

F. ADAMS.

GATE.

APPLICATION FILED DEC. 4, 1908.

Patented June 22, 1909.

2 SHEETS—SHEET 1.

925,977.

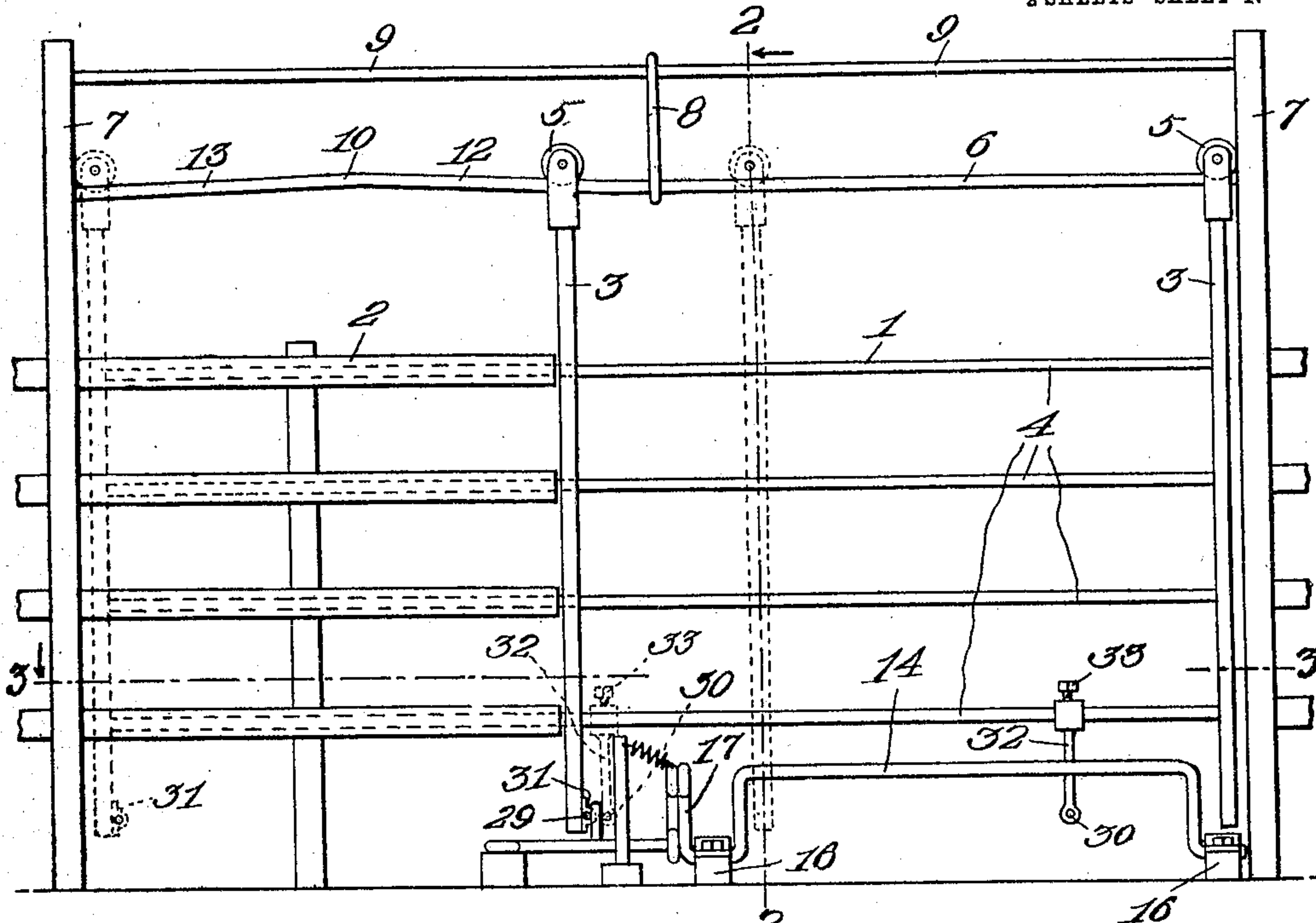


Fig. 1.

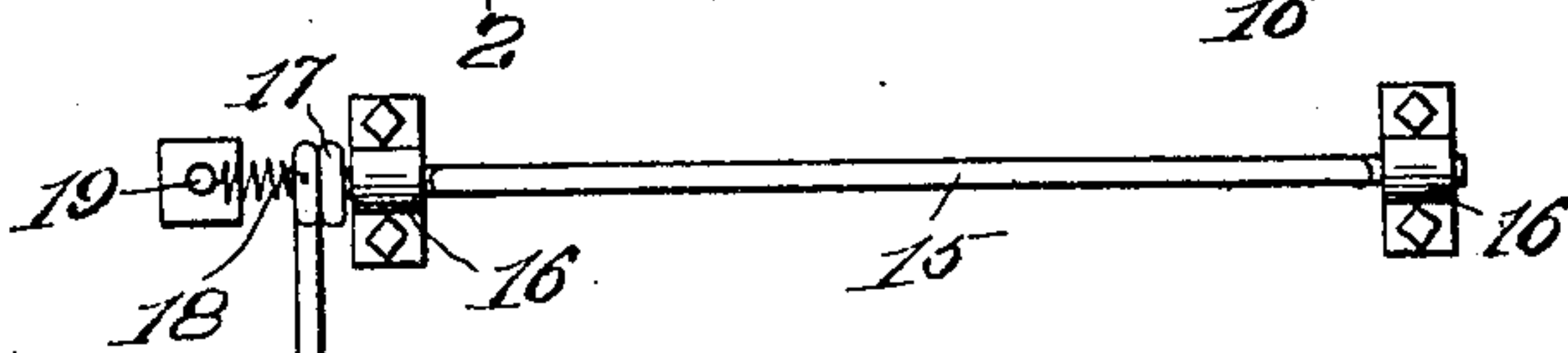
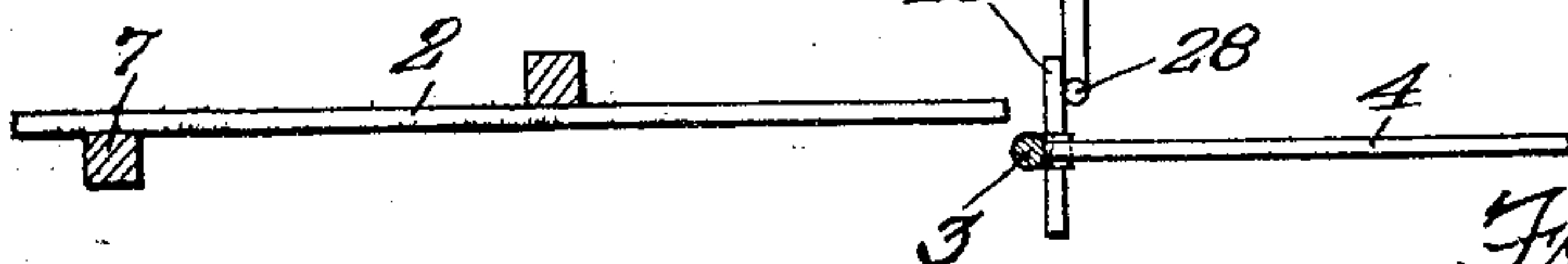


Fig. 3.



Witnesses

James F. Brown
Madelon E. Burns.

Inventor

Fred Adams

By

Watson E. Coleman

Attorney

F. ADAMS.

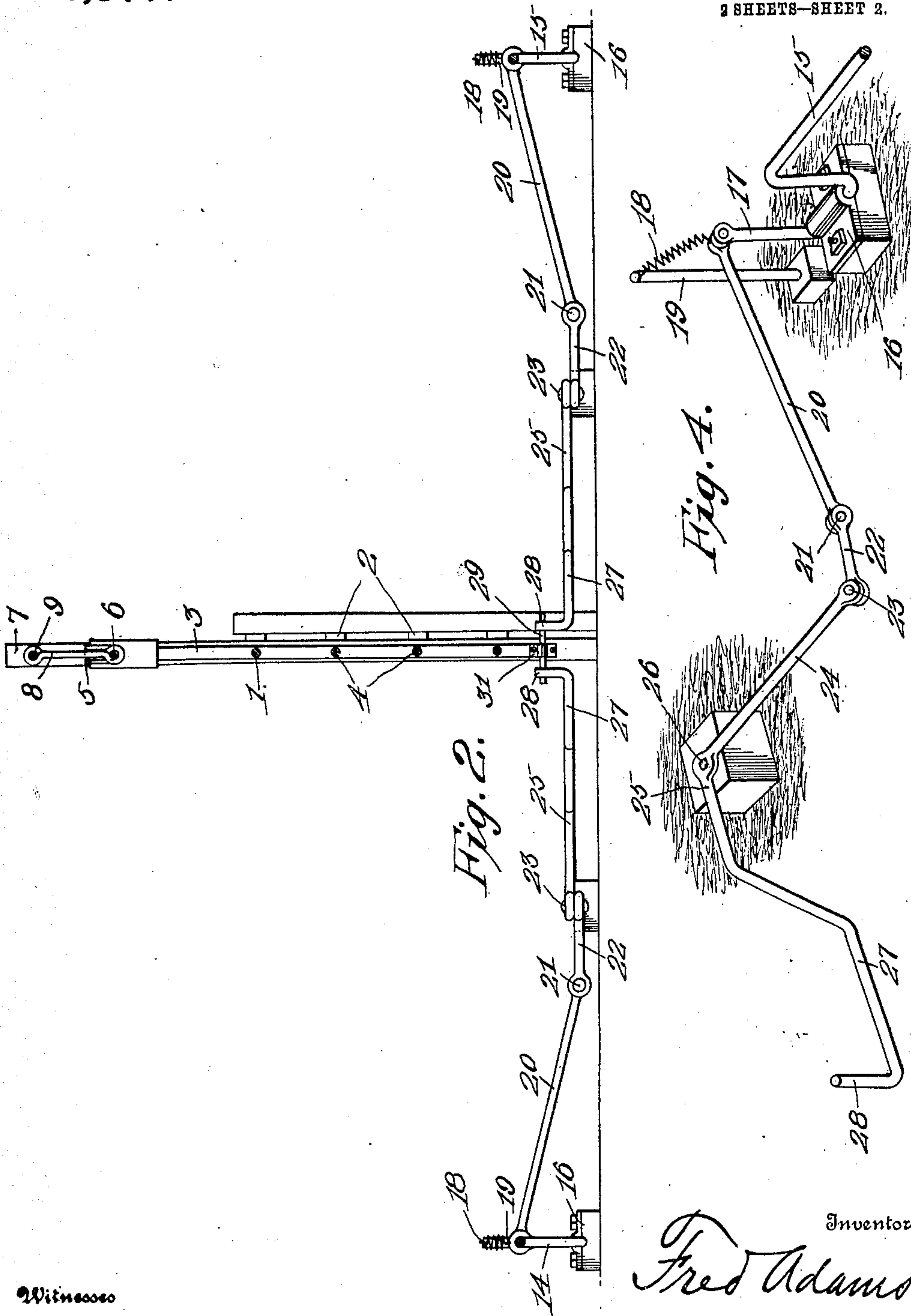
GATE.

APPLICATION FILED DEC. 4, 1908.

925,977.

Patented June 22, 1909.

2 SHEETS—SHEET 2.



Witnesses

James F. Brown
Madelon E. Burns.

Inventor

Fred Adams

By

Watson E. Coleman
Attorney

UNITED STATES PATENT OFFICE.

FRED ADAMS, OF STAUNTON, ILLINOIS, ASSIGNOR OF ONE-HALF TO WILLIAM ADAMS, OF STAUNTON, ILLINOIS.

GATE.

No. 925,977.

Specification of Letters Patent.

Patented June 22, 1909.

Application filed December 4, 1908. Serial No. 465,958.

To all whom it may concern:

Be it known that I, FRED ADAMS, a citizen of the United States, residing at Staunton, in the county of Macoupin and State of Illinois, have invented certain new and useful Improvements in Gates, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in sliding gates and devices for opening and closing the same.

The object of the invention is to provide a simple and practical device of this character which will be automatically opened and closed by the wheels of a vehicle striking and operating devices arranged in the road on each side of the gate.

With the above and other objects in view, the invention consists of the novel features of construction and the combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a front or side elevation of the improved gate showing it in its closed position in full lines and in its open position in dotted lines; Fig. 2 is a vertical cross section taken on the line 2—2 in Fig. 1; Fig. 3 is a plan view of the operating mechanism on one side of the gate; and Fig. 4 is a perspective view of such operating mechanism.

In the drawings 1 denotes the body of the improved gate which is arranged for horizontal sliding movement at the gate opening in a fence 2 of any form and construction. As illustrated, said gate is composed of uprights 3 united by longitudinal bars 4 and having at their upper ends hangers provided with anti-friction rollers 5 to travel upon a track bar 6. The latter extends between extended uprights or posts 7 in the fence 2 and is supported at its center by a hanger rod 8 depending from an upper brace bar 9 between the upper portions of the posts 7. The track 6 extends, of course, over the roadway or gate opening in the fence and also a suitable distance to one side of the same and the portion of the track 6 over the roadway is horizontal while that portion to one side is highest at its central point 10 and has two opposite and downwardly inclined portions 12, 13 extending from said central point, as clearly shown in

Fig. 1. By making said portion of the track bar 6 with the two inclines, it will be seen that when the innermost wheel 5 of the gate is upon either of said inclines 12, 13 the gate will be gravity actuated to either its closed or its open position.

For the purpose of permitting the gate to be automatically opened and closed by an approaching or leaving vehicle, crank shafts 14, 15 are arranged transversely across the road or driveway on opposite sides of the gate. These shafts are mounted in suitable bearings 16 and each has at one end a crank arm 17 to which is connected one end of a coil spring 18. The other end of this spring is connected to an upright 19 so that said spring maintains the arm 17 normally in a vertical position and, consequently, the crank portions 14, 15 in similar positions across the road so that they can be actuated in either direction to a horizontal position by the wheels of a passing wagon or other vehicle. The crank arm 17 has connected to it one end of a link 20, the other end of which is connected by a horizontal pivot 21 to a short link 22, which latter is in turn connected by a vertical pivot 23 to one arm 24 of a bell crank 25. The latter is pivoted at its angle, as at 26, and has another angular arm or end 27 provided with an upwardly bent extremity 28 adapted to engage and actuate laterally projecting pins or studs 29, 30 carried by the gate 1. It will be understood that the parts just described are duplicated on the other side of the gate and the pin 29 is in the form of a rod clamped intermediate its ends by a plate 31 to the innermost upright 3 of the gate body so that its two ends project laterally from opposite sides of the gate and may be actuated by the ends 28 of the bell crank arms 27. The pin 30 is in the form of a rod secured intermediate its ends in a depending hanger 32 which has a hub portion slidably arranged on the lowermost bar 4 of the gate and adapted to be fastened in an adjusted position by means of a set screw 33. The pins 29, 30 are so disposed when the gate is closed that the pins 29 will be engaged with the ends 28 of the bell crank arms 27 and will be actuated thereby in a direction to open the gate when either of the crank shafts 14, 15 are actuated by a vehicle approaching a gate; and the pins 30 are so disposed that they will be in an operative position with re-

spect to said elements 28 when the gate is in its open position, as indicated in full and dotted lines in Fig. 1.

In operation, assuming the gate to be in its closed position shown in full lines in Fig. 1, a vehicle approaching the gate from either side will actuate one of the crank shafts 14, 15 and thereby cause the corresponding bell crank to be actuated so that the part 28 engages the pin 29 on the gate and shifts the latter to an open or partially open position. The action of the bell crank will shift the gate at least to a half open position so as to carry the innermost roller 5 over the highest point 10 in the track bar 6 and the gate will then be gravity actuated to its entirely open position, as will be readily understood. The instant the crank shaft that was actuated is released, the spring 18 will return to its upright position and when the gate assumes its open position the other pin 30 will be in an operative position with respect to the ends 28 of the bell cranks 25. The vehicle after passing through the gate will strike and operate the other crank which in like manner will return the gate to its closed position.

Having thus described the invention what is claimed is:

1. The combination of a horizontally sliding gate, laterally projecting pins upon the lower portion of the gate adjacent its opposite ends, a horizontally swinging bell crank mounted at its angle on a vertical pivot and having one arm adapted to engage the pins on the gate to actuate the latter in either direction, a crank shaft and a link connection between the latter and the other arm of the bell crank.

2. The combination of a horizontally sliding gate, means for mounting the gate,

whereby it will be gravity actuated from a partially open position to either a full open or full closed position, horizontally disposed pins projecting laterally from the opposite sides of the gate adjacent its opposite ends, vertical pivots arranged on the ground on opposite sides of the gate, bell cranks pivoted at their angles on said pivots and having arms with bent ends to engage said pins on the gate to actuate the latter, transverse rock shafts disposed on opposite sides of the gate at a distance therefrom and having crank portions and crank arms, coil springs, each having one end fixed and its other end connected to one of the crank arms, whereby the crank portions of the rock shafts are maintained in vertical position and pairs of links connected together by horizontal pivots, one link of each of said pairs being pivoted by a vertical pivot to the other arm of one of the bell cranks, and the other link of each of said pairs being pivoted to the crank arm on one of said rock shafts, substantially as described.

3. The combination of a horizontally sliding gate, a laterally projecting pin upon the gate adjacent to one of its ends, a longitudinally adjustable support upon the gate adjacent to its other end, a laterally projecting pin on said support, a horizontally swinging lever adapted to engage and actuate either one of said pins and means for actuating said lever.

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

FRED ADAMS.

Witnesses:

WILLIAM PREST,
PETER SOENS.