

No. 657,394.

Patented Sept. 4, 1900.

L. A. COOPER.
SLIDING GATE.

(Application filed Mar. 7, 1900.)

(No Model.)

Fig. 1.

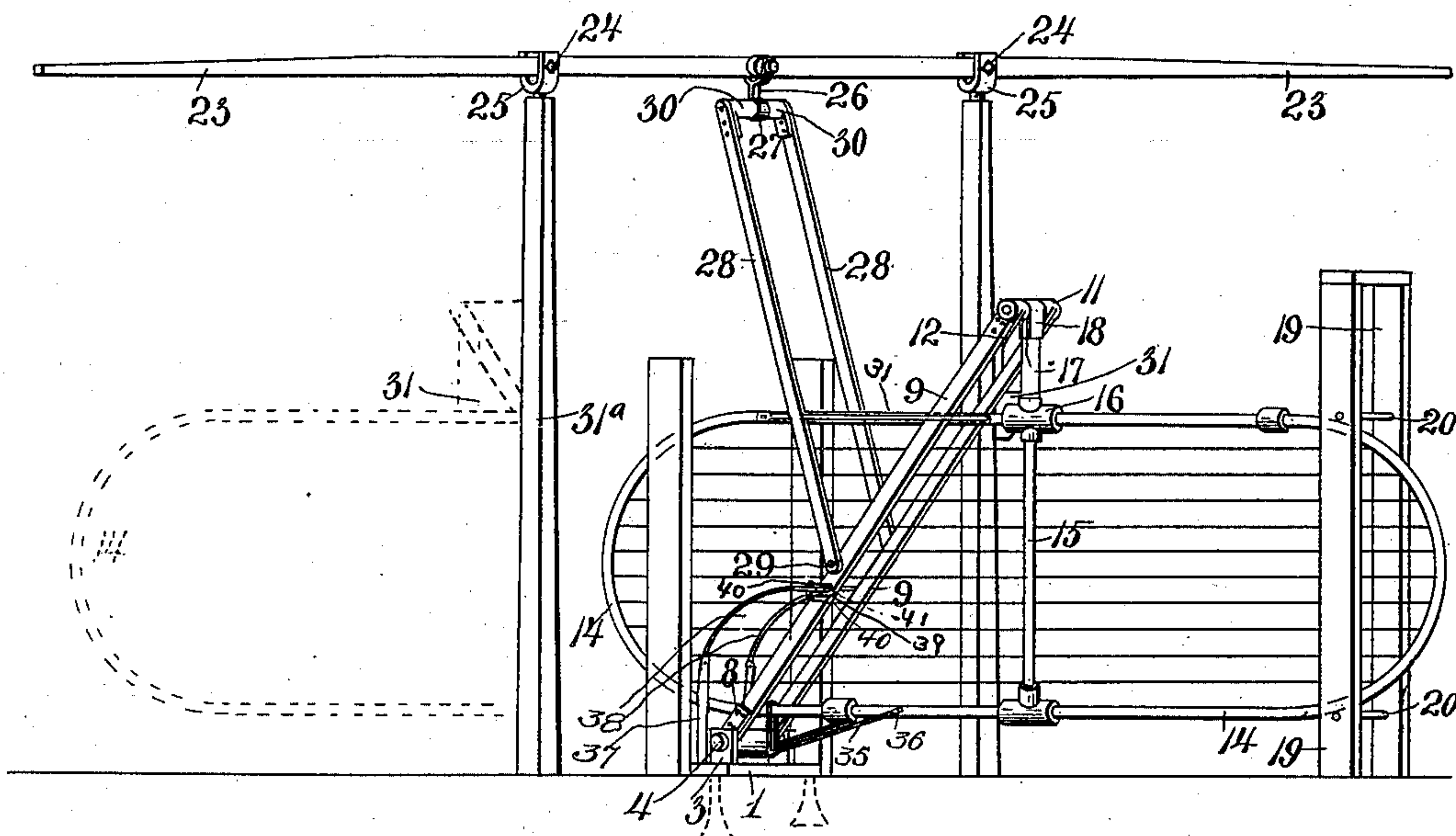


Fig. 4.

Fig. 2.

Fig. 5.

Fig. 7.

Fig. 3.

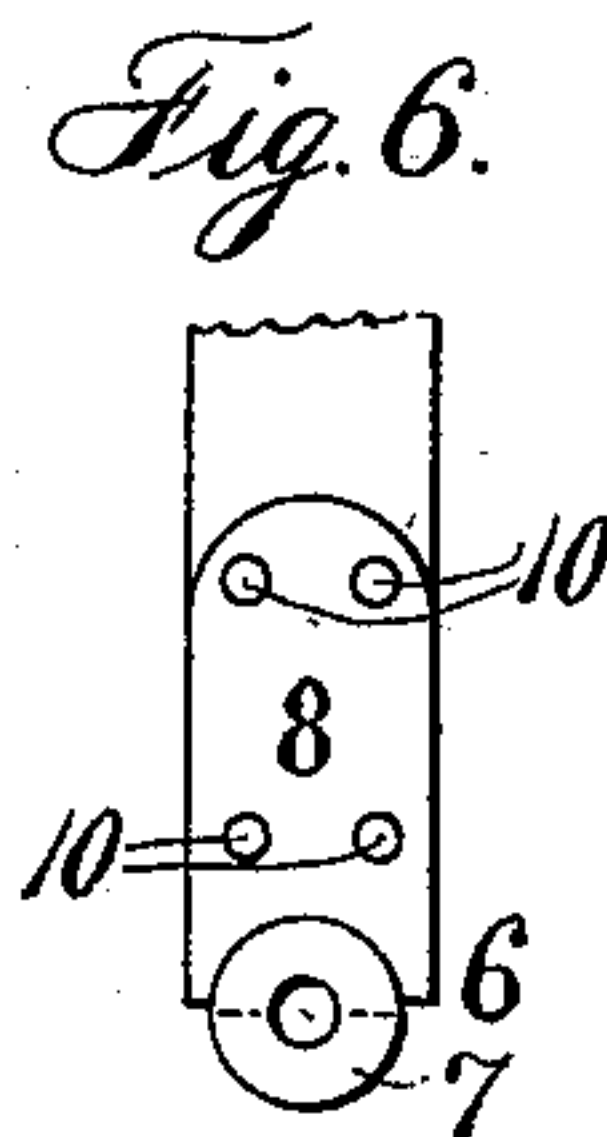
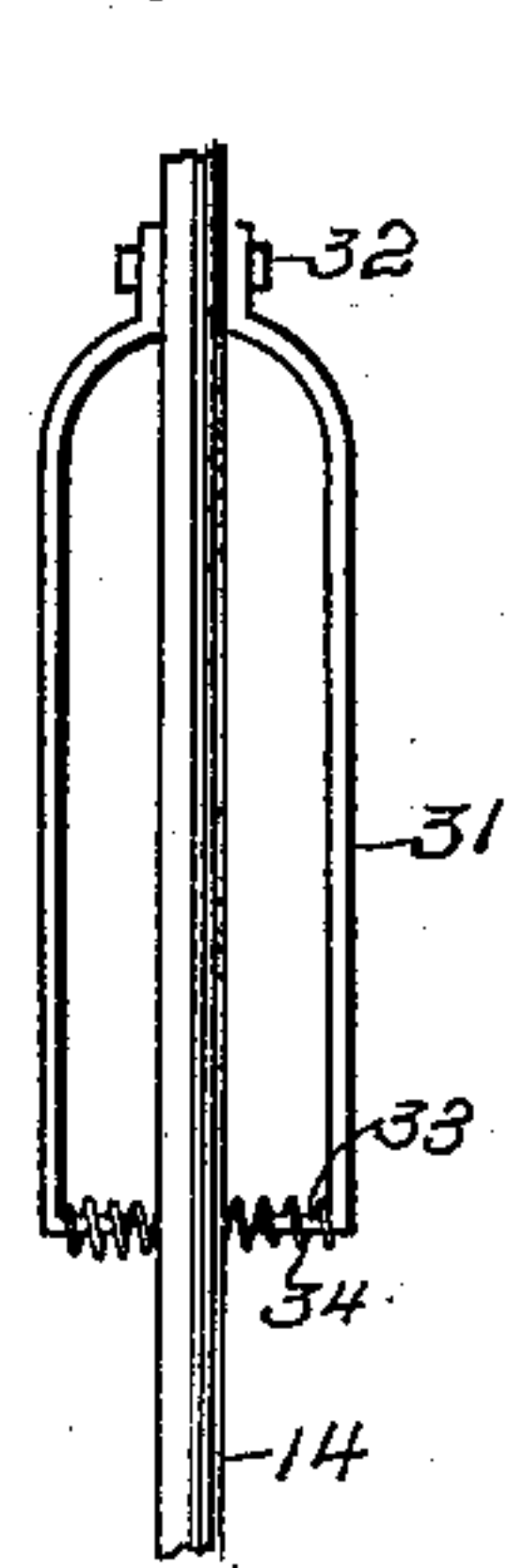
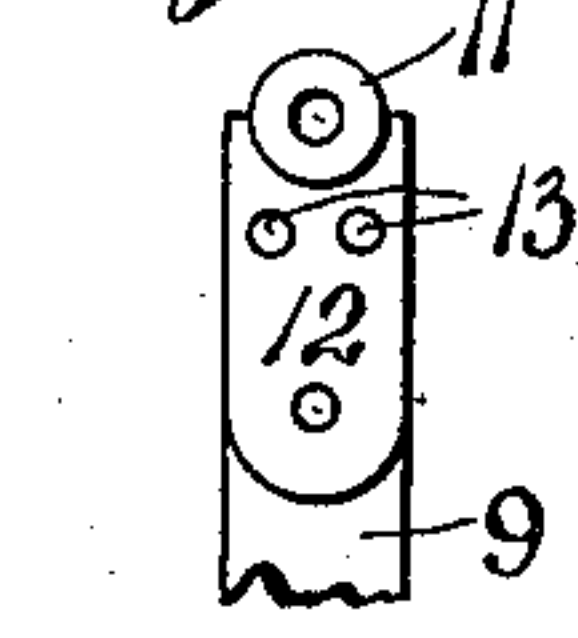
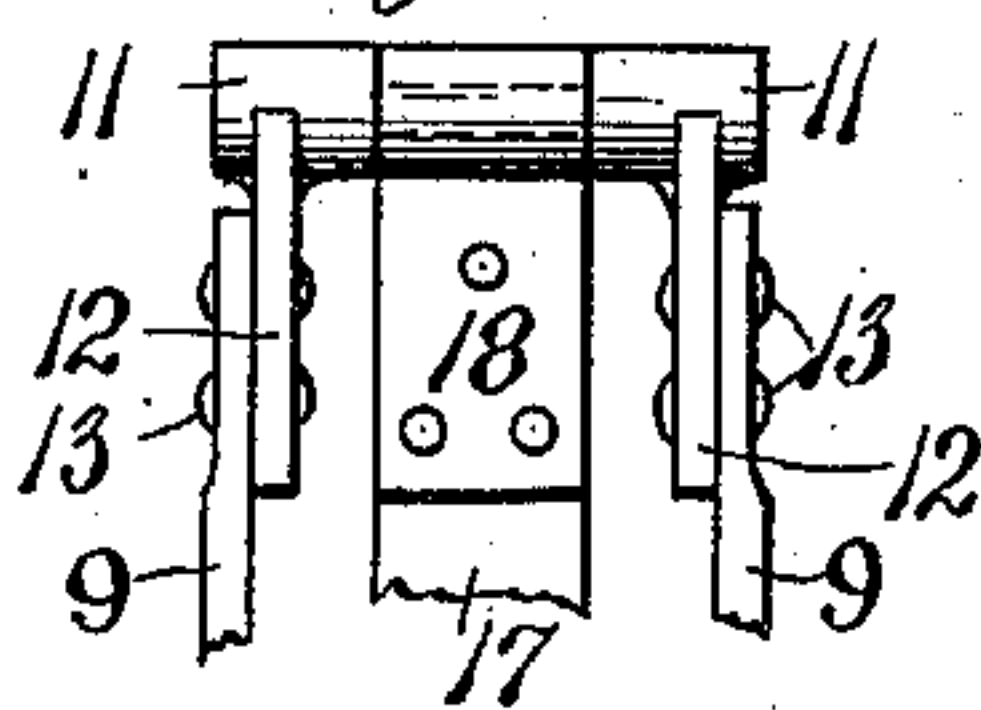
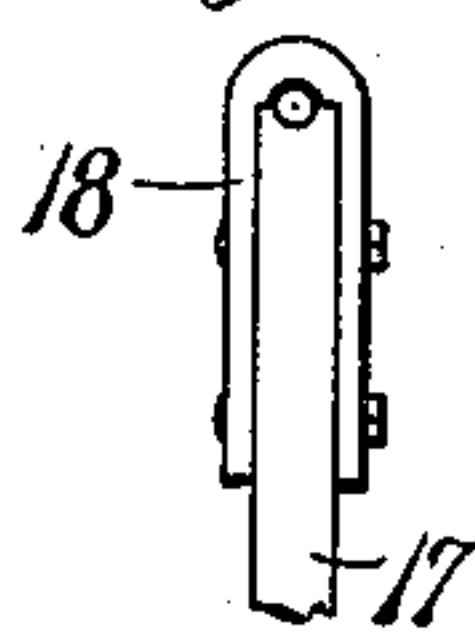
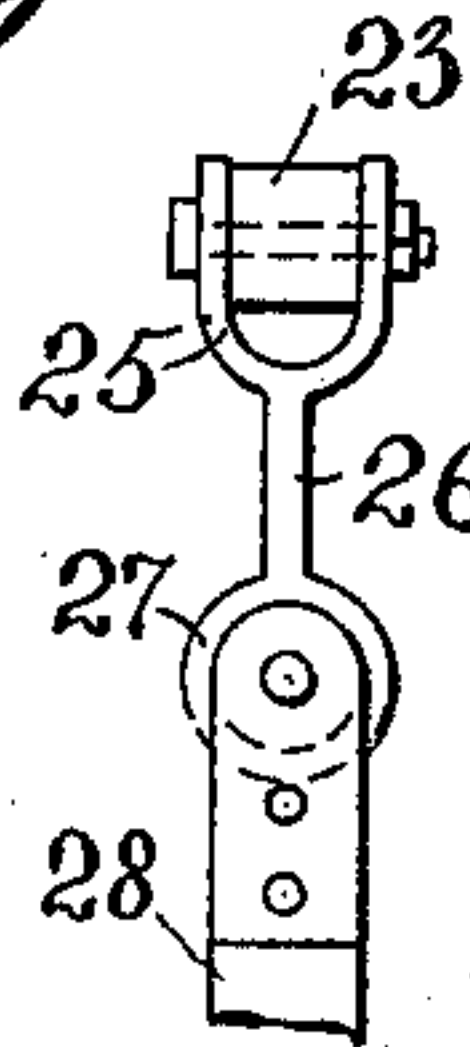
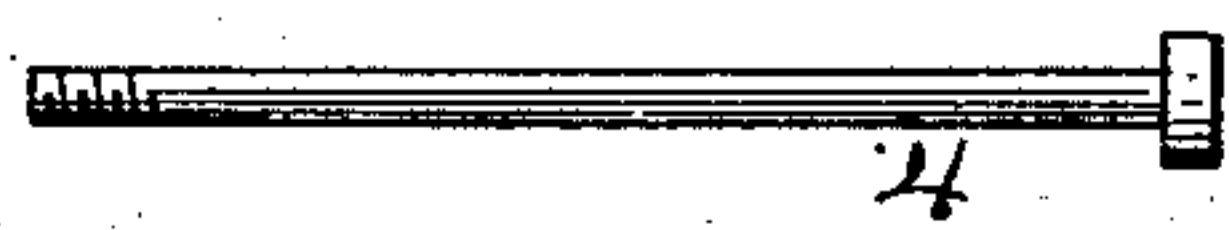
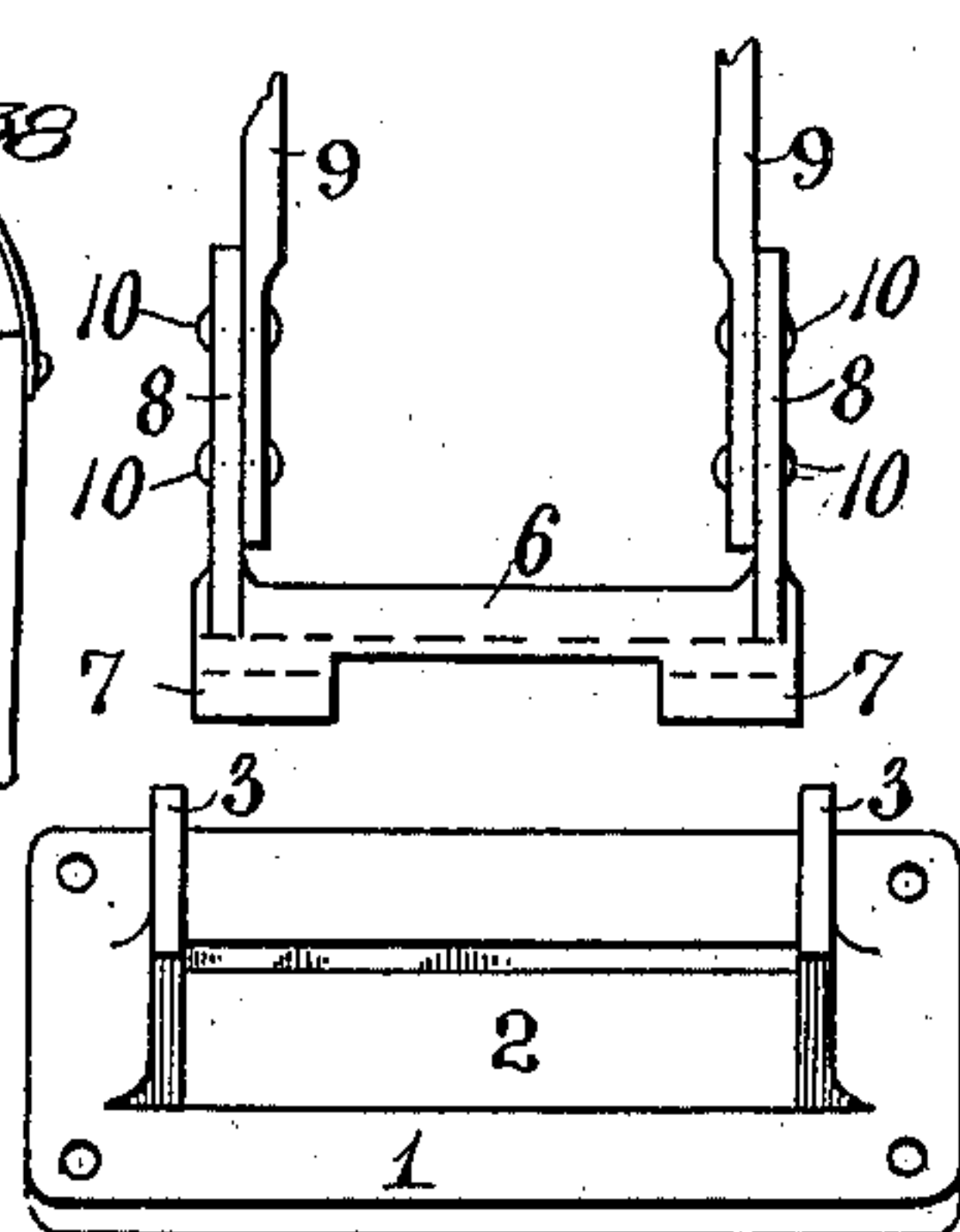
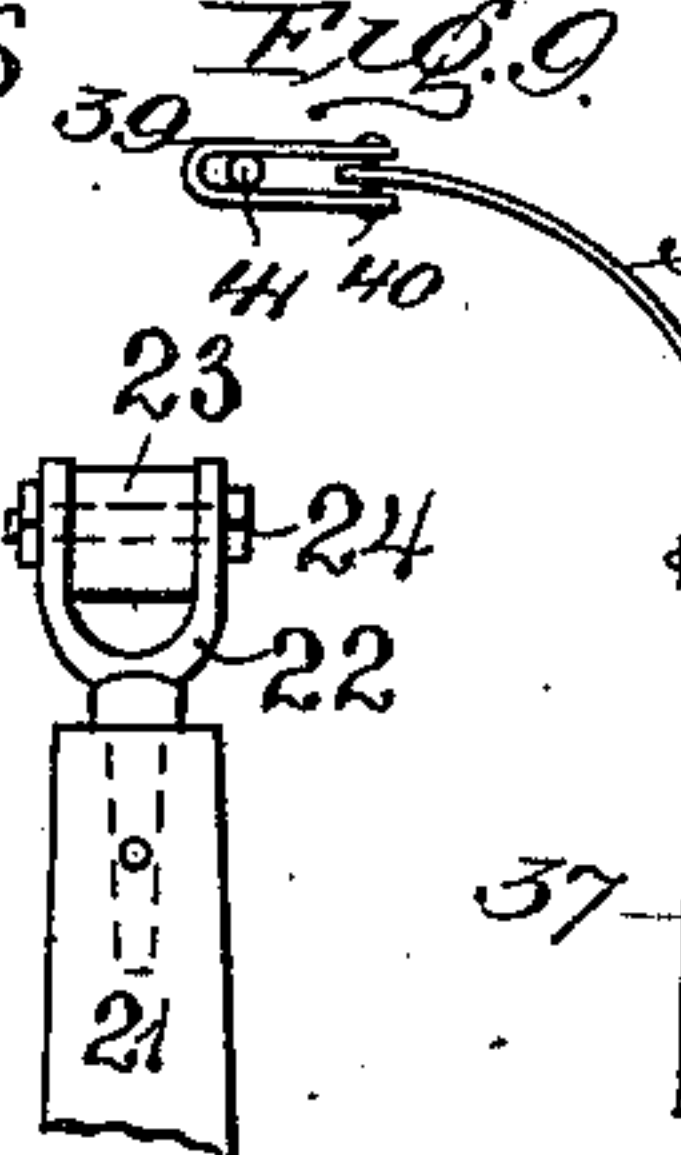


Fig. 8.



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SLIDING GATE.

SPECIFICATION forming part of Letters Patent No. 657,394, dated September 4, 1900.

Application filed March 7, 1900. Serial No. 7,687. (No model.)

To all whom it may concern:

Be it known that I, LEONARD A. COOPER, a citizen of the United States, and a resident of Atchison, in the county of Atchison and State of Kansas, have invented certain new and useful Improvements in Sliding Gates, of which the following is a specification.

My invention relates to gates in general, but more especially to that class which are adapted to be opened from the side by means of levers; and it consists of the parts and combination of parts, as will be more fully hereinafter set out.

In the drawings, Figure 1 is a perspective view of a gate embodying my invention. Fig. 2 is a front elevation of the gate-carrying lever-yoke, the base-plate of which is shown in perspective. Fig. 3 is a detail view of the combined yoke and hanger. Fig. 4 is a side elevation of the post 17, broken away, showing the cap for the same. Fig. 5 is a side elevation of the casting secured to the top of the levers 9. Fig. 6 is a similar view of the casting secured to the lower end of the levers 9. Fig. 7 is a detail view of the guiding-arms. Fig. 8 is a detail view of the mounting of the operating-levers. Fig. 9 is a side elevation of one of the spring lifting - arms and its standard.

1 represents a base plate or block having a central aperture 2, from each end of which a lug 3 extends upwardly, said lugs having bolt-openings. (Not shown.) 4 is a bolt extending across said plate through the bolt-openings in said lugs, and 5 is a nut to secure said bolt therein.

6 is a casting having perforated depending lugs 7, through which the bolt 4 passes to secure said casting pivotally between the lugs 3 of the base-plate.

8 represents arms extending from and integral with the casting 6, provided with suitable bolt-openings.

9 represents levers, the lower ends of which are secured by means of bolts 10 to the arms 8 of the casting 6, as shown in Fig. 2.

11 represents castings, having a bolt-opening, from which depend the arms 12, to which the upper ends of the levers 9 are secured by means of the bolts 13.

14 is the gate, made preferably with rounded ends, as shown, said gate being provided

with a central standard 15, which is secured to the upper rail of the gate by means of the four-arm coupling 16 and to the lower rail by means of the coupling shown.

17 is an arm secured in the upper socket of the coupling 16, the upper end of which is provided with a cap 18, which is pivoted between the castings 11 on the upper ends of the levers 9, as shown in Fig. 2.

19 is a double post, between which are secured the pins or rods 20 to guide the end of the gate in closing, said pins serving also to support the outer end of the gate in its closed position.

21 represents posts planted a suitable distance apart to permit the gate 14 to readily pass or move between them. 22 is a yoke secured in the top of each of said posts, in which is pivoted a hand operating-lever 23 by means of the bolt 24, the inner ends of said levers being pivoted together by means of a yoke 25, from which depends an arm 26, carrying a perforated casting 27.

28 represents arms pivoted at their lower ends, as at 29, to the respective levers 9, the upper ends of said arms being provided with castings 30, which are similar to the castings 11 on the levers 9, said castings being pivotally secured to the casting 27 by means of a bolt, thereby connecting said arms 28 to the hand operating-levers 23, as shown in Fig. 1.

31 represents guiding-arms secured on each side of the gate at the top at one end by means of the bolt 32, said arms being bowed out and the ends 33 loosely secured at the rear end of the gate, with coil-springs 34 coiled around the ends 33, between the gate and the main portions of the arms, whereby said arms are at all times more or less extended and are susceptible of movement. These arms serve to guide the gate between the posts in the act of closing, and should the gate strike on one side by reason of being out of line the loose spring-controlled end 33 would give and permit the gate to pass the obstruction and close.

35 is a spring snap-catch secured at its end 36 to the lower rail of the gate by means of a bolt, the forward end of the catch being of substantially an inverted-U-shaped form, whereby the catch is adapted to straddle the lower end of the gate. In closing, the catch 35 rides over the castings at the lower end of

the levers 9 and snaps down in front of said castings, thereby locking the gate and preventing small animals from opening the same. This catch, however, does not prevent the opening of the gate by means of the levers 23, inasmuch as said levers 23 first elevate the gate, thereby raising the catch from its engagement with said castings and leaving it free to be thrown back and open.

37 represents standards secured in a suitable manner to the base-plate 1 and projecting upwardly therefrom in a vertical position, to the upper end of which a lift-spring 38 is secured, said lift-spring being provided with a yoke 39, pivoted to the upper end thereof by means of a bolt 40, said yoke 39 being elongated and loosely secured to the levers 9 by means of a bolt 41, extending from the side thereof, the gate being provided with two of these standards and springs, one on each side, as shown.

The operation is as follows: The parts being assembled, as in Fig. 1, the lever 23 is pulled downward at its outer end, thereby elevating its inner end, thus pulling the yoke formed by the arms 28 upward, which in turn swings the yoked lever 9 backward on its pivot 4 until it and the arms 28 assume an upright or vertical position, from which they are carried backward by the momentum of the gate 14 to the position indicated in dotted lines in Fig. 1, thereby opening the closure, as will be readily understood. The springs 38, through their connection with the gate by means of the yoke 39, assist very materially in opening the gate, especially if the gate is of a heavy pattern, as will be readily understood. The gate is closed from the opposite side by pulling downward on the other hand operating-lever. When the gate is closed, the catch 35, as hereinbefore explained, snaps over the base-castings of the levers 9 and holds the gate against lateral displacement, while the front end of the gate is secured against vertical displacement between pins 20 in the posts 19.

What I claim, and desire to secure by Letters Patent, is—

1. The combination with a base-plate, lugs extending upwardly from the same, a casting having depending lugs pivotally secured between the lugs on the base-plate by means of a bolt, levers extending upwardly from said casting, arms secured to said levers, a gate, an upwardly-extending arm secured to the center of the gate and pivotally secured be-

tween the upper ends of said levers, hand-operated levers suitably pivoted, and a yoke and perforated hanger-casting integral with each other, said hand operating-levers being pivoted together at their inner ends in said yoke, and the upper ends of the first-named arms being pivotally secured on each side of said hanger.

2. In a gate of the character described, the combination with a base-plate, lugs extending upwardly from the same, a casting having depending perforated lugs pivotally secured between said lugs, levers extending upwardly from the casting, and flat spring-standards connected to said levers, of a central arm 17 extending upwardly from the gate to which the upper ends of said levers are pivotally secured, arms pivotally secured to said levers, a combined yoke and hanger-casting to which said arms are pivoted, and hand operating-levers pivoted together in said yoke.

3. The combination with a gate of the character described, of bowed guides for the lifting-arms, secured to the gate and movable at one end.

4. In a gate of the character described, the combination of bowed guides for the lifting-arms secured to the gate and movable at one end, and coil-springs interposed between the movable ends of said guides and the gate.

5. In a gate of the character described, the combination with the levers pivoted to the gate and operating-arms pivoted to the levers, of spring-standards, a loop pivotally secured to the upper end of the spring-standards, and a bolt on the levers to which said loop is movably connected.

6. In a gate of the character described, the combination with the base-plate, levers pivoted thereto, a gate pivoted between the upper ends of said levers, operating-arms connected with said levers, and a catch comprising an inverted-U-shaped frame and arms extending upwardly and backwardly from the frame, said arms secured to the lower rail of the gate, while the U-shaped frame straddles said rail, and is adapted to lock against the base-plate and hold the gate closed against movement except that derived from the operating-arms.

LEONARD A. COOPER.

Witnesses:

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E. E. HANOL.