

No. 647,205.

W. A. STREITMATTER.
AUTOMATIC GATE.

Patented Apr. 10, 1900.

(Application filed July 7, 1899.)

(No Model.)

2 Sheets—Sheet 1.

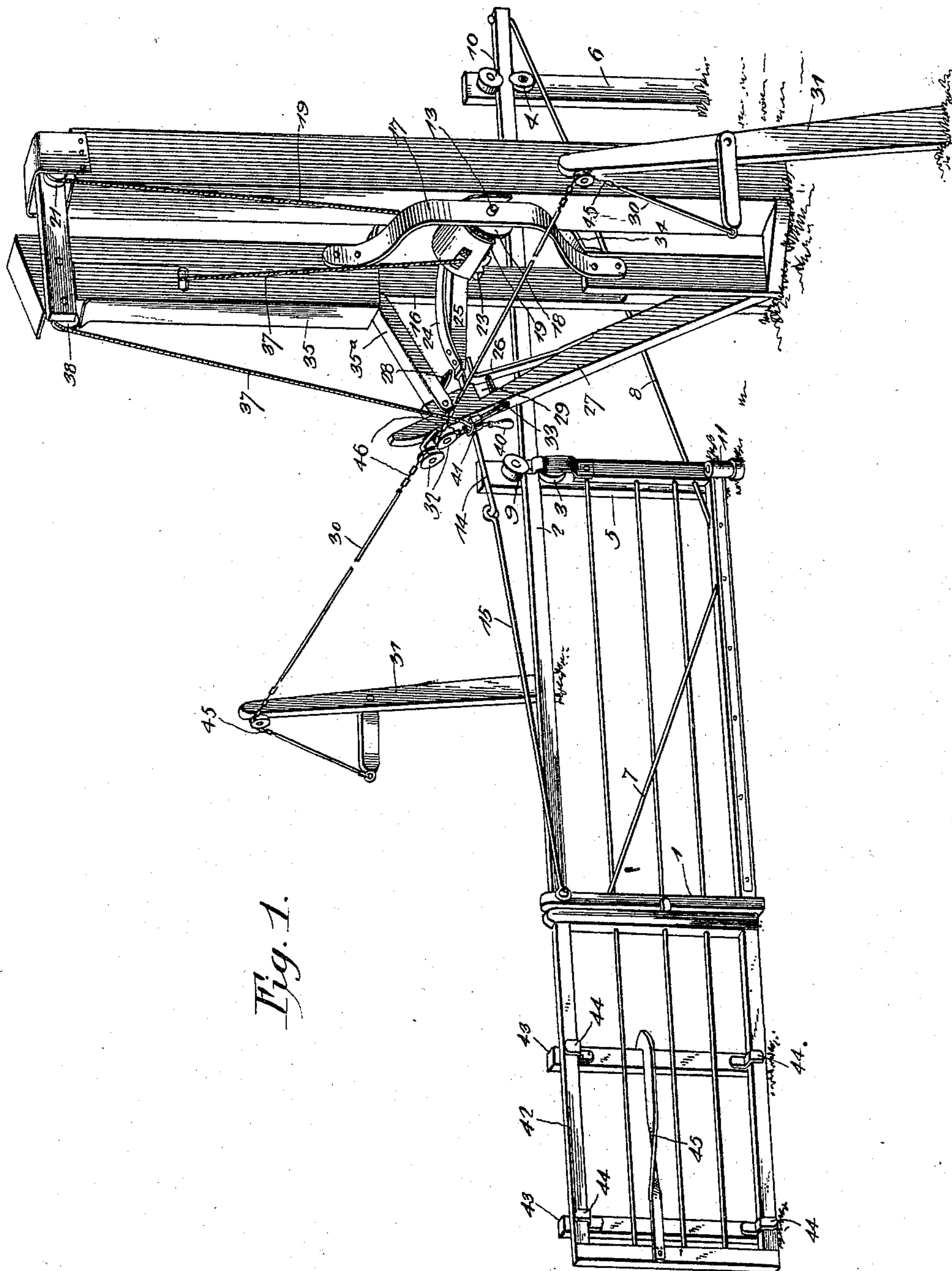


Fig. 1.

Witnesses
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Fig. 2.

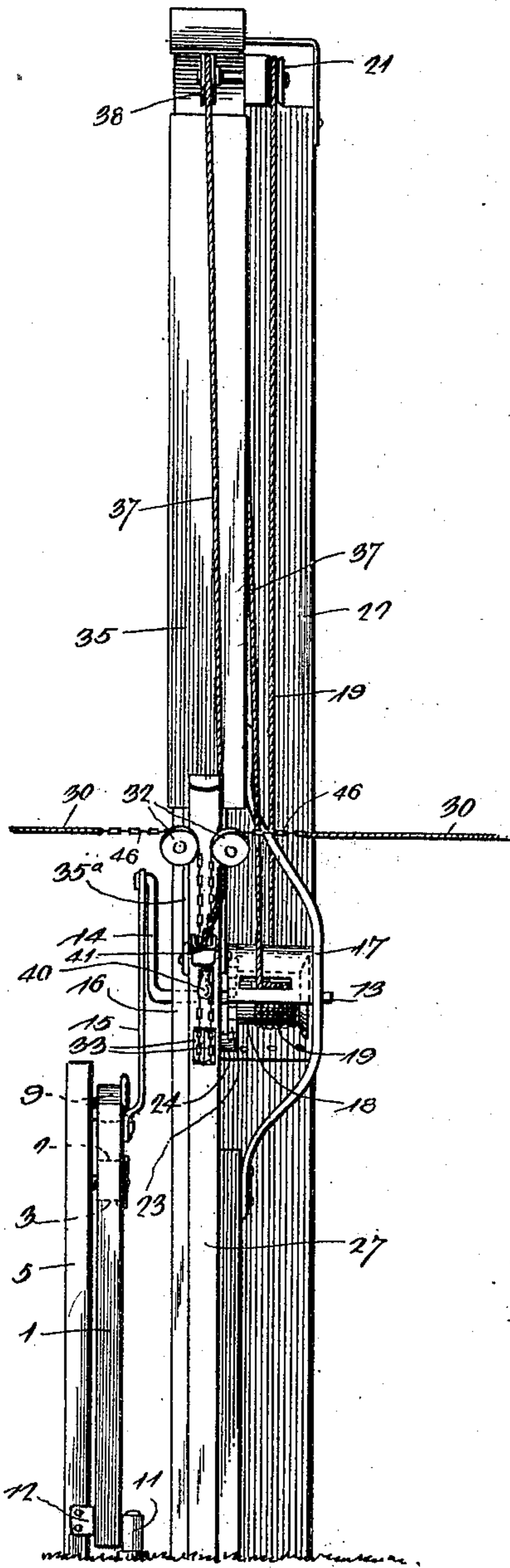
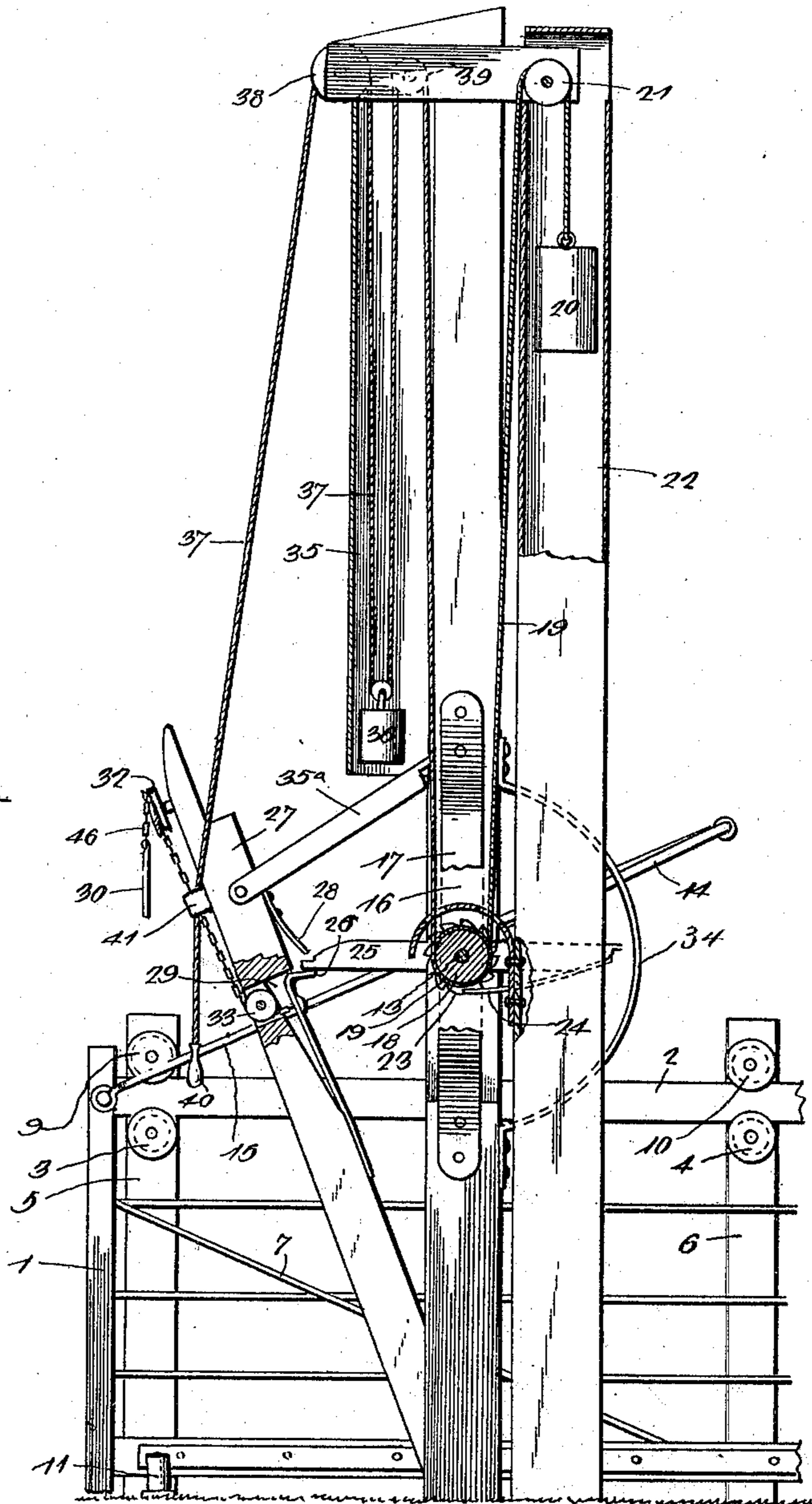


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM ANDREW STREITMATTER, OF PRINCEVILLE, ILLINOIS.

AUTOMATIC GATE.

SPECIFICATION forming part of Letters Patent No. 647,205, dated April 10, 1900.

Application filed July 7, 1899. Serial No. 723,072. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ANDREW STREITMATTER, a citizen of the United States, residing at Princeville, in the county of Peoria and State of Illinois, have invented a new and useful Automatic Gate, of which the following is a specification.

The invention relates to improvements in automatic gates.

10 The object of the present invention is to improve the construction of sliding gates and to provide a simple and comparatively-inexpensive one capable of being operated at a distance from either side of it by a person in
15 a vehicle or on horseback or on a bicycle without stopping and adapted after the actuating mechanism has run down to have the same readily wound up by a person driving through the gateway without leaving his vehicle.

20 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 claims hereto appended.

25 In the drawings, Figure 1 is a perspective view of an automatic gate constructed in accordance with this invention and shown closed. Fig. 2 is an end elevation of the gate, the same being open. Fig. 3 is a side elevation of the same, partly in section.

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

1 designates a sliding gate, preferably composed of a wooden frame and horizontal wires, the top bar 2 of which is extended rearward and is supported upon rollers 3 and 4 of up-
35 rights 5 and 6, whereby the gate is adapted to slide longitudinally in opening and closing.
40 The gate is strengthened by inclined bracing-wires 7 and 8, extending upward from the bottom of the gate and connected, respectively, to the front end bar and to the rear end of the top bar. The posts or uprights 5
45 and 6 are provided with suitable guide-pulleys 9 and 10, located above the supporting-rollers and retaining the top rail 2 of the gate thereon. The bottom of the gate is guided by a vertical roller 11, mounted on a suitable spindle or support and located adjacent to the
50 post 5, which is provided with a wear-iron 12,

the gate passing between the same and the bottom roller in opening and closing.

The sliding gate is reciprocated by a shaft 13, provided at one end with an arm 14, which
55 is connected by a rod 15 with the front of the gate, and when the shaft rotates by the means hereinafter described the gate will slide back and forth, as will be readily understood. The
60 shaft 13, which is disposed horizontally, is journaled in suitable bearings of a supporting-frame 16 and a bracket 17, and it carries a drum 18, around which is wound an actuating cord or rope 19, and a weight 20 is connected with the same and is adapted in fall-
65 ing to rotate the shaft. The cord or rope 19 extends upward from the drum and passes around a pulley 21 at the top of the supporting-frame, and a vertical casing 22 forms a well for the weight and is adapted to protect
70 the same and the rope from the weather.

The drum, which is adapted to be rotated by the means hereinafter described for winding up the weight, is loosely mounted on the shaft, and is connected with the same by a
75 clutch consisting of a ratchet-wheel 23, carried by the drum, and a pawl 24, mounted on a bar 25, which projects from opposite sides of the shaft. The bar 25, which is fixed to
80 the shaft, forms a pair of arms which are adapted to engage alternately a resilient catch 26, whereby the shaft is locked at the end of each half-revolution to hold the gate open and closed. The resilient catch 26 is mounted on
85 an inclined bar 27, extending forward from the lower portion of the supporting-frame and connected near its upper end with the same, and the said catch, which is mounted on the inner edge of the bar 27, has its upper end bent at an angle to form an arm to
90 receive the arms of the shaft. The bar 25, which is carried by the shaft, is held against retrograde movement to prevent the gate from having any recoil by a resilient dog 28, located above the catch 26 and mounted on
95 the inclined bar 27. The inclined bar 27 of the supporting-frame is provided with a recess 29, into which the resilient catch is drawn to trip the actuating mechanism of the gate and cause the latter to be reciprocated. The
100 tripping of the actuating mechanism is effected by means of operating devices 30, ex-

tending from the gate in opposite directions and having their outer portions supported by suitable posts or uprights 31. The operating devices pass over suitable guide-pulleys of the posts or supports 31 and extend therefrom to the supporting-frame, which is provided with pulleys 32 and 33, located at the outer edge of the inclined bar 27. The guide-pulley 33 is located opposite the upper end of the catch, and when either of the operating devices is pulled the said catch is withdrawn from its engagement with the bar 25 of the shaft, whereby the latter is tripped and is permitted to rotate one-half a revolution. The supports or uprights 30 are located a sufficient distance from the gate to allow the latter sufficient time to open, so that a person within a vehicle or on a bicycle may pass through the gateway without stopping. The operating devices, which may be constructed in any suitable manner, preferably consist of wires provided at the guide-pulleys with short chains 45 and 46.

The rotating bar 25 is arranged within guards 34 and 35^a, mounted on the supporting-frame and arranged as clearly shown in Fig. 3 and located beneath a vertical casing 35, which receives the supplemental weight 36. The supplemental weight 36 is loosely connected with a winding rope or cord 37, which passes over a pair of pulleys 38 and 39 at the top of the casing and which has its inner end wound around the drum in a reverse direction to that of the weighted cord or rope, whereby when the winding cord or rope is drawn outward the drum will be rotated to wind up the weight. The weight 36 is connected with the cord or rope 37 at a point between the pulleys 38 and 39, and it is adapted after the weight has been wound up to draw the slack of the winding cord or rope into the casing 35 to protect it from the weather. The outer end of the winding cord or rope is provided with a suitable grip 40 and is arranged beneath a guide-pulley 41, located at the outer edge of the bar 27 in convenient position for a person passing through the gateway to readily grasp it, whereby the weight may be wound up without necessitating a person dismounting.

The gate when it is closed abuts against a supplemental gate 42, consisting, preferably, of a rectangular frame of wood and a body portion of wires similar to the gate 1 and slidingly mounted on posts or supports 43, which are provided with upper and lower brackets 44. The brackets 44 have outwardly-extending L-shaped arms receiving the top and bottom bars of the supplemental gate, which is held in its closed position by a spring 45. Any other suitable form of latch may be employed for the supplemental gate, which is adapted to be opened to permit the passage of a large load or a binder or other agricultural machine.

The invention has the following advantages: The gate, which is simple and com-

paratively inexpensive in construction, is positive, reliable, and automatic in its operation, and it is capable of being opened and closed by persons within vehicles or on horseback or bicycles without dismounting. Also the gate-actuating mechanism may be readily wound up as it runs down, and the winding operation may be performed by a person driving through the gateway without leaving his vehicle.

Changes in the form, proportion, size, and the minor details of construction within the scope of the appended claims may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What is claimed is—

1. The combination with a sliding gate, of a shaft connected with the same, arms connected with the shaft, a drum mounted on the shaft, a clutch connecting the shaft with the drum, mechanism for actuating the drum, a catch arranged to be engaged by the arms of the shaft, and operating mechanism connected with the catch and adapted to trip the same, substantially as described.

2. The combination of a sliding gate, a shaft connected with the same and provided with arms, a drum mounted on the shaft, a clutch connected with the shaft and with the drum, mechanism for actuating the drum, a catch arranged to be engaged by the arms, a dog for locking the arms against retrograde movement, and operating mechanism for tripping the catch, substantially as described.

3. The combination of a sliding gate, a shaft connected with the same, a drum mounted on the shaft and having a clutch connection with the same, means for actuating the drum for operating the gate, and a winding rope or cord wound around the drum, suspended over the roadway and adapted to be operated for rewinding the actuating mechanism of the gate, substantially as described.

4. The combination with a sliding gate, of a shaft connected with the same, arms projecting from the shaft, means for setting and tripping the arms, a drum arranged on the shaft and having a ratchet-wheel, a pawl mounted on one of the arms and engaging the ratchet-wheel, means for actuating the drum, and a winding rope or cord wound around the drum, substantially as described.

5. The combination of a sliding gate, a shaft connected with the same, a drum mounted on the shaft and having actuating means for rotating it to open and close the gate, mechanism for setting and tripping the shaft, and a winding-rope wound around the drum and having its outer end arranged to be grasped by a person passing through the gateway, whereby the actuating mechanism may be rewound when the same has run down, substantially as described.

6. The combination of a sliding gate, a shaft connected with the same, means for setting and tripping the shaft, a drum mounted on

the shaft and having a clutch connection with the same, a winding cord or rope wound around the drum, a casing, pulleys arranged at the top of the casing and supporting the
5 winding cord or rope, and a weight connected with the latter at a point between the pulleys and adapted to draw the slack within the casing, substantially as described.

10 7. The combination of a sliding gate, a supporting-frame, a shaft mounted on the supporting-frame and connected with the gate, a pulley arranged at the top of the supporting-frame, a drum mounted on the shaft, a weight-

ed cord or rope passing over the pulley and wound around the shaft, a winding cord or
15 rope reversely wound around the shaft, and means for setting and tripping the shaft, substantially as described.

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

WM. ANDREW STREITMATTER.

Witnesses:

RAY F. MURRAY,
WEEDE MARTIN.