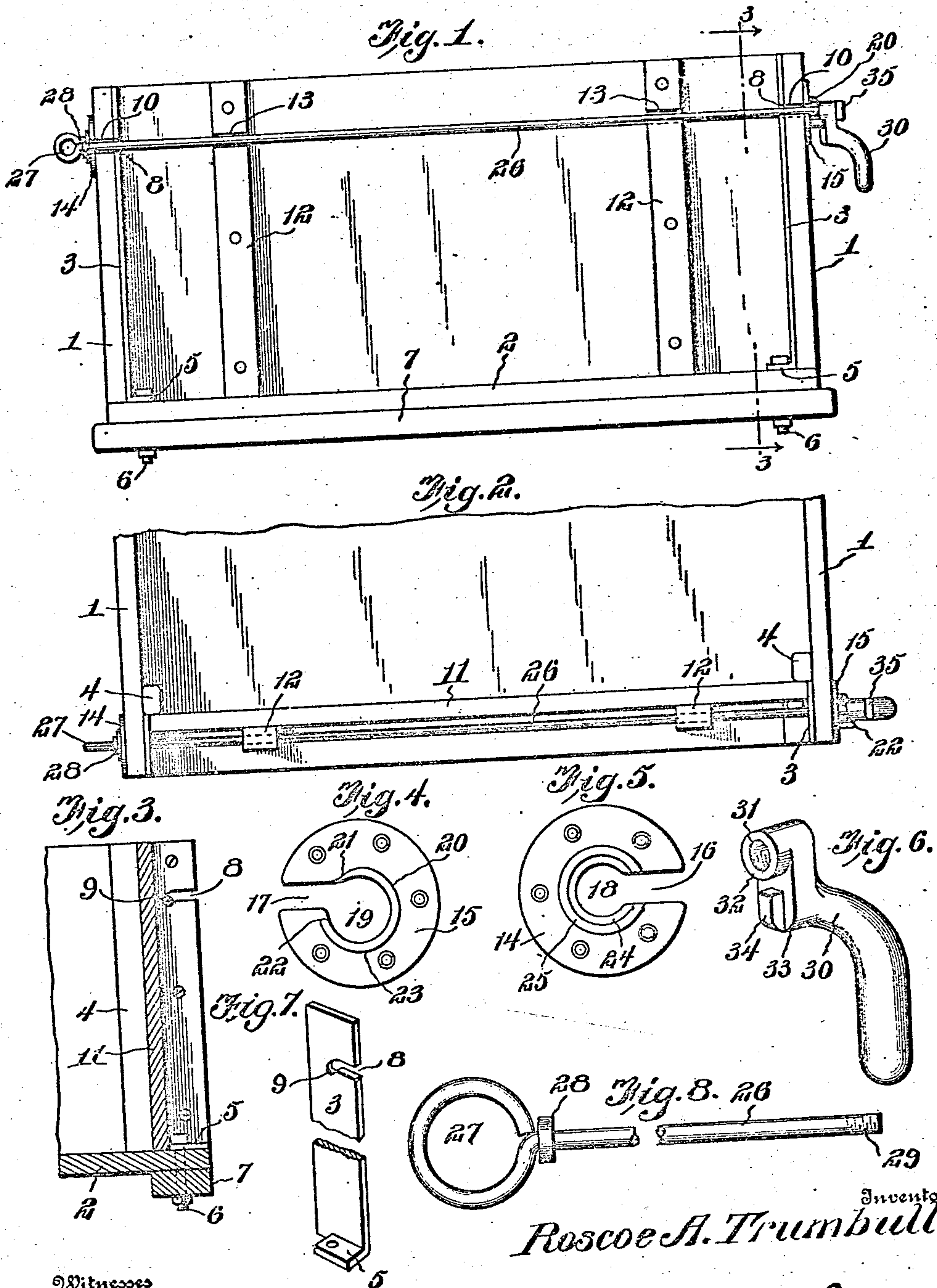


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 END GATE.
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Patented Sept. 15, 1908.

898,940.



Witnesses

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UNITED STATES PATENT OFFICE.

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END-GATE.

No. 898,940.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ROSCOE A. TRUMBULL, a citizen of the United States of America, residing at Hicksville, in the county of Defiance and State of Ohio, have invented new and useful Improvements in End-Gates, of which the following is a specification.

This invention is an improved end gate for vehicle boxes or bodies, and the said invention consists in the construction, combination and arrangement of devices hereinafter described and claimed.

One object of my invention is to provide an improved end gate fastening which may be readily detached from the side boards of the box or body to release the end gate, without the necessity of having to withdraw such fastening longitudinally through openings in the side boards of the box or body.

A further object is to provide improved means for securing the end gate fastening rod.

A further object is to provide a novel construction of end gate and of fastening means therefor which enables the lower section of the end gate to be removed at will without the necessity of having to remove the upper section of the end gate in cases where the vehicle box or body is provided with detachable upper side boards and a detachable upper end gate section.

In the accompanying drawings, Figure 1 is a rear elevation of a wagon box provided with an end gate, and end gate fastening means constructed in accordance with my invention. Fig. 2 is a top plan view of the same. Fig. 3 is a sectional view on the plane indicated by line 3—3 of Fig. 1. Figs. 4 and 5 are elevations of the reinforcing and fastening plates which are employed on the outer sides of the side boards of the vehicle box to fasten and receive the ends of the end gate fastening rod. Fig. 6 is a detail perspective view of the lever. Fig. 7 is a similar view of one of the reinforce bracket plates employed in securing the side boards to the bottom of the wagon box or body. Fig. 8 is a detail elevation of the end gate fastening rod.

The rear ends of the side boards 1 of the wagon box or body are secured on the bottom 2 thereof by means of reinforce bracket plates 3 which are secured to the inner surfaces of the said side boards and in rear of the usual vertical cleats 4 by screws or other suitable devices, the lower ends of the said

reinforce bracket plates being bent horizontally as at 5 to bear on the bottom of the box and secured thereto by bolts 6 which pass through such bent lower arms 5 and also through the bottom 2 and the transverse cleat or bar 7 which is secured under the bottom of the box at the rear end thereof. The heads of the said bolts 6 prevent the lower edge of the end gate from moving rearwardly. The said reinforce plates are provided near their upper ends with rearwardly extending slots 8 disposed horizontally, open at their rear ends and one having downwardly inclined front end or arm 9, said slots 8 registering with similar slots 10 which are made in the rear ends of the side boards.

The end gate 11, which may be otherwise of any suitable construction, is provided on its rear side at a suitable distance from its ends with vertically disposed cleats 12 which are provided in their rear sides near their upper ends with rearwardly opening slots 13 which are similar to and aline with the slots 8, 10, of the reinforce bracket plates and side boards.

On the outer sides of the side boards are securing and reinforce plates 14, 15, which are here shown as circular in form and which are provided respectively with rearwardly extending slots 16, 17 which when the said plates are secured on the boards 1 as by means of screws or other suitable devices register with the slots hereinbefore described, in the side boards, the reinforce bracket plates and in the cleats of the end gate. The said plates 14, 15 are respectively provided with central openings 18, 19 which register with the inner ends or arms of the slots. The lower portion of the opening 19 of the plate 15 is eccentric to the said plate and to the said lower inner ends of the said slots and the said plate is provided on its outer side with a cam flange 20, the outer edge of which gradually recedes from the outer surface of such plate from the inner end 21 of such cam flange to the opposite end 22 thereof and the lower side 23 of such cam flange is eccentrically disposed with reference to the said plate. The plate 14 has a socket 24 in its outer side at the center formed within a flange 25, the opening 18 and the said socket and flange of the said plate being concentric.

The end gate fastening rod 26 is placed in the slots of the plates 14, 15, the side boards, the reinforce bracket plates and of the end gate cleats to connect the side boards to-

gether and bear against the rear side of the end gate, and owing to the position of the said slots, the said fastening rod may be readily placed in and removed from such slots without the necessity of having to move such fastening rod endwise which would be required if the slots were not provided. The said fastening rod is formed at one end with a head or ring 27 and has a stop collar or flange 28 at such end, its opposite end being screw threaded, as at 29. The lever 30 has a screw threaded opening 31 to receive the threaded portion of said rod. A boss 32 through which said opening extends has an arm 33 extending from one side of said boss and is provided with a stud 34 which bears on the outer side of the cam flange 23 of the plate 15. When said lever is turned, to screw the same on the rod and cause said lever to coact with the rod to draw the side boards toward each other and against the ends of the end gate, the said stud 34 coacts with the eccentric cam flange 23 to draw the end of the said rod to which said lever is attached downwardly into the eccentric portion of the opening 19 and insure the placing of such end of the rod in the lower portions of the slots. To prevent the said lever from becoming casually detached from the said rod, the latter is provided with a stop nut 35 at its screw threaded end.

It will be understood that when the rod 26 has been removed from the wagon box, the end gate 11 may be readily removed and that it requires no vertical movement of the end gate to remove the same, so that in the event that the wagon box is provided with upper side boards and upper end gate sections, such upper end gate sections need not be disturbed in order to open the end gate 11.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent is:—

1. A wagon body or box having rearwardly opening slots in its side boards and wear plates on its outer sides having openings coincident with such slots, the said opening of one of said plates being downwardly inclined at the front end and the said plate having a curved cam flange on its outer side disposed eccentrically with reference to the

downwardly inclined inner end of the opening, in combination with an end gate fastening rod to lie in such slots and openings, and a lever revoluble on said rod and having means to engage and coact with the outer side of such cam flange to move said rod eccentrically and force the same downwardly into said opening of said wear plate.

2. A wagon body or box having rearwardly opening slots in its side boards and wear plates on its outer sides having openings coincident with such slots, one of said wear plates having its said opening downwardly inclined at the front end and further provided with a cam flange on its outer side disposed eccentrically with reference to the inner end of such opening in combination with an end gate fastening rod to lie in such slots and openings, and a lever screwed on said rod and having means to coact with such cam flange to move such rod eccentrically and force the same downwardly into the downwardly inclined front end of the said opening.

3. A wagon box having its side boards provided at their rear ends with rearwardly opening slots, a device on the outer side of one of such boards having an opening coincident with the slot thereof, said opening inclined downwardly at the front end, the said device being further provided with an annular cam flange disposed eccentrically with reference to the said inclined front end of the said opening, said cam flange having an outer surface which recedes in one direction from said side board, in combination with a fastening rod to lie in said slots and in said opening, and a lever on said rod, said lever having a stud to bear on the outer side of said annular cam flange and coact therewith when said lever is turned in one direction to force the said fastening rod downward into the downwardly inclined front end of the said opening.

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

ROSCOE A. TRUMBULL.

Witnesses:

E. F. ARMSTRONG,
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