No. 871,637. PATENTED NOV. 19, 1907.

C. SCHÄFFER.

GATE.

APPLICATION FILED APR. 20, 1907.

3 SHEETS—SHEET 1.

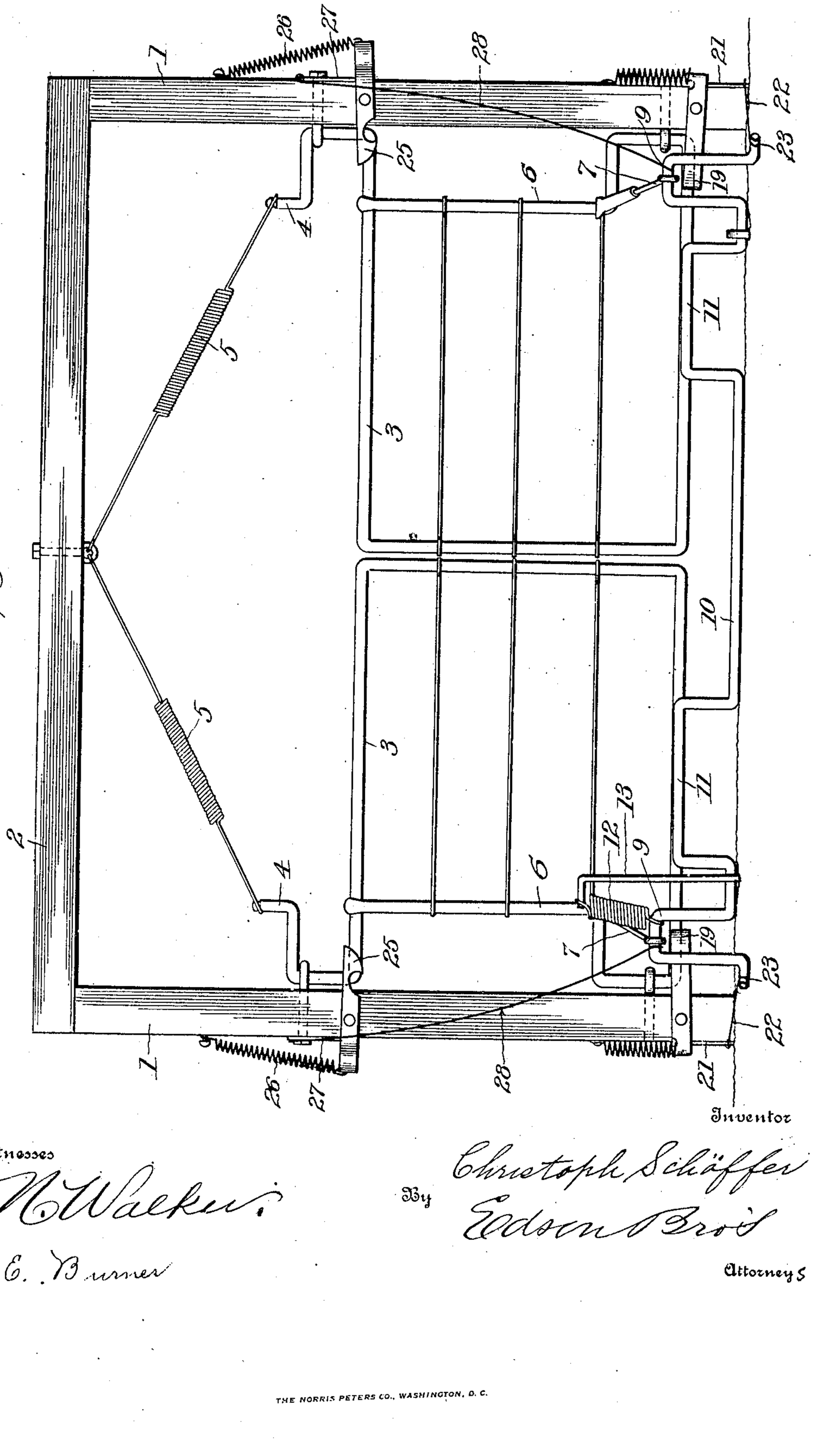

Fig. 1.

Witnesses

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3 SHEETS—SHEET 2.

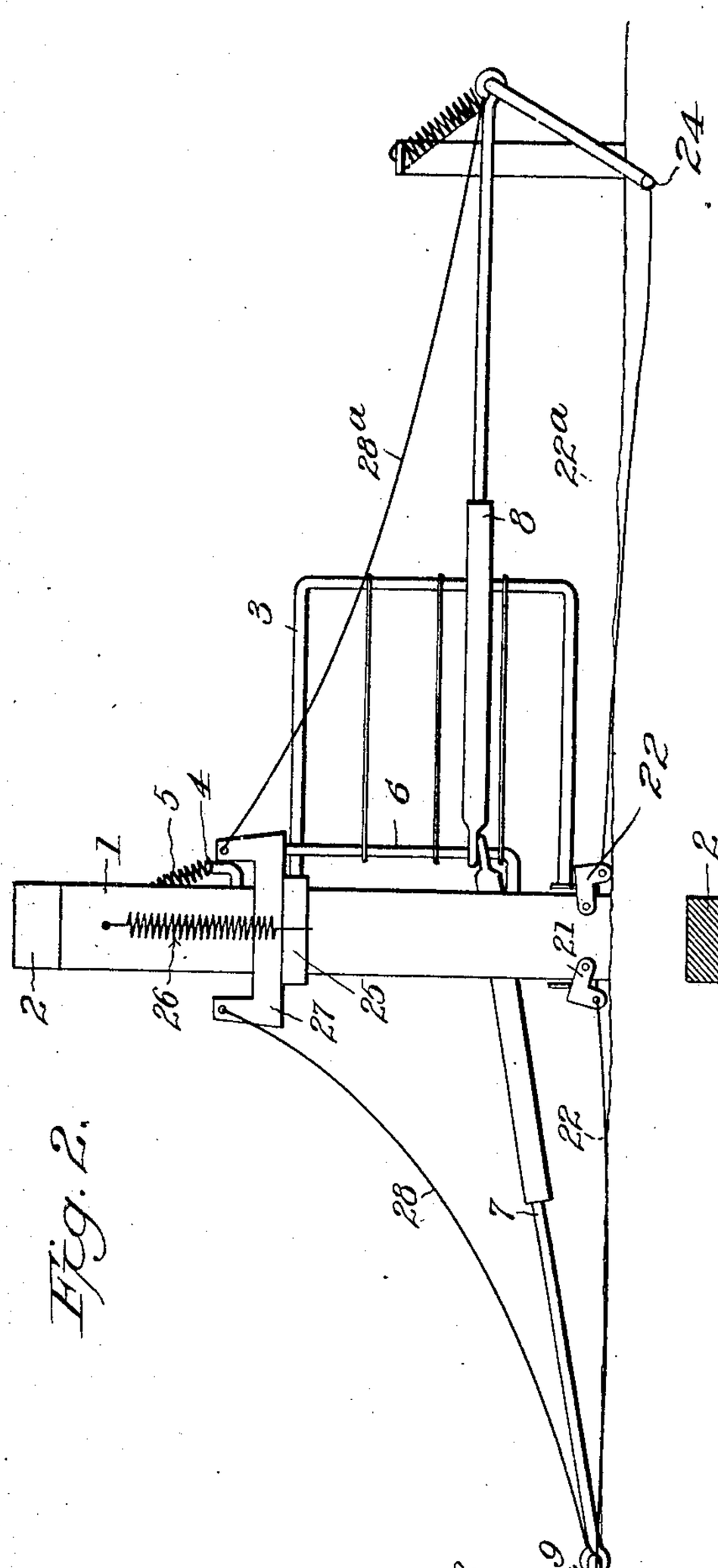

Fig. 2.

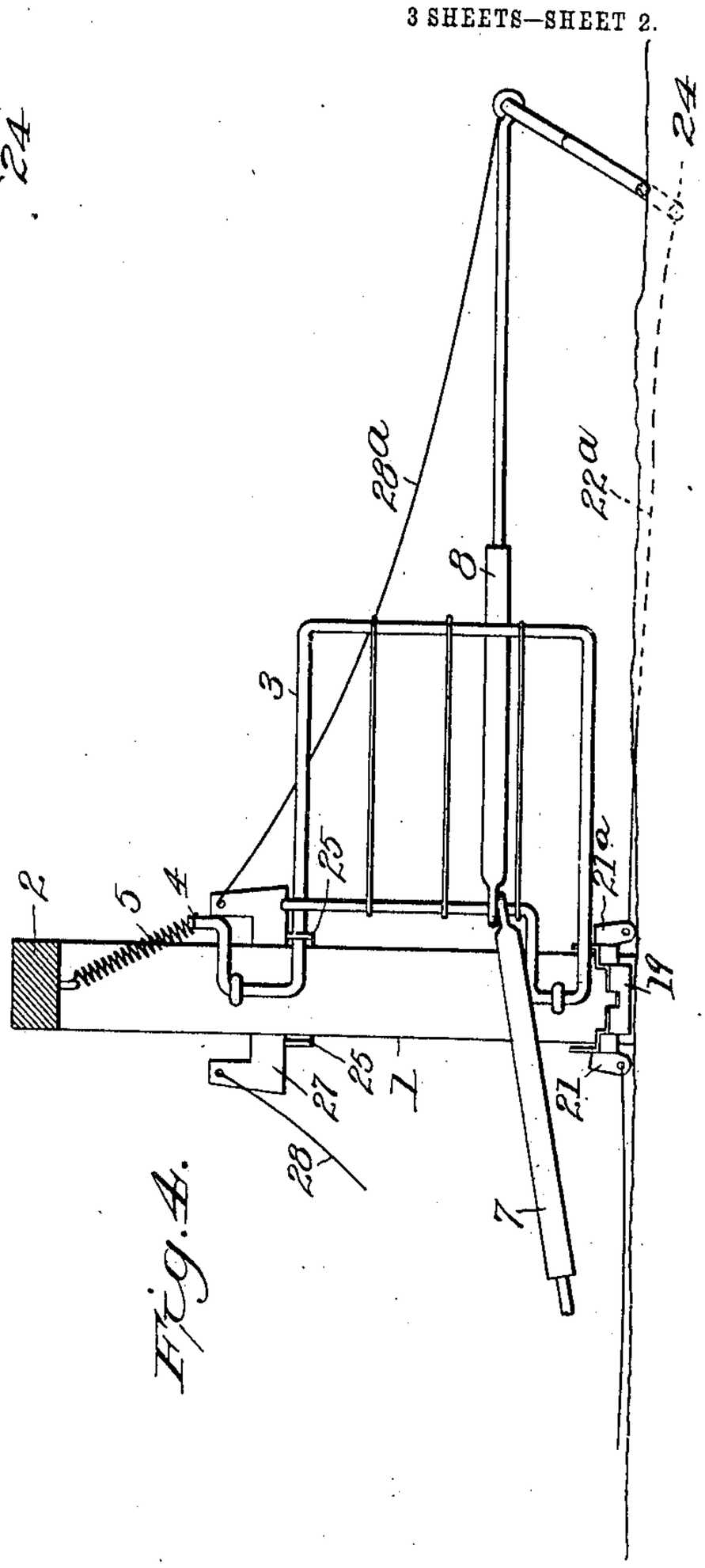

Fig. 4.

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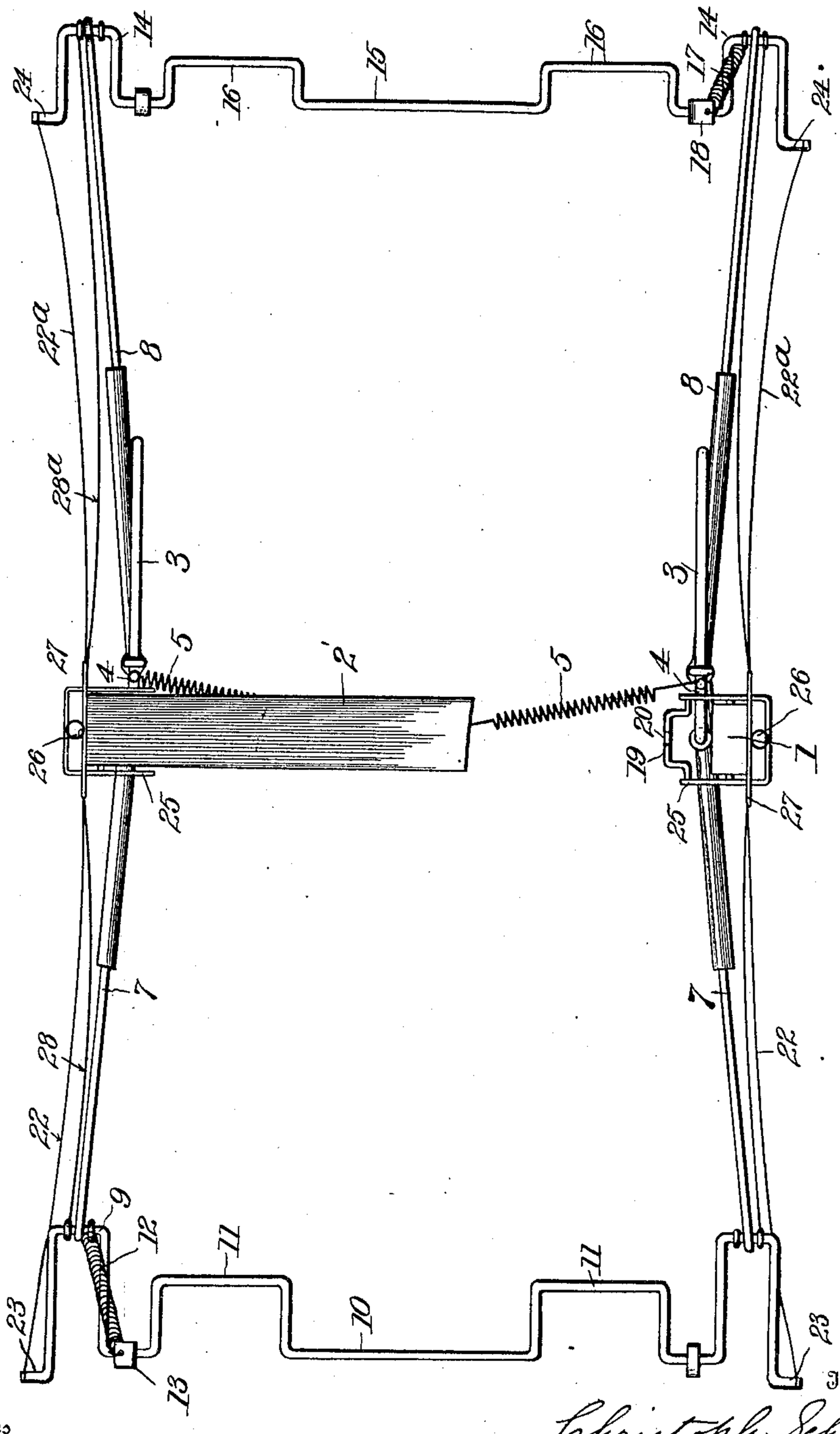
3 SHEETS—SHEET 3.

Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

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GATE.

No. 871,637. Specification of Letters Patent. Patented Nov. 19, 1907.

Application filed April 20, 1907. Serial No. 369,241.

To all whom it may concern:

Be it known that I, CHRISTOPH SCHÄFFER, a citizen of the United States, residing at Melville, in the county of Foster and State of North Dakota, 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 automatic gates.

It has for its object to provide an improved gate which is capable of being unlocked, opened and locked open by a vehicle approaching in either direction and afterwards released, closed and locked by the vehicle after it has passed through said gate.

The invention consists in the features of construction and combinations of parts hereinafter described and particularly pointed out in the claims.

In the accompanying drawings, illustrating the preferred embodiment of my invention: Figure 1 is a front elevation of the gates closed. Fig. 2 is a side elevation showing the gates open. Fig. 3 is a plan view showing the gates open, the end portions of the cross bar being broken away, and Fig. 4 is a broken inner face view of one of the posts with the gate open.

Referring more particularly to the drawings, 1, 1 are the road posts connected by a cross bar 2. One of the gates 3 is hinged to each of said posts. Said gates are preferably made of metal frames with wire meshes as shown. At the upper end of each gate is a crank arm 4, between which and the central portion of the cross bar 2 is arranged a spring 5 normally holding said gate closed. Another crank 6 is formed by a reëntrant angle in the metal frame of each gate. On said latter crank are mounted telescopic rods, one 7 extending up and another 8 down the road. The opposite ends of the rods 7 are connected to cranks 9 on the rocking shaft 10 which is provided with two other cranks 11 arranged in the paths of the wheels of vehicles passing over the road. Said rocking shaft is normally held in an upright position by means of a spring 12 preferably arranged between one of the cranks 9 and an upright bracket 13. The rods 8 are connected to cranks 14 on another rocking shaft 15 having cranks 16 in the road and equipped with a spring 17 connected to the bracket, 18.

The gates are locked closed by spring pressed latches 19, each preferably comprising a bent strip extending across the inner face of one of the road posts and pivoted on the sides thereof. Said bent strip is formed with a notch or depression 20 to receive the lower rail of a gate. Trips 21 and 21ª are pivoted on the outer face of each post below the rear ends of the latch 19. Said trips are connected by wires 22 and 22ª, or other suitable connections, with crank arms 23 and 24, respectively, on the rocking shafts 10 and 15 which extend below the pivotal axes of said shafts. A double latch 25 is mounted farther up on each post and comprises a bent piece extending across the outer face of said post where it is equipped with a spring 26. The ends of said bent piece, on which the latches proper are formed, extend past the inner face of the post in position to grip the upper rail of the gate when it is swung open. A single rocking trip 27 is adapted to operate the latch 25 when it is rocked in either direction. Wires 28 and 28ª connect the opposite ends of said trip 27 with the cranks 9 and 14 respectively on the shafts 10 and 15. The push rods 7 and 8 are made in telescopic sections to permit either pair to be used for opening the gate and at the same time allow the other pair to be extended, when the latches for releasing the gates are being operated without acting upon the gate at all.

If a vehicle approaches from the direction of the rocking shaft 10, its wheels will depress the cranks 11 towards said gates thereby turning the cranks 9 in the same direction and exerting pressure through the rods 7 upon the gates to open the same. At the first movement of said rocking shaft, the crank arms 23, which are turned away from the gates as the cranks 9 and 11 are turned towards them, release the latches 19 by means of the wires 22 and trips 21. When the gates are opened to their full extent, they are caught and locked by the latches 25. After the vehicle has passed through the gateway, the wheels thereof depress the cranks 16 away from the gates thereby turning the rocking shaft 15 and the cranks 14 in the same direction and releasing the latches 25 by means of the trips 27 and wires 28ª. As soon as the latches 25 are released, the gates are automatically closed by means of

the springs 5 and as soon as the lower rails of said gates reach the notches 20 in the latches 19, they will be engaged and locked thereby. If a vehicle approaches in the opposite direction, the operation is reversed, the rocking shafts 15 being employed to open the gates and the rocking shaft 10 to close them, it being noted that the rods 7 and 8 are extended when their rocking shafts are turned away from the gates.

I claim:

1. A gate having a latch for locking it closed, a latch for locking it open, means operated by an approaching vehicle for releasing the first named latch, means including push rods directly connected to the gate for opening the same in either direction and also operated by said vehicle, means for releasing said last named latch operated by said vehicle after it has passed through the gateway, and means to automatically close said gate when released.

2. The combination, with a hinge post, of a gate hinged thereto, a latch mounted on said hinge post for locking said gate closed, a latch for locking it open, means operated by an approaching vehicle for releasing the first named latch, means connected to the gate for opening the same and also operated by said vehicle, means for releasing said last named latch operated by said vehicle after it has passed through the gateway and means to automatically close said gate when released.

3. A gate having a latch for locking it closed, a latch for locking it open, means operated by an approaching vehicle for releasing the first named latch, means including telescopic push rods directly connected to the gate for opening the same and also operated by said vehicle, means for releasing said last named latch operated by said vehicle after it has passed through the gateway, and means to automatically close said gate when released.

4. The combination, with a gate post, of a gate hinged to said post, a latch for locking said gate closed, a rocking shaft having a crank and a crank arm extending in opposite directions, a push rod connecting said crank and gate, and means of connection between said crank arm and latch whereby said gate is released and opened when said shaft is turned.

5. The combination, with a gate post, of a gate hinged thereto, a latch for locking said gate closed, a latch for securing said gate open, a rocking shaft having a crank and a crank arm extending in opposite directions, a telescopic push rod connecting said crank and gate and means of connection between said crank arm and first named latch whereby said gate is released and opened when said shaft is turned in one direction, and means of connection between said crank and said second named latch whereby the gate is released and permitted to close when said shaft is turned in the opposite direction.

6. The combination, with a gate post, of a gate hinged to said post, a latch for locking said gate closed, a rocking shaft having a crank and a crank arm extending in opposite directions, a push rod connecting said crank and gate means of connection between said crank arm and latch whereby said gate is released and opened when said shaft is turned, and another crank on said shaft arranged in the path of a vehicle on the road.

7. The combination, with a gate post, of a gate hinged to said post, a latch for locking said gate closed, two rocking shafts, one arranged in front and the other in rear of said gate, each shaft having a crank and a crank arm extending in opposite directions, push rods connecting said cranks and the gate and means of connection between said crank arms and said latch whereby said gate is released and opened when either of said shafts is turned.

8. The combination, with a gate post, of a gate hinged thereto, a latch for locking said gate closed, a latch for securing said gate open, rocking shafts, one arranged in front and the other in the rear of said gate, each shaft having a crank and a crank arm extending in opposite directions, telescopic push rods connecting said cranks and gates and means of connection between said crank arms and first named latch whereby said gate is released and opened when either of said shafts is turned in one direction, and means of connection between said cranks and said second named latch whereby the gate is released and permitted to close when either of said shafts is turned in the opposite direction.

9. The combination, with a gate post, of a gate hinged to said post, a latch for locking said gate closed, a latch for locking said gate open, a rocking shaft having a crank and crank arm extending in opposite directions, a telescopic push rod connecting said crank and gate and means of connection between said crank arm and first named latch whereby said gate is released and opened when said shaft is turned in one direction, means of connection between said crank and said second named latch whereby the gate is released and permitted to close when said shaft is turned in the opposite direction, another crank on said shaft arranged in the path of a vehicle on the road, and means to normally hold said latter crank upright.

10. The combination, with a gate post, of a gate hinged thereto, a latch for locking said gate closed comprising a bent strip extending across the inner face of said post and having arms pivoted to the sides thereof and projecting beyond the outer face of said post, said inner portion of said strip having a

notch adapted to engage the gate, means to hold said latch in position to normally engage said gate, and a trip pivoted to the outer face of said post and adapted to engage one of the extending ends of said latch.

11. The combination, with a gate post, of a gate hinged thereto, a double latch for locking said gate open in either direction comprising a bent strip extending across the outer face of said post and having arms pivoted to the sides thereof and projecting beyond the inner face of said post, said projecting ends having notches to engage the gate, means to hold said latch in position to normally engage said gate, and a trip pivoted to the outer face of said post and adapted to engage the outer portion of said latch.

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

CHRISTOPH SCHÄFFER.

Witnesses:
J. P. KIDDER,
C. R. FEYSON.