

No. 869,859.

PATENTED OCT. 29, 1907.

C. E. RIFE.

GATE.

APPLICATION FILED JULY 26, 1907.

2 SHEETS—SHEET 1.

Fig. 1.

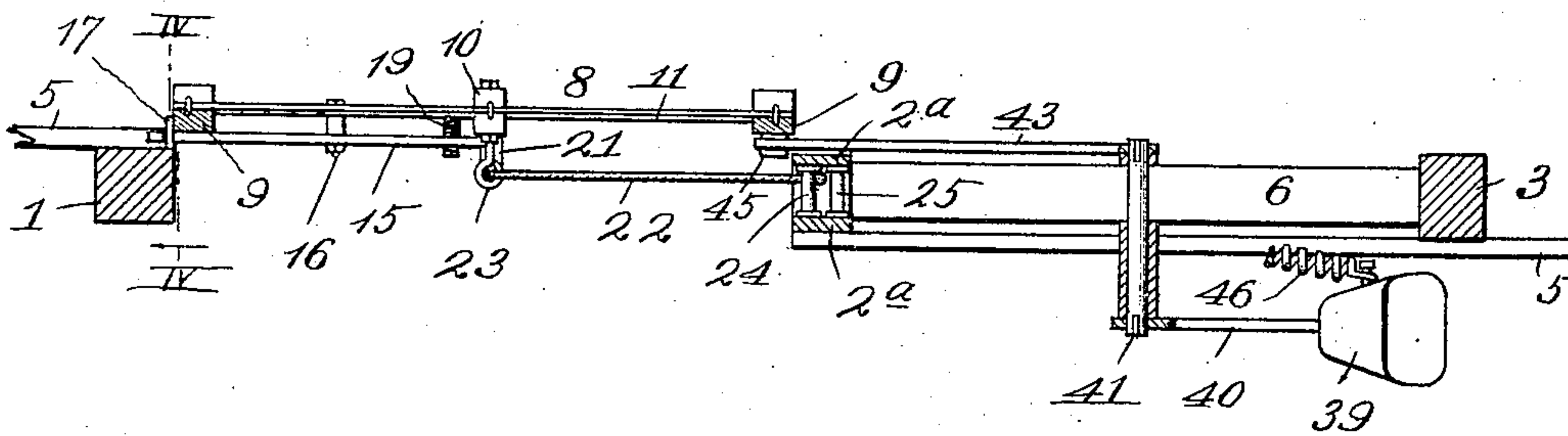
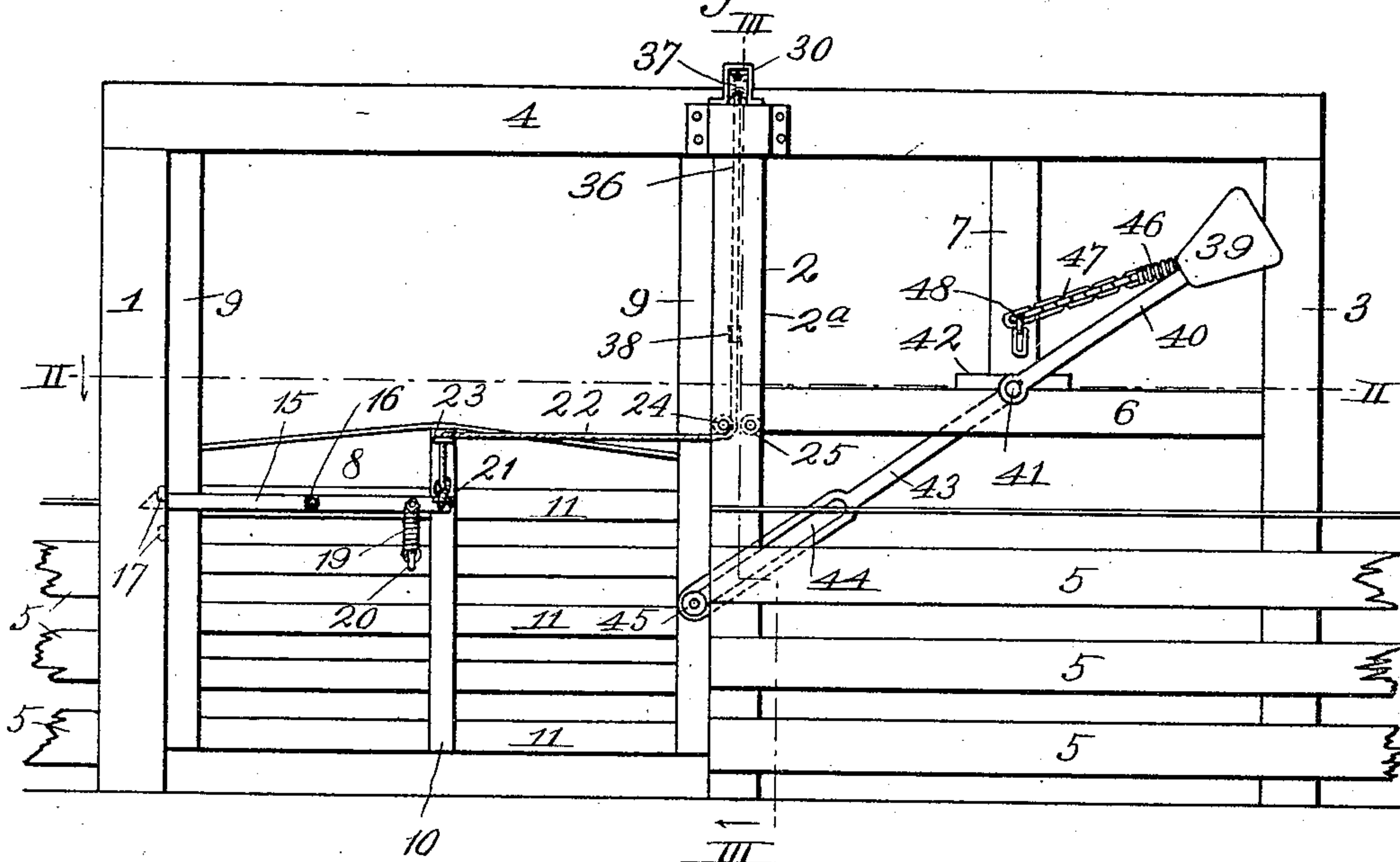


Fig. 2.

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2 SHEETS—SHEET 2.

Fig. 3.

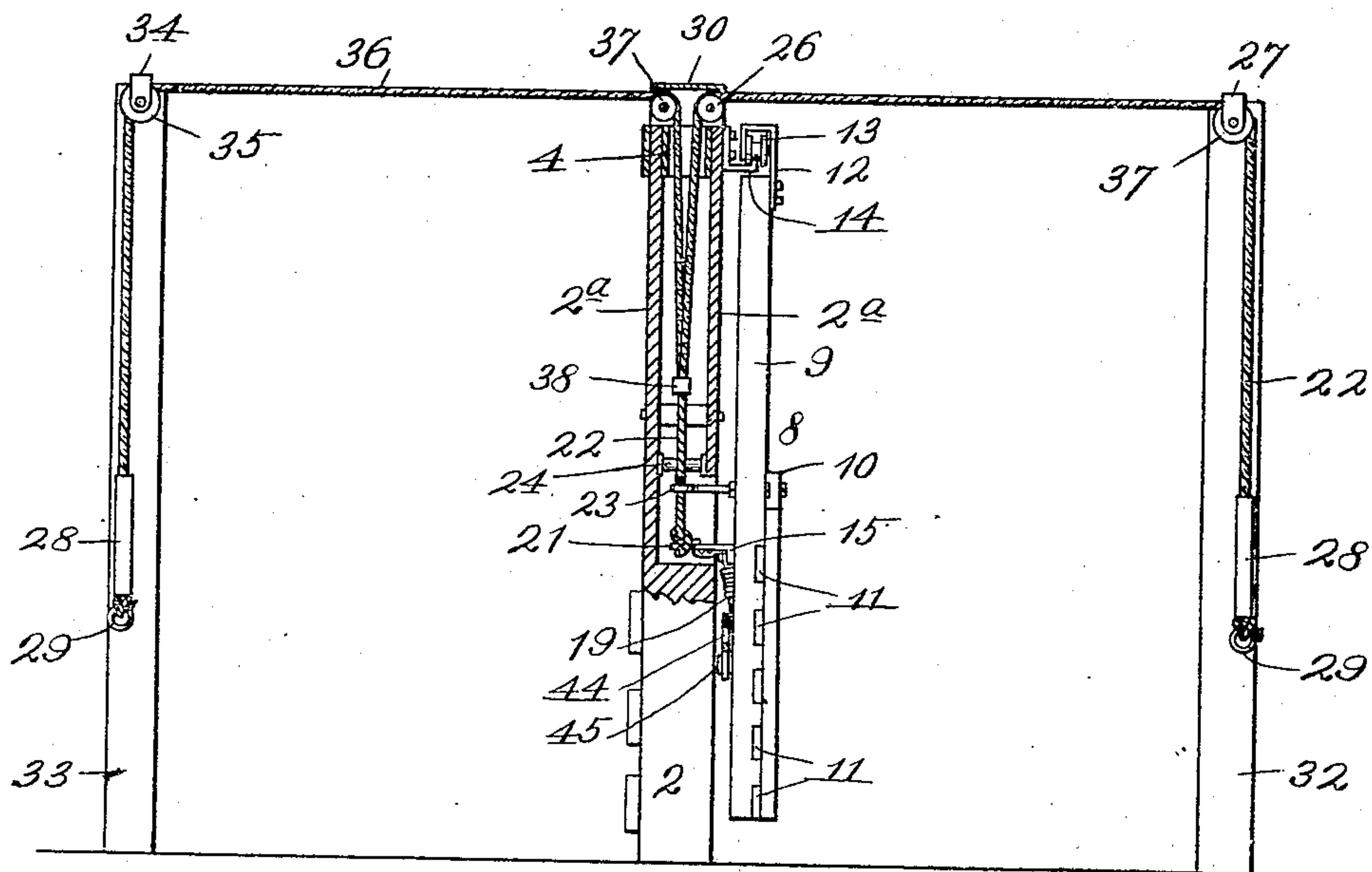


Fig. 4.

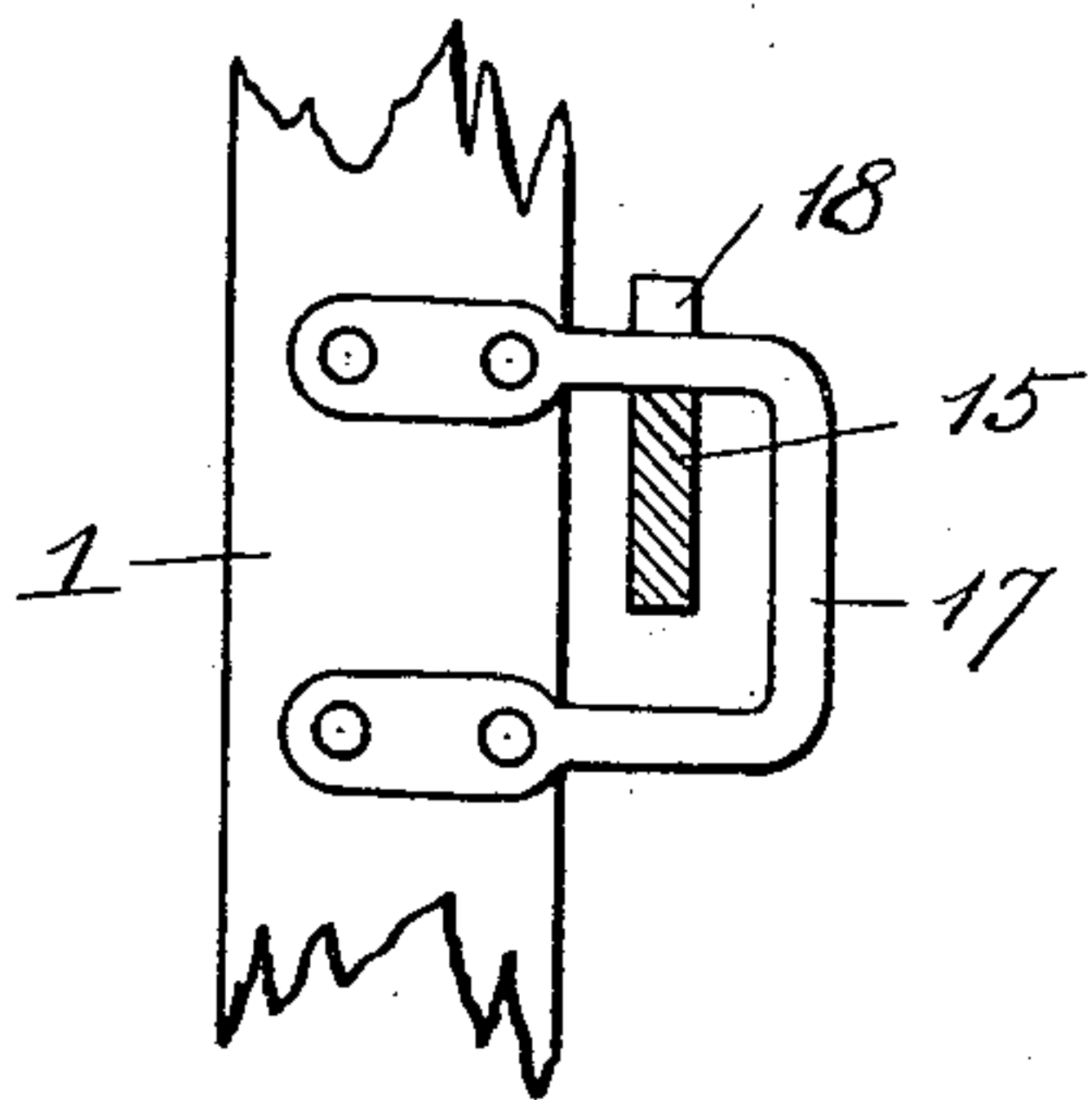
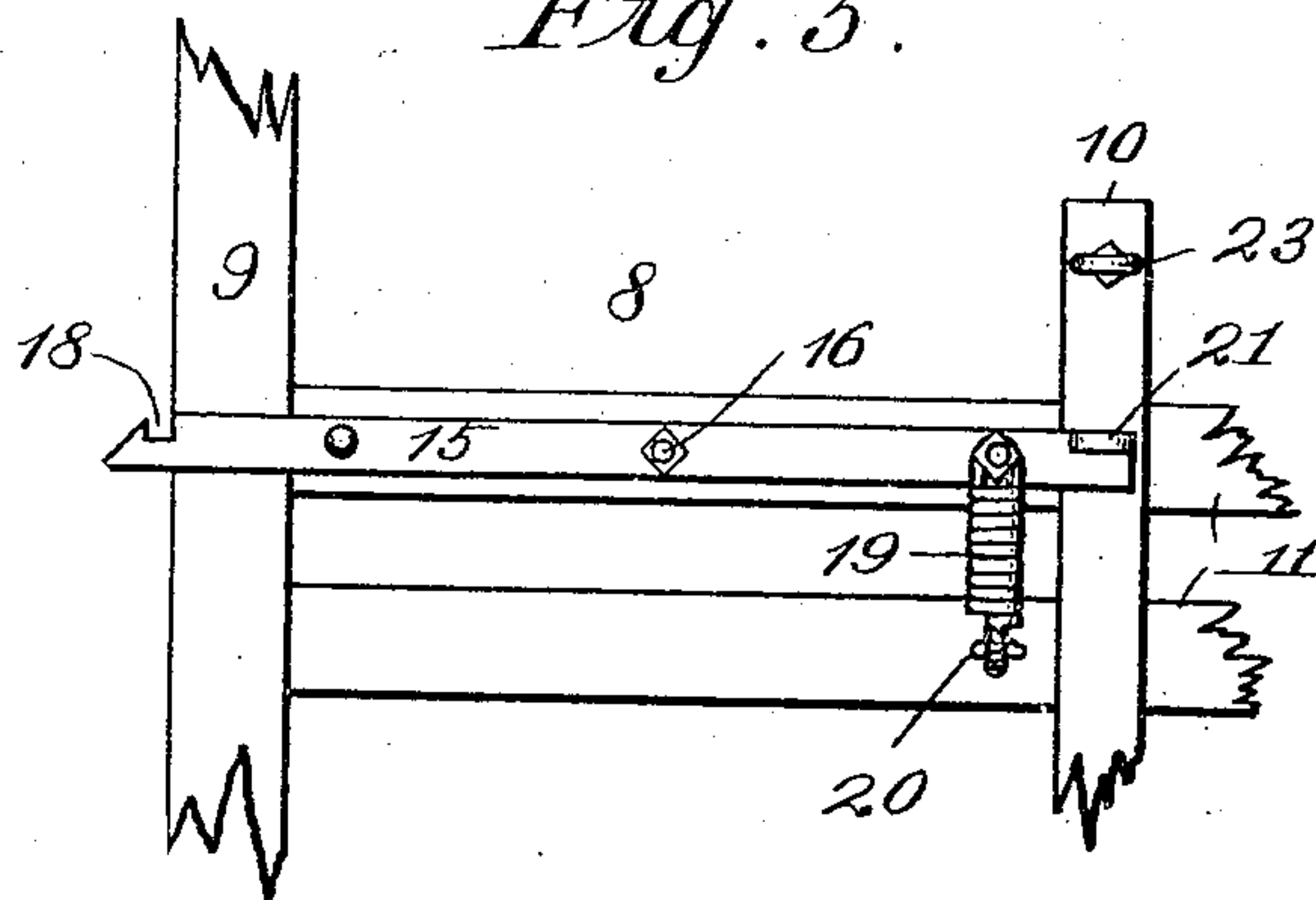


Fig. 5.



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UNITED STATES PATENT OFFICE.

CHARLES E. RIFE, OF KANSAS CITY, KANSAS.

GATE.

No. 869,859.

Specification of Letters Patent.

Patented Oct. 29, 1907.

- Application filed July 26, 1907. Serial No. 385,608.

To all whom it may concern:

Be it known that I, CHARLES E. RIFE, a citizen of the United States, residing at Kansas City, in the county of Wyandotte and State of Kansas, have invented certain
5 new and useful Improvements in Gates, of which the following is a specification.

My invention relates to that class of gates which are so arranged that equestrians and those riding in vehicles may open and close them without alighting, and
10 in order that it may be fully understood, reference will now be made to the accompanying drawings, in which:

Figure 1 represents a side elevation of my improved gate. Fig. 2 is a horizontal section on line II—II of Fig. 1. Fig. 3 is an irregular vertical section on line III—
15 III of Fig. 1. Fig. 4 is a broken section on line IV—IV of Fig. 2. Fig. 5 is a detail broken side elevation of the gate, provided with a latch forming part of the invention.

In carrying out the invention I employ a frame consisting of three equally-spaced posts 1, 2 and 3, united
20 at their upper ends by a longitudinal beam 4.

5 designates fence-rails secured to the posts, as shown in Fig. 1.

6 designates a horizontal beam, connected at its ends
25 to posts 2 and 3.

7 designates a short vertical beam arranged midway between posts 2 and 3 and connected at its ends to beams 4 and 6.

8 designates the gate which consists of upright pieces
30 9, an intermediate vertical piece 10, and longitudinal slats 11. Pieces 9 are provided with hangers 12 having antifriction rollers 13 arranged to travel upon a track 14 and thus carry the gate.

The gate is normally locked in a closed position, so
35 that it can not be opened by stock, or be blown open by wind. The locking means consists of a latch 15 fulcrumed upon a bolt 16, and adapted to engage a keeper 17, which latter projects from post 1 and is engaged by the notched end 18 of the latch. The notched end of
40 the latch is held in engagement with the upper portion of the keeper by a retractile spring 19, connected to the rear end of the latch, and a staple 20, which latter is secured to the gate. The rear portion of latch 15 has an
45 outturned extension 21 to which the lower end of a cable 22 is attached. Said cable extends upward through an eye-bolt 23, thence between two antifriction guide-rollers 24 25, thence over sheaves 26 27 from which
50 latter it depends, and is provided with a weight 28 and a ring 29. Weight 28 holds the depending end of the cable steady so that ring 29 may be readily grasped when it is desired to open or close the gate.

Rollers 24 25 are arranged between members 2^a forming the upper portion of post 2. Sheave 26 is mounted in a hood 30 secured to beam 4. Sheave 27 is secured
55 to an arm 31 projecting from the upper portion of a post 32 arranged a suitable distance from the gate.

33 designates another post arranged at the opposite side of the gate from post 32 and provided with an arm 34, carrying a sheave 35, over which a cable 36 runs. The free end of said cable, like the free end of cable 22, 60 is provided with a weight 28 and a ring 29, while its opposite end runs over a sheave 37, and is secured to cable 22 by a clip 38. Sheave 37, like sheave 26, is mounted in hood 30.

By pulling downward on cable 22 or 36 the gate will
65 be either half-way opened or half-way closed, and these movements are completed by a counterweight 39 carried upon the upper end of a crank-arm 40 fixed at its lower end to a rock-shaft 41 mounted in a bearing 42 on beam 6. 70

43 designates a crank-arm fixed to the opposite end of shaft 41 and having a longitudinal slot 44 in its lower end through which an antifriction roller 45, carried by the rear end of the gate, extends.

46 designates a retractile spring which assists in start- 75 ing the gate on its opening or closing movement, and also acts as a cushion in preventing the gate from completing its movement with a jar. Said spring is connected at its opposite ends to the counterweight 39 and a chain 47, which latter adjustably engages a pin 48 so
80 that the tension of spring 46 may be regulated as desired.

Pin 48 is arranged vertically above shaft 41 so that when the counterweight approaches the end of its stroke in either direction, the spring will be expanded and thus gradually bring the weight to rest and, through 85 the intermediacy of the connecting parts, gradually check the movement of the gate, so that the latter will open or close without shock.

The operation is substantially as follows: A party approaching the gate from the right will draw down- 90 ward on cable 22, so that the latter pulling around guide-roller 24 will disengage the latch from its keeper and open the gate halfway, when its opening movement will be completed by the counterweight exerting backward pressure on roller 45, through the inter- 95 mediacy of crank-arms 40 43 and shaft 41. After passing through the opening left by the gate, the latter is closed by drawing downward on cable 36, which pulling around guide-roller 25 will halfway close the gate. The closing movement will then be completed by the coun- 100 terweight swinging to the position shown in Fig. 1, it being understood that the momentum acquired by the counterweight will carry it beyond the dead center when traveling in either direction.

Having thus described my invention, what I claim 105 is:—

1. A sliding gate, a frame on which it is suspended, a rock-shaft mounted in said frame, a crank-arm loosely connected at one end to the gate and fixed at its opposite end to the rock-shaft, another crank-arm fixed to the rock-shaft, a counterweight on the free end of the last-men- 110 tioned crank-arm, and resilient means attached to the counterweight and the frame.

2. A sliding gate, a frame on which it is suspended, a rock-shaft mounted in said frame, a crank-arm loosely connected at one end to the gate and fixed at its opposite end to the rock-shaft, another crank-arm fixed to the rock-shaft, a counterweight on the free end of the last-mentioned crank-arm, resilient means attached to the counterweight, and a cable attached to said means and adjustably connected to the frame. 20
3. A sliding gate, a frame on which it is suspended, a rock-shaft mounted in said frame, an antifriction roller on the gate, a crank-arm fixed at one end to the shaft and having a slotted portion loosely engaging the antifriction roller, another crank-arm fixed to the rock-shaft, and a counterweight on the free end of the last-mentioned crank-arm. 25
4. A sliding gate, a frame on which it is suspended, a rock-shaft mounted in said frame, a crank-arm loosely connected at one end to the gate and fixed at its opposite end to the rock-shaft, another crank-arm fixed to the rock-shaft, a counterweight on the free end of the last-mentioned crank-arm, a latch pivoted on the gate, posts at each side of the gate a suitable distance therefrom, a sheave secured to each post, a cable attached to the latch and running over one of the sheaves, and another cable attached to the first-mentioned one and extending over the other sheave.

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

CHARLES E. RIFE.

Witnesses:

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