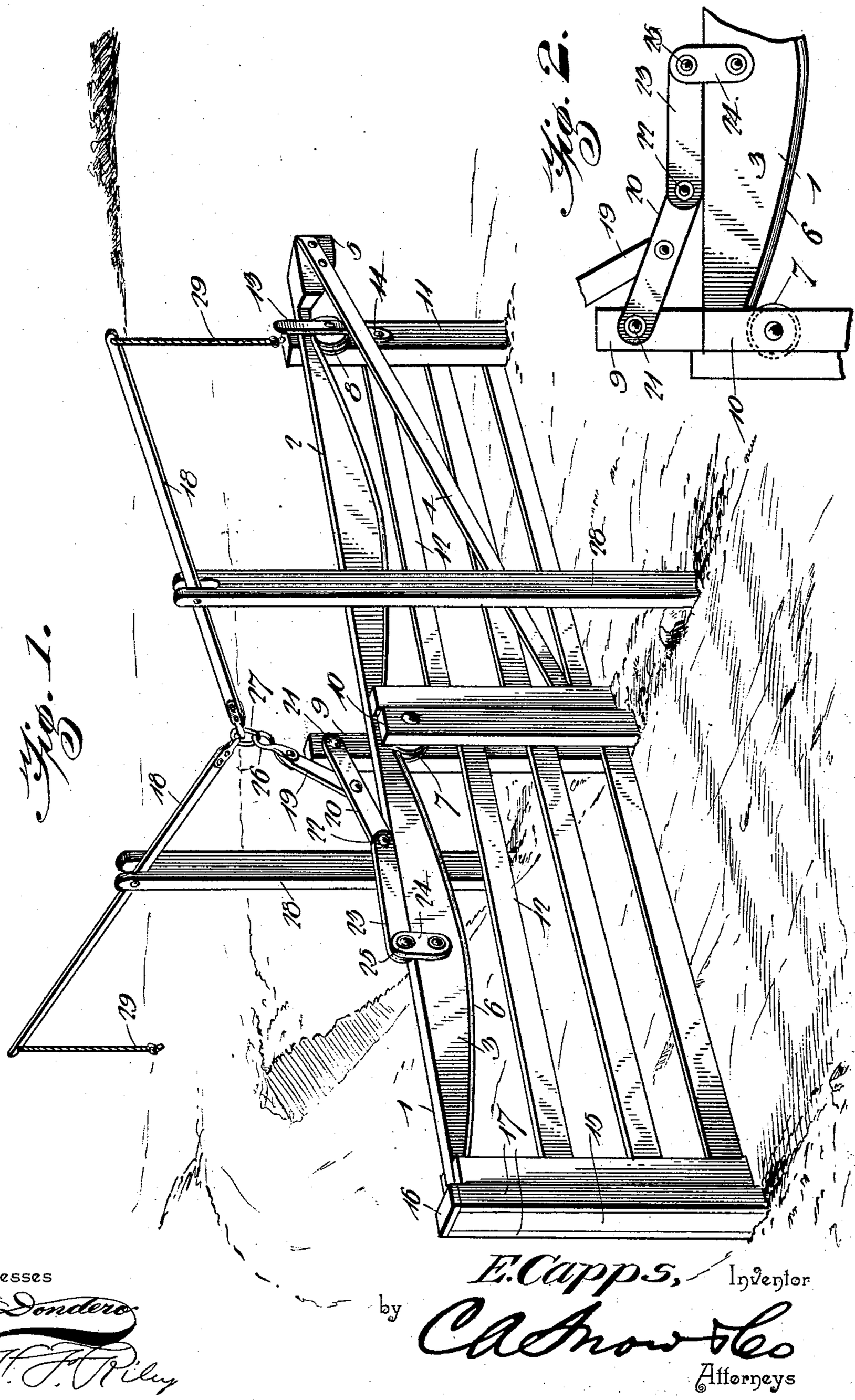

Fig. 1.

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UNITED STATES PATENT OFFICE.

ELIJAH CAPPS, OF ADEL, IOWA, ASSIGNOR OF ONE-HALF TO SILAS L. SWAIN, OF ADEL, IOWA.

GATE.

SPECIFICATION forming part of Letters Patent No. 688,385, dated December 10, 1901.

Application filed April 18, 1901. Serial No. 56,458. (No model.)

To all whom it may concern:

Be it known that I, ELIJAH CAPPS, a citizen of the United States, residing at Adel, in the county of Dallas and State of Iowa, have invented a new and useful Gate, of which the following is a specification.

The invention relates to improvements in gates.

One object of the present invention is to improve the construction of sliding gates and to provide a simple, inexpensive, and durable one which will not easily get out of order and which may be opened and closed at either side of it by a person on horseback or in a vehicle.

A further object of the invention is to provide a gate of this character having operating mechanism adapted to form a positive lock for holding it in its open and closed positions.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended.

In the drawings, Figure 1 is a perspective view of a gate constructed in accordance with this invention and shown closed. Fig. 2 is a detail view of a portion of the gate, illustrating the arrangement of the combined locking and connecting devices.

Like numerals of reference designate corresponding parts in both figures of the drawings.

1 designates a sliding gate provided with a rearwardly-extending arm 2, forming a continuation of the top rail 3 and supported by an inclined brace 4, extending upward from the bottom of the gate and secured to a block 5, which extends laterally from the rear end of the arm 2. The top rail and the arm 2 are provided with lower convexly-curved edges, forming oppositely-disposed inclined portions and receiving a rod 6, which forms a track and which is arranged to run on grooved rollers or wheels 7 and 8. The grooved rollers or wheels 7 and 8 are mounted upon a suitable support, preferably consisting of a portion of the adjacent fence and composed of intermediate posts 9 and 10, a rear post 11, and horizontal bars or rails 12, secured to the posts 9 and 11. The intermediate posts 9 and 10 are spaced apart to receive the gate, and the grooved pulley or wheel 7 is mounted between their upper portions. The other pulley or wheel 8 is mounted in a bracket 13, secured to the rear posts and extending vertically above the grooved wheel or roller and spaced from the upper end of the rear post to receive the rearwardly-extending arm 2 of the gate. The bracket consists of a lower attachment portion or plate 14 and an upper approximately L-shaped arm, which has its upper portion offset from the rear post, as clearly shown in Fig. 1. The gate is composed of vertical end bars and horizontal bars or rails; but any other form of gate may be employed.

The front or outer end of the gate abuts against a latch-post 15, which is designed in practice to be provided with a recess formed by projecting strips 16 and 17, secured to the top and sides of the post 15, as clearly shown in Fig. 1. The side strips 17 are adapted to support the gate and prevent it from being sprung laterally.

The sliding of the gate to open and close it is effected by means of a pair of operating-levers 18, connected by a bar 19 with a lever 20, and the latter is fulcrumed at its end 21 on the post 9 and is pivoted at its other end 22 to a link 23. The link 23, which extends longitudinally from the outer end 22 of the lever when the gate is completely opened or closed, is pivoted to the gate, the gate being provided with an upwardly-projecting ear 24, preferably formed by a plate secured to the center of the top bar or rail 3. The inner end of the lever 21 is pivoted at a point slightly above the gate, and when the gate is open or closed the pivot of the outer end 22 of the lever rests upon the gate and by being arranged below a straight line intersecting the pivot 25 of the link and the pivot of the inner end 21 of the lever it forms a positive lock and is capable of resisting any longitudinal movement of the gate or any strain tending to open and close the gate. The connecting-bar 19 is pivoted at its lower end to the lever 20 at a point between the ends thereof, and it extends upward therefrom and is provided at its upper end with an eye 26, which is linked into a

ring 27. The ring 27 is linked into suitable eyes of the inner adjacent ends of the levers 18 and it connects them with the bar 19.

The operating-levers 18 are fulcrumed on uprights 28, located at opposite sides of the gate, and the outer ends of the operating-levers are provided with depending ropes 29 or other suitable means for enabling them to be readily grasped. When the outer end of either of the operating-levers is swung downward, the gate-actuating lever 20 is swung upward and moves the gate longitudinally, and the momentum of the gate is sufficient to carry the centers of the convexly-curved edges of the top bar 3 and the arm 2 beyond the grooved wheels or rollers 7 and 8, and gravity will complete the opening and closing movement. When the gate is closed, as shown in Fig. 1, and one of the operating-levers is swung downward, the adjacent inclined portion of the bar 3 will ride up the pulley 7 and raise the gate, and after the center of the gate has passed over the pulley or wheel 7 the gate will complete its movement by gravity. The inclined portions of the arm 2 are similar to the inclined portions of the top bar 3, and when the center of the top bar 3 is over the grooved roller or wheel 7 the center of the arm 2 will be arranged over the grooved wheel or roller 8. When the gate is closed, the lever and the link are arranged as shown in Fig. 2 and are adapted to retain the gate in its open position. The link and the lever form a straight brace and are supported by the top of the gate, and the position illustrated in Fig. 2 is the exact reverse to that shown in Fig. 1.

It will be seen that the gate is exceedingly simple and inexpensive in construction, that it possesses great strength and durability, and that it may be readily operated by a person on a horse or within a vehicle. It will also be seen that the round rod, which forms the track at the top of the gate and which fits in the grooves of the rollers or wheels, is adapted to reduce the friction to a minimum.

What I claim is—

The combination of a support, a sliding gate provided with the rearwardly-extending top rail having the lower convexly-curved edges and provided with the rod forming the track, the block 5 extending laterally from the rear end of the extended portion of the top rail, the inclined brace 4 extending from the block to the bottom of the gate, rollers mounted on the support and receiving the gate, the inclined lever fulcrumed on the support, the link 23 connected with the inclined lever and with the gate, the operating-levers connected at their inner ends, and the link 19 extending from the inclined lever to the operating-levers, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ELIJAH CAPPS.

Witnesses:
WM. ROBERTS,
G. H. MESSENGER.