

No. 737,748.

PATENTED SEPT. 1, 1903.

A. LEHMANN.
SINGLE RAIL RAILWAY WAGON.

APPLICATION FILED MAY 20, 1902.

NO MODEL.

4 SHEETS—SHEET 1.

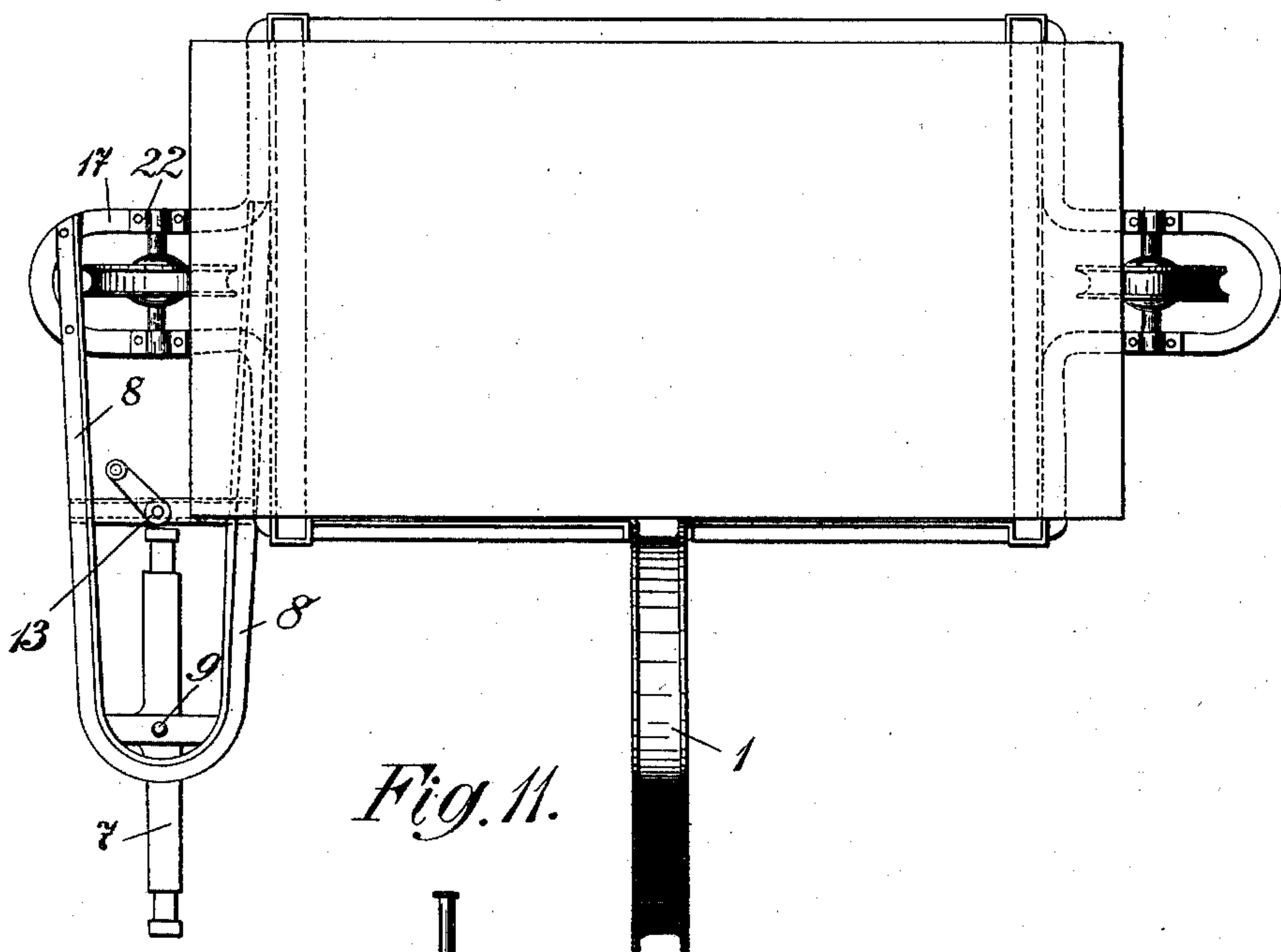
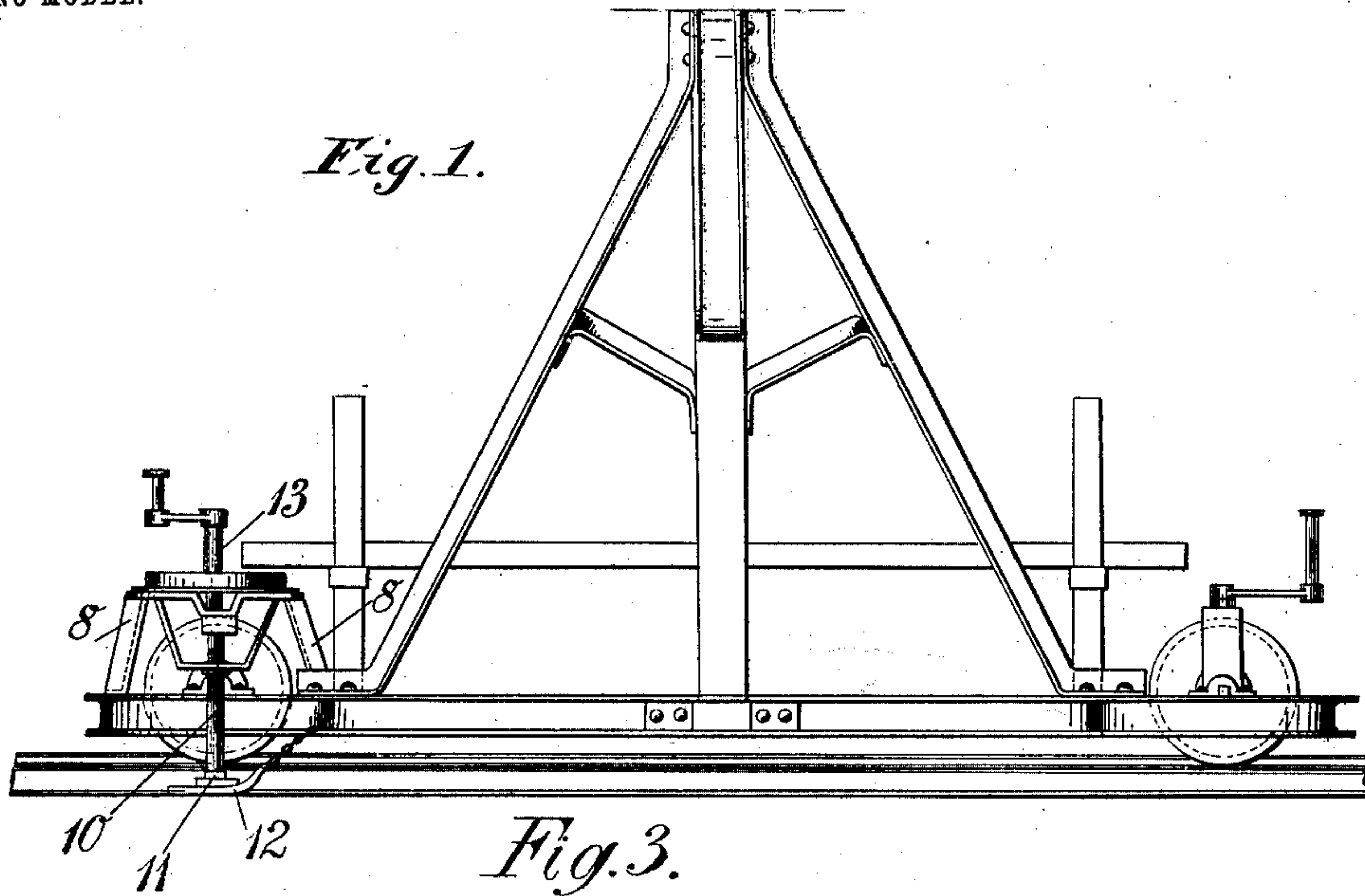
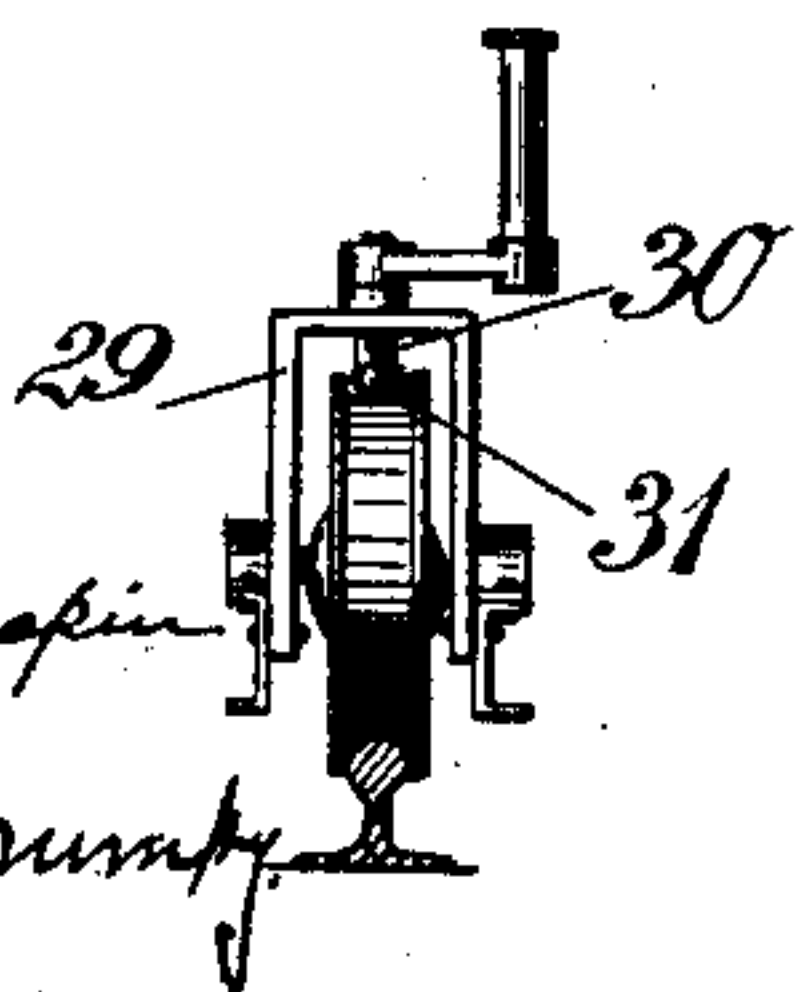


Fig. 11.

Witnesses

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Randall M. Trumbull



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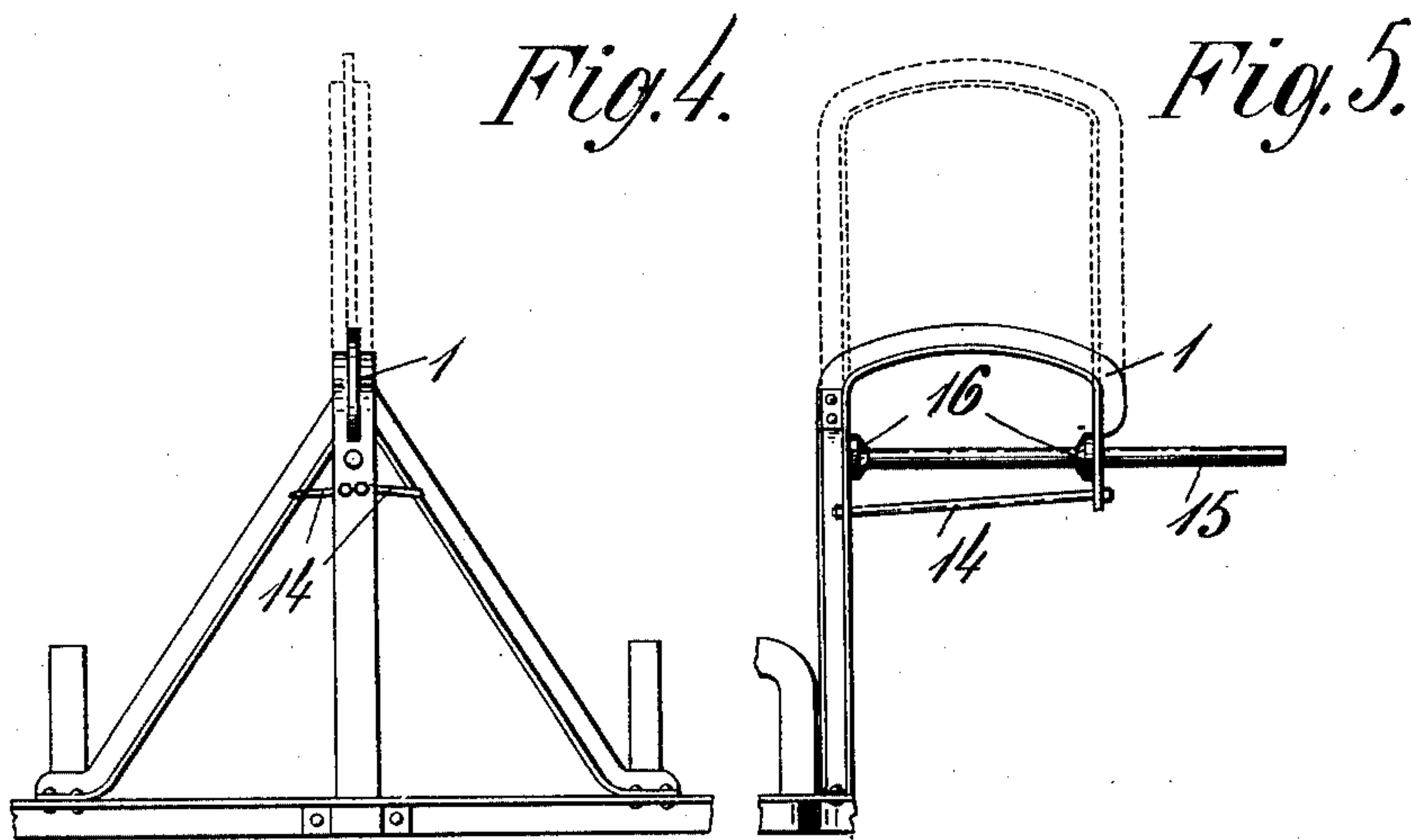
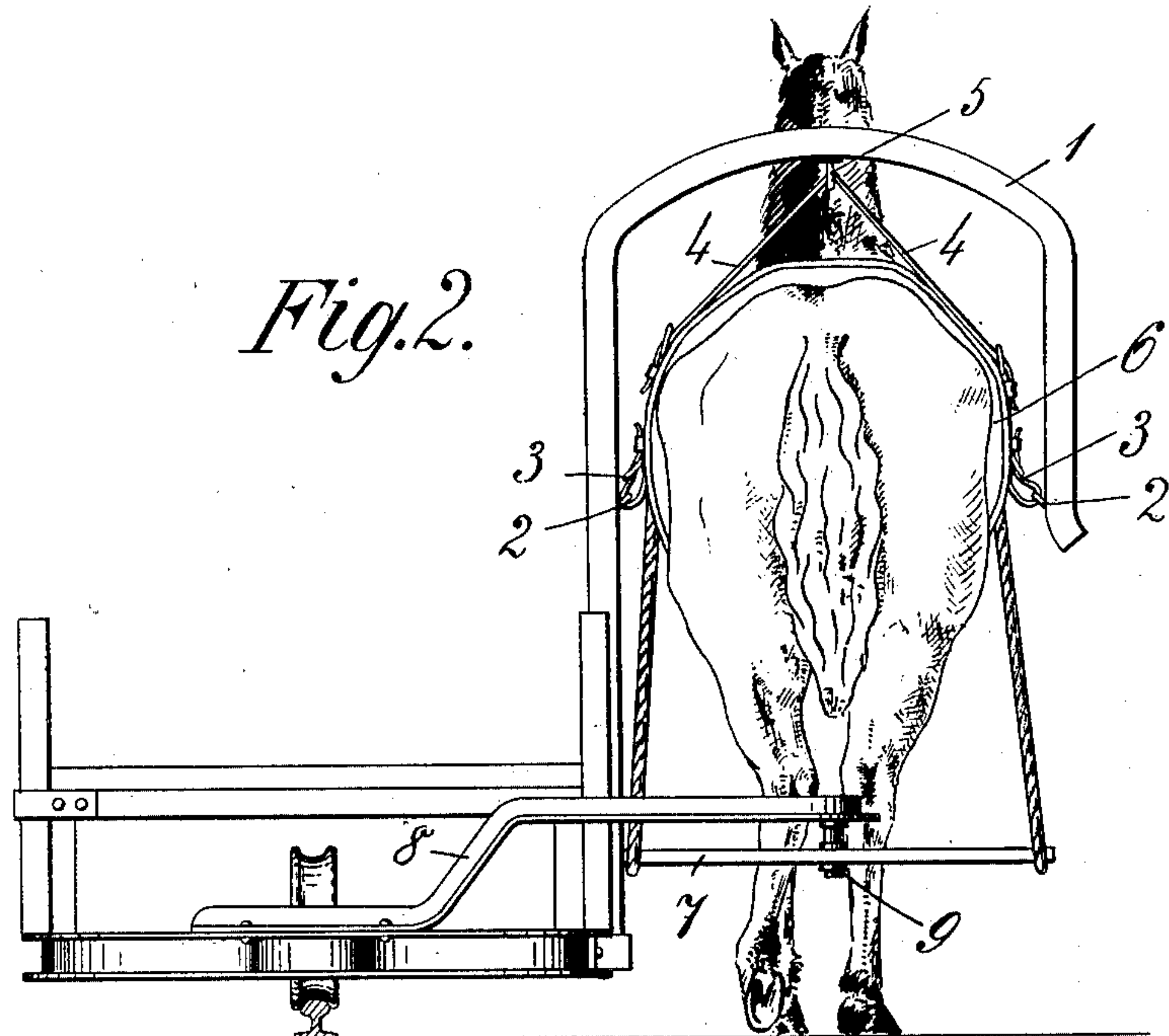
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NO MODEL.

4 SHEETS—SHEET 2.



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4 SHEETS—SHEET 3.

Fig. 6.

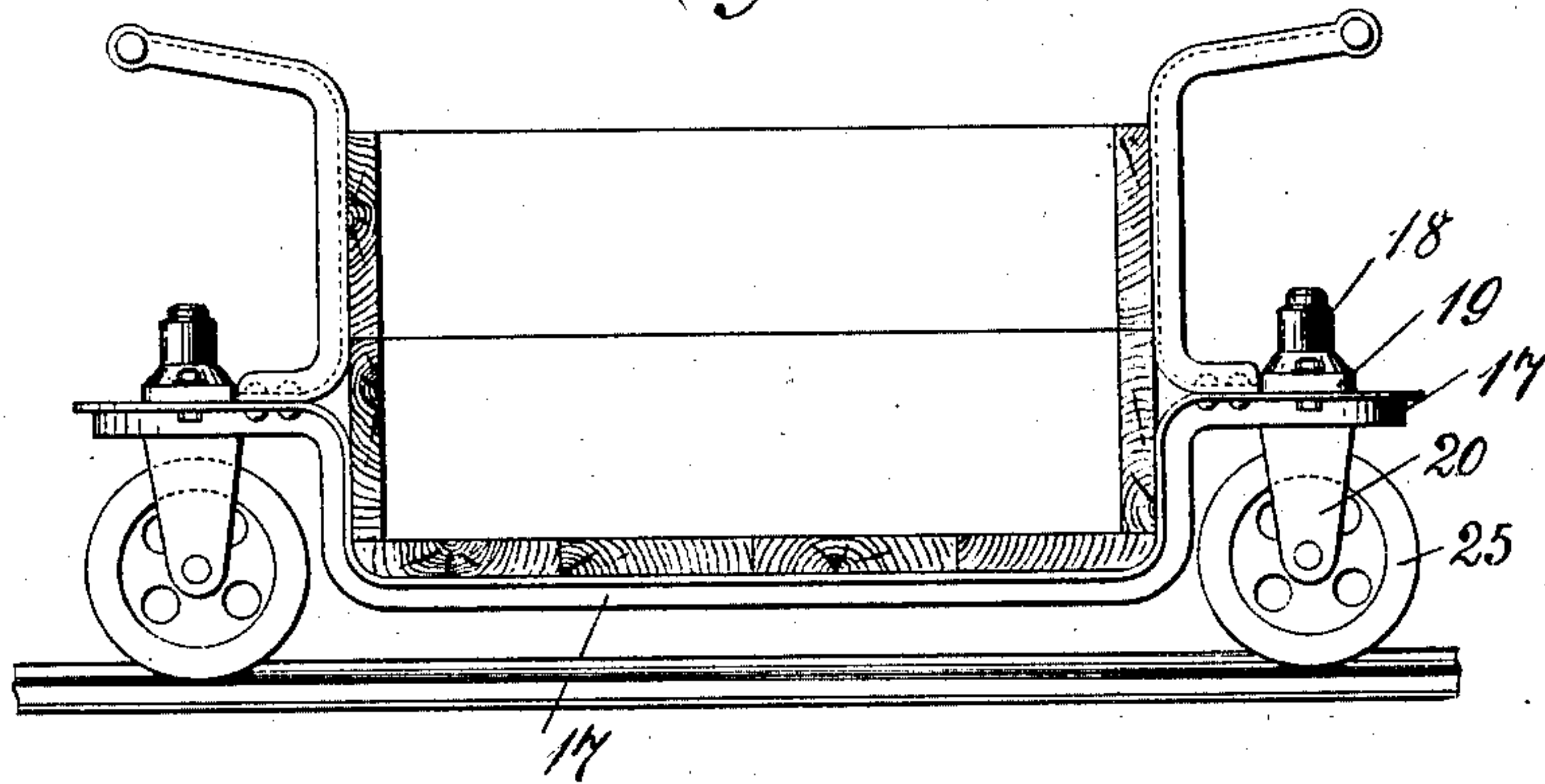


Fig. 7.

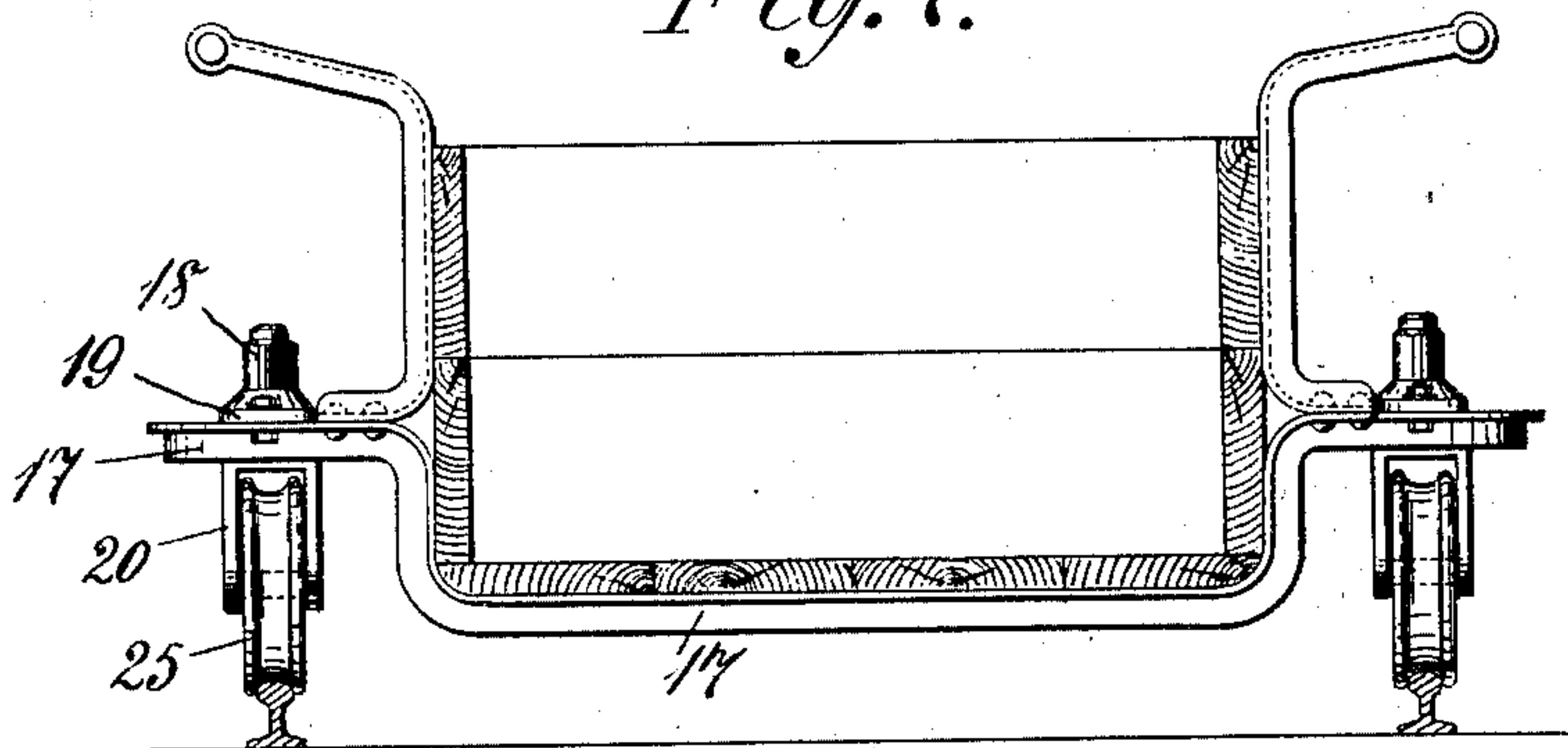
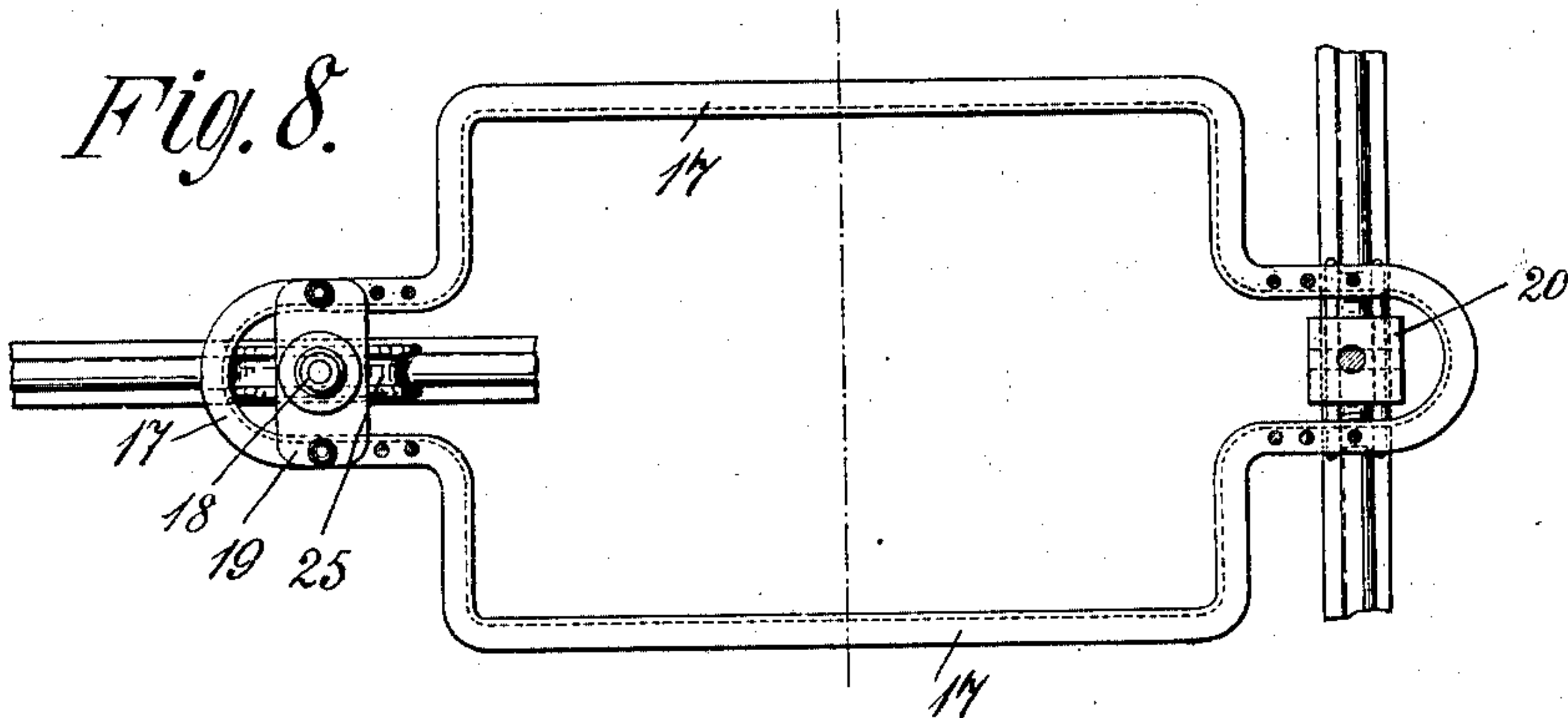


Fig. 8.



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APPLICATION FILED MAY 20, 1902.

NO MODEL.

4 SHEETS—SHEET 4.

Fig. 9.

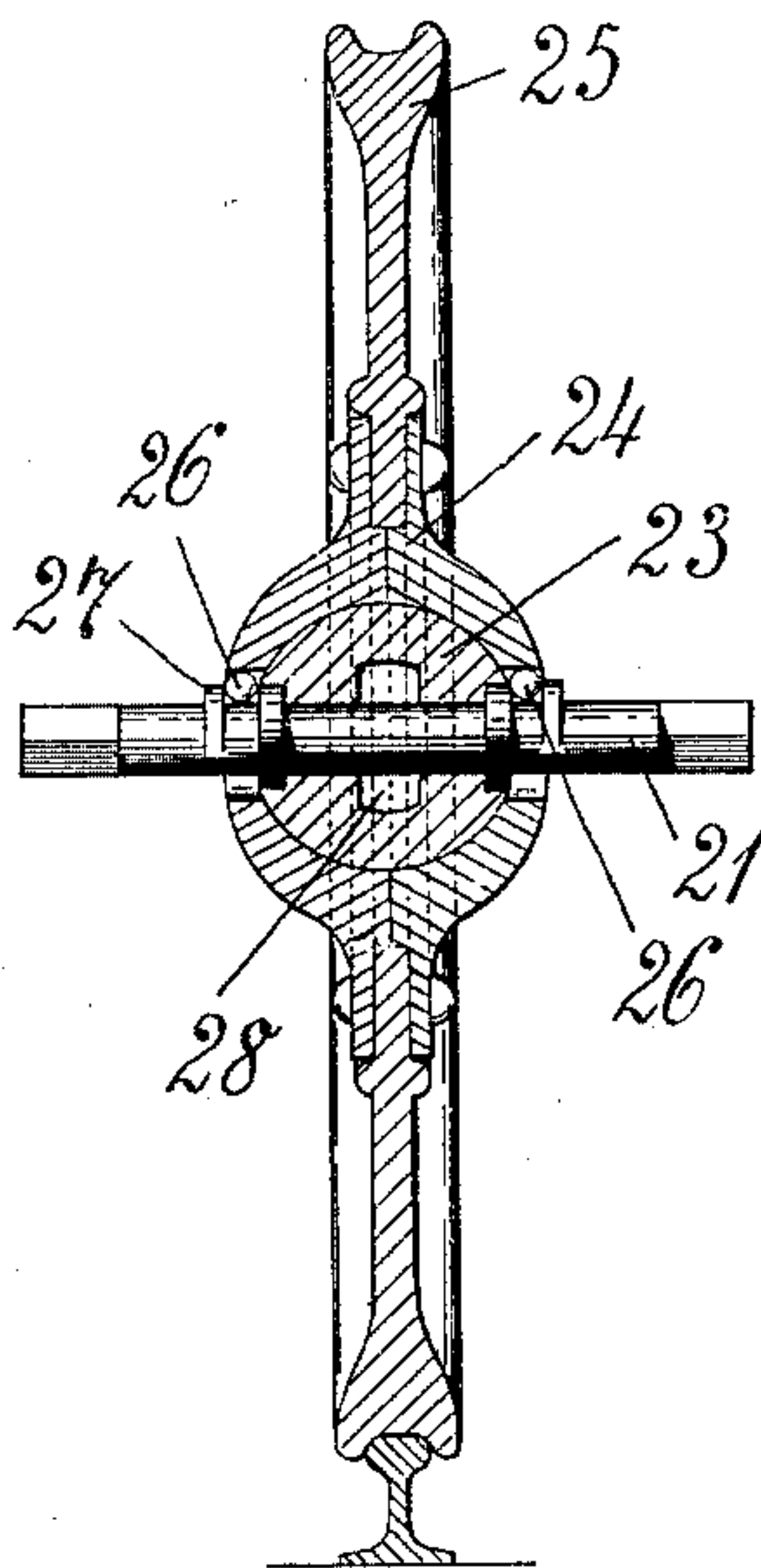
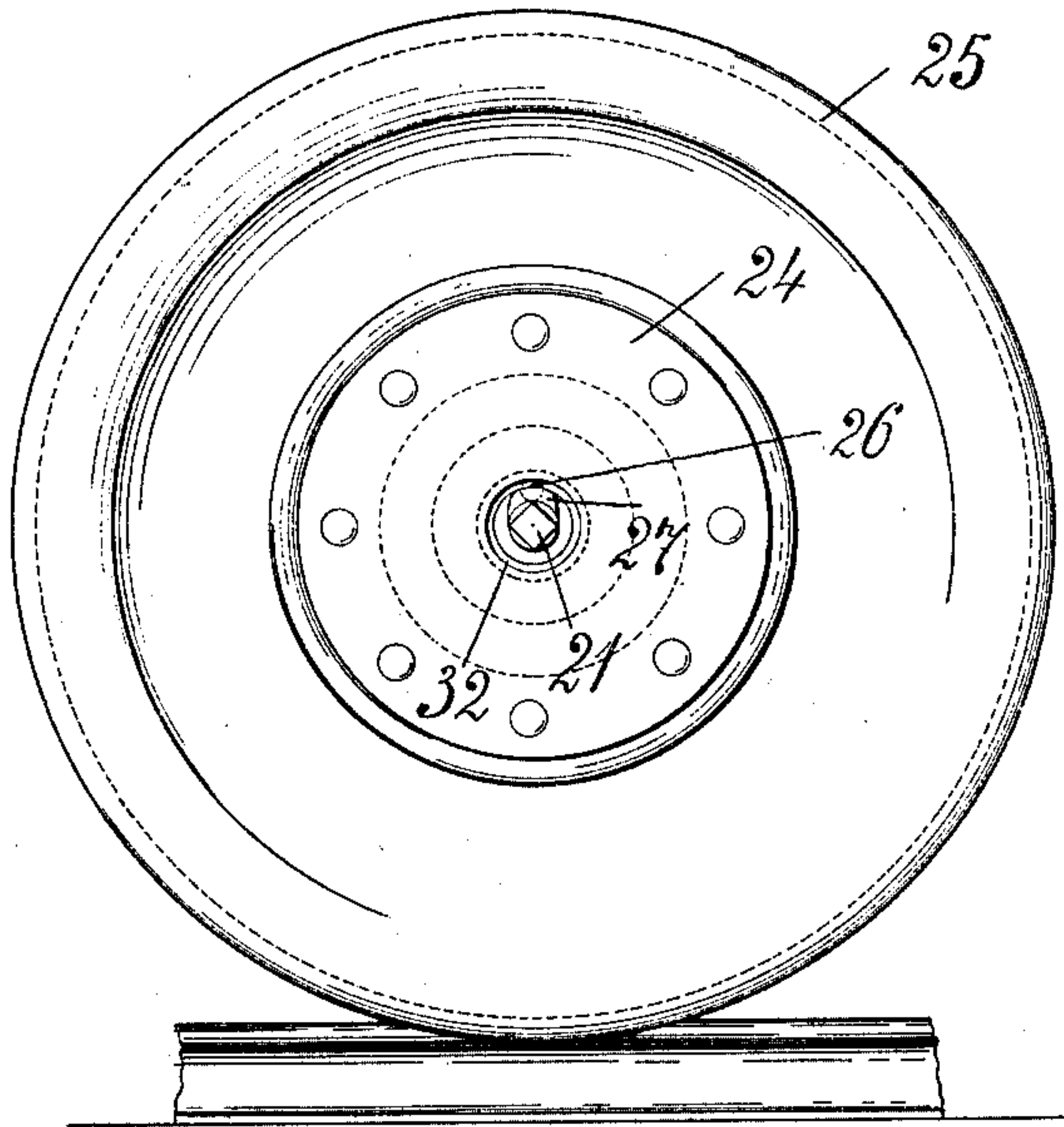


Fig. 10.



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UNITED STATES PATENT OFFICE.

ALBERT LEHMANN, OF VIENNA, AUSTRIA-HUNGARY.

SINGLE-RAIL-RAILWAY WAGON.

SPECIFICATION forming part of Letters Patent No. 737,748, dated September 1, 1903.

Application filed May 20, 1902. Serial No. 108,156. (No model.)

To all whom it may concern:

Be it known that I, ALBERT LEHMANN, a subject of the King of Prussia, residing at Hütteldorferstrasse 102, Vienna, XIII/3, Austria-Hungary, have invented certain new and useful Improvements in Single-Rail-Railway Wagons, of which the following is a specification.

The present invention relates to a single-rail-railway wagon; and it has for its object to enable such wagons to be more readily drawn in consequence of improvements in the wheel construction and arrangement and to provide improvements in the devices by which the animal is secured and draws the wagon.

In the accompanying drawings, which illustrate the invention, Figure 1 is a side elevation showing the inspan and traction attachments and arrangement and attachment of the wheels. Fig. 2 shows the wagon in a rear view with the animal inspanned. Fig. 3 is a plan of the wagon according to Fig. 1. Figs. 4 and 5 show the attachment for human traction in side and rear elevation. Figs. 6 to 8 show a single-rail-railway wagon with such altered arrangement of the wheels that the latter may describe the sharpest possible curves and which allow for the wagon being used as a two-rail wagon. Fig. 6 is a side elevation of the wagon in its employment for a single-rail track; Fig. 7, a side elevation of the wagon in its employment for two-rail tracks. Fig. 8, left, is a plan from Fig. 6, and Fig. 8, right, is a plan from Fig. 7. Fig. 9 is a side elevation and section of a support.

The inspan attachment 1 consists of an arch fastened or adjustable at the right or at the left in the middle of the wagon-frame of T, U, or angle iron, which extends upward from the frame and on the far-away side descends to half the depth of the animal's body and is there provided with hooks, rings, eyes, or the like 2. This inspan-arch serves for inspanning the animal by means of belts, ropes, chains 3, or the like connected with the saddle and which effect the balance of the wagon while the same is being drawn. Besides, the animal is held by means of two

belts, ropes, or the like 4, which are secured in a hook 5 or eye attached to the center of the arch. These belts, ropes, or the like are directly connected with the saddle-girth 6, which is firmly tightened around the body of the horse, and they have the object to prevent rocking of the wagon during draft and from tilting over to the side opposite the animal without causing annoyance to the animal by pressure or friction on its body, as is the case with the loose girth or the girth which tightened temporarily, hitherto employed. As the saddle-girth is always drawn tight and the animal always feels its pressure, it is no longer disturbed by a temporary increase of pressure and is not always annoyed by tickling of a loose girth should the wagon rock. This inspan attachment serves only for maintaining the balance of the wagon, while for forward motion a whiffletree 7, which may be fixed at either end, is connected for the time being at the back of the wagon-frame to a traction-frame 8, firmly secured to the wagon-frame and projecting laterally from the same. To this frame 8 beneath the same is attached the whiffletree 7, movable horizontally around the vertical bolt 9, and on the animal pulling the whiffletree is pressed upward, tending to raise the whole wagon-frame, so that while drawing the wagon the horse is relieved from being overburdened of the lateral arch-shaped halter.

To the frame 8 is attached a supporting device 13, arranged so as to move up and down with a skid-shoe plate 12, and which screwed downward serves as a support for the wagon when at rest, so that the animal may be relieved when the wagon is to be kept stationary from maintaining balance. This supporting device 13 consists of a threaded spindle 10, carrying at its lower end a ball 11, which lies in a socket 11^a and by means of a covering-plate is secured therein and forms a ball-and-socket joint, which is held by a dovetailed connection in the shoe 12 and is adapted to slide along the same until the chain of the shoe is taut. By this means the bending or breaking of the threaded spindle is prevented on uneven ground or upon a sudden

forward movement of the animal drawing the vehicle.

For human or manual traction—that is, when pulled by hand—the same inspan attachment may be employed, but so far simplified that the rings and eyes, with the belts connected with the animal, are removed and the arch-shaped halter 1, connected laterally in the center of the wagon-frame, is provided with lateral cross-stays 14. A cross-bar 15 has bearing in the arch-shaped halter at about the height of the hips from the ground, by means of which the man drawing the wagon can balance the load while moving the wagon with the load. The halter may be as high as the breasts or above the man's height, and by means of this arrangement in the center of the wagon-frame a more central traction as well as an easier motion of the wagon is obtained, and at the same time it is possible to transport with the monorail-railway wagon long objects.

As shown in Figs. 6 to 8, the frame 17 is at both ends of the wagon bent to form loops, and in these loops round vertical axes 18 in the neck-bearings 19 are carried pivotally wheel-forks 20, supporting the wheel, and thereby the wheel can be turned in the longitudinal as also in the transverse direction of the wagon and very easily describe short curves. Wheels of any suitable height may be employed, and by varying the degree of bend or loop imparted to the frame 17 the

bearing of the load lies at the same height or beneath the center of the axle.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. In single-rail-railway wagons, the combination of an arch-shaped halter projecting laterally in the central line of the wagon-frame and having means for attaching the hauling agency thereto, substantially as described.

2. In single-rail-railway wagons, the combination of an arch-shaped halter projecting laterally in the central line of the wagon-frame and adapted to pass over the back of the hauling-animal, said halter being provided with means for attaching the animal thereto, substantially as described.

3. In single-rail-railway wagons the arrangement of a screw-threaded spindle with ball-joint 11 and skid-shoe plate 12 as support-point for the wagon while it remains stationary.

4. In single-rail-railway wagons the formation of the framework bent in loop shape upward and at this position the arrangement of wheels secured in wheel-forks and pivotal in neck-bearings round vertical trunnions.

In testimony whereof I have hereunto set my hand in the presence of two witnesses.

ALBERT LEHMANN.

Witnesses:

ALVESTO S. HOGUE,
AUGUST FUGGER.