

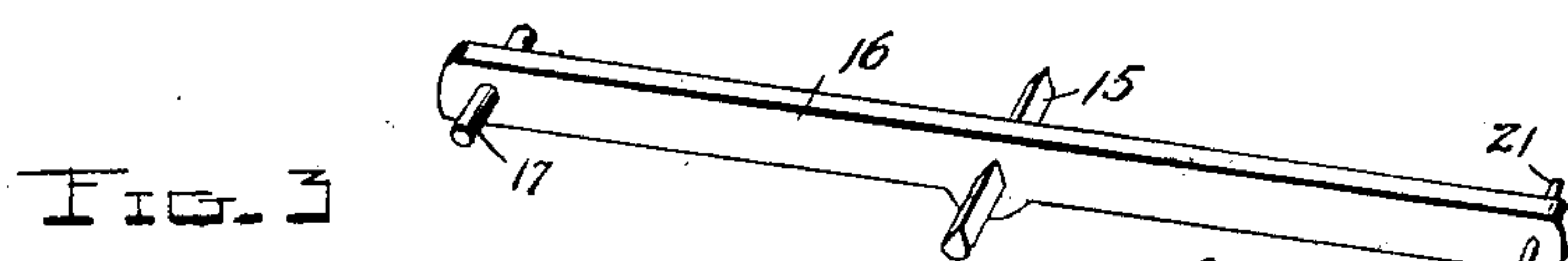
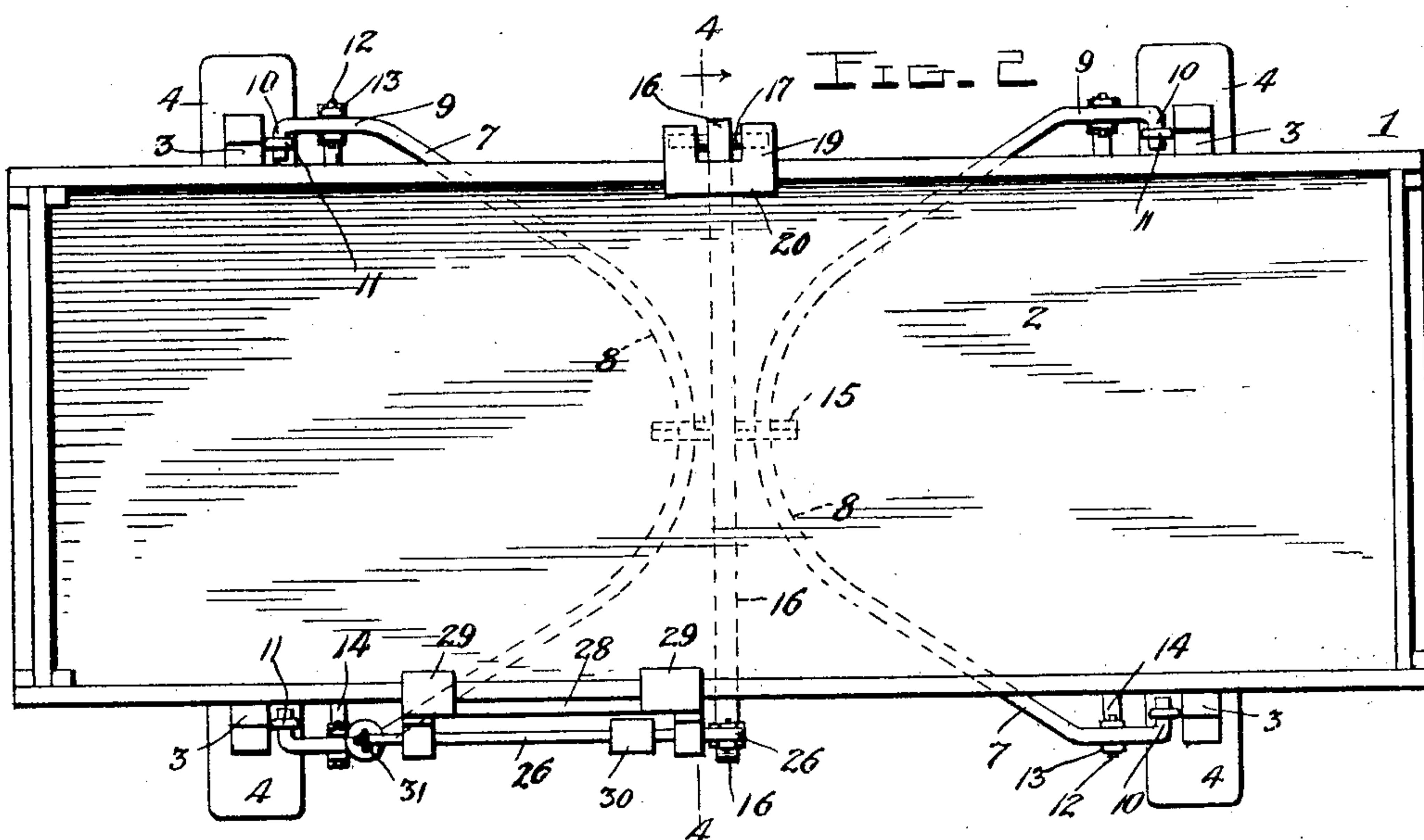
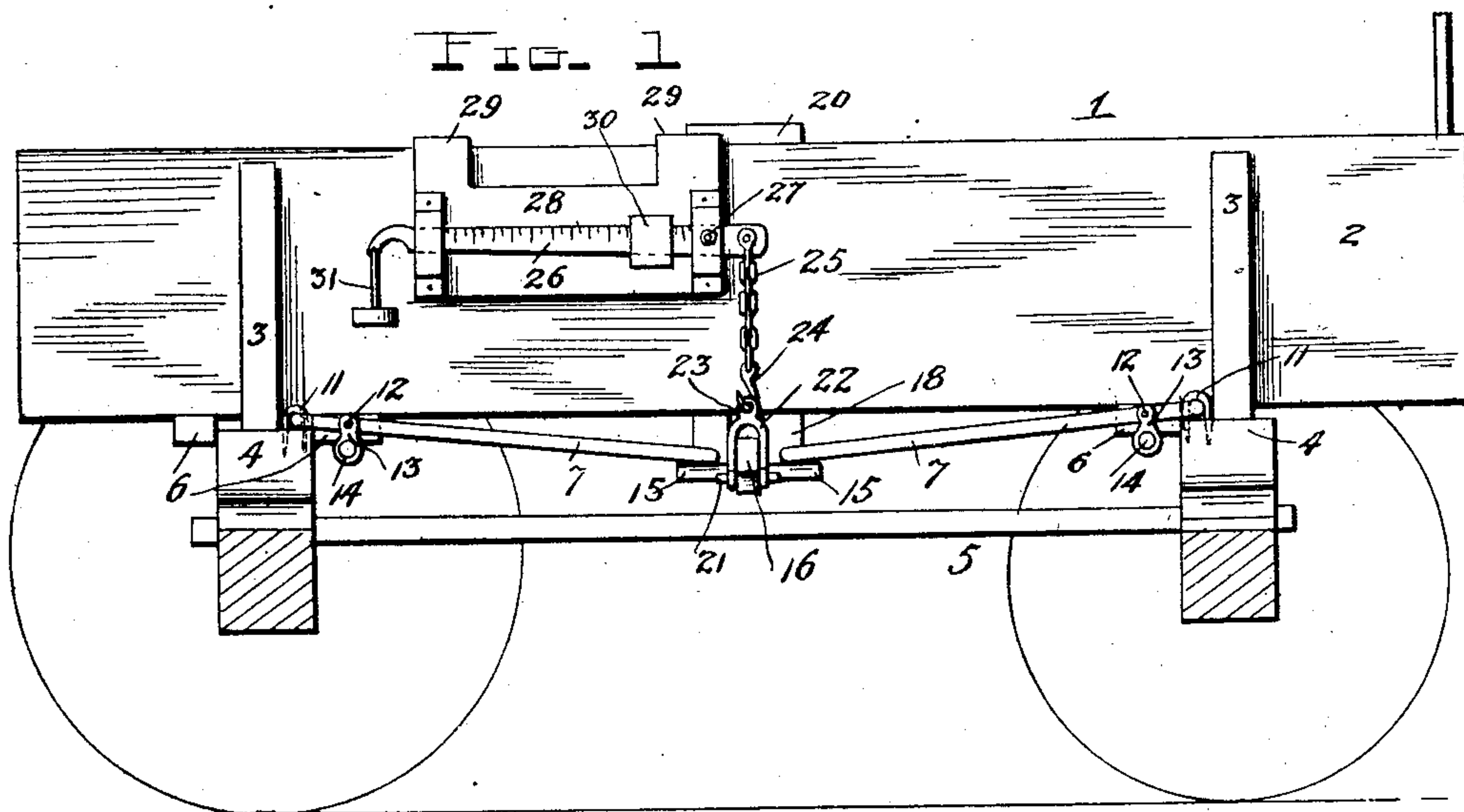
No. 861,176.

PATENTED JULY 23, 1907.

J. F. HINCK & J. L. LARSEN.
WAGON SCALE.

APPLICATION FILED MAR. 11, 1907.

2 SHEETS—SHEET 1.



Witnesses
J. H. Kriesbauer Jr.
L. O. Little.

By

Jess F. Hinck and
James L. Larson
Watson & Cleman Attorneys

Inventors

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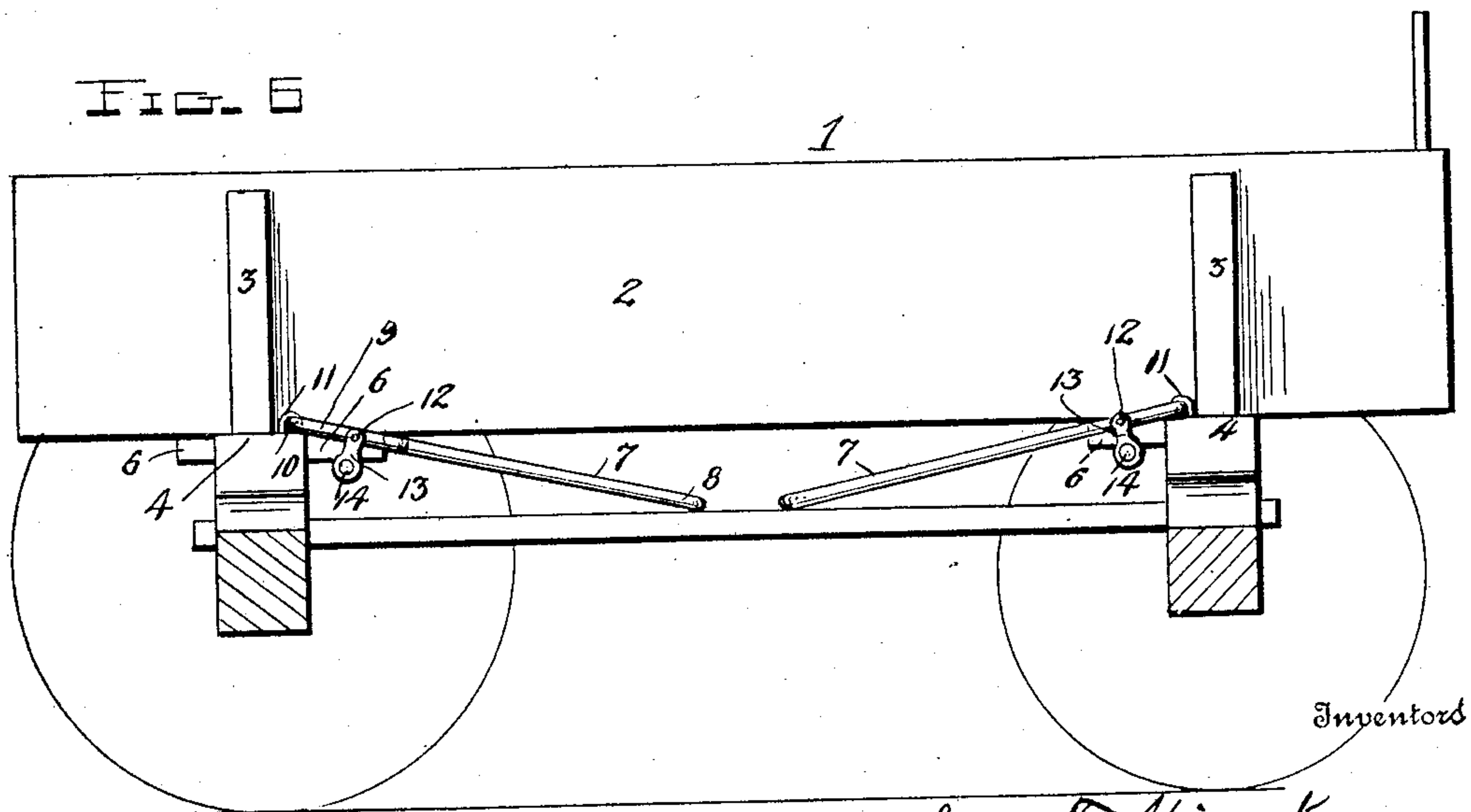
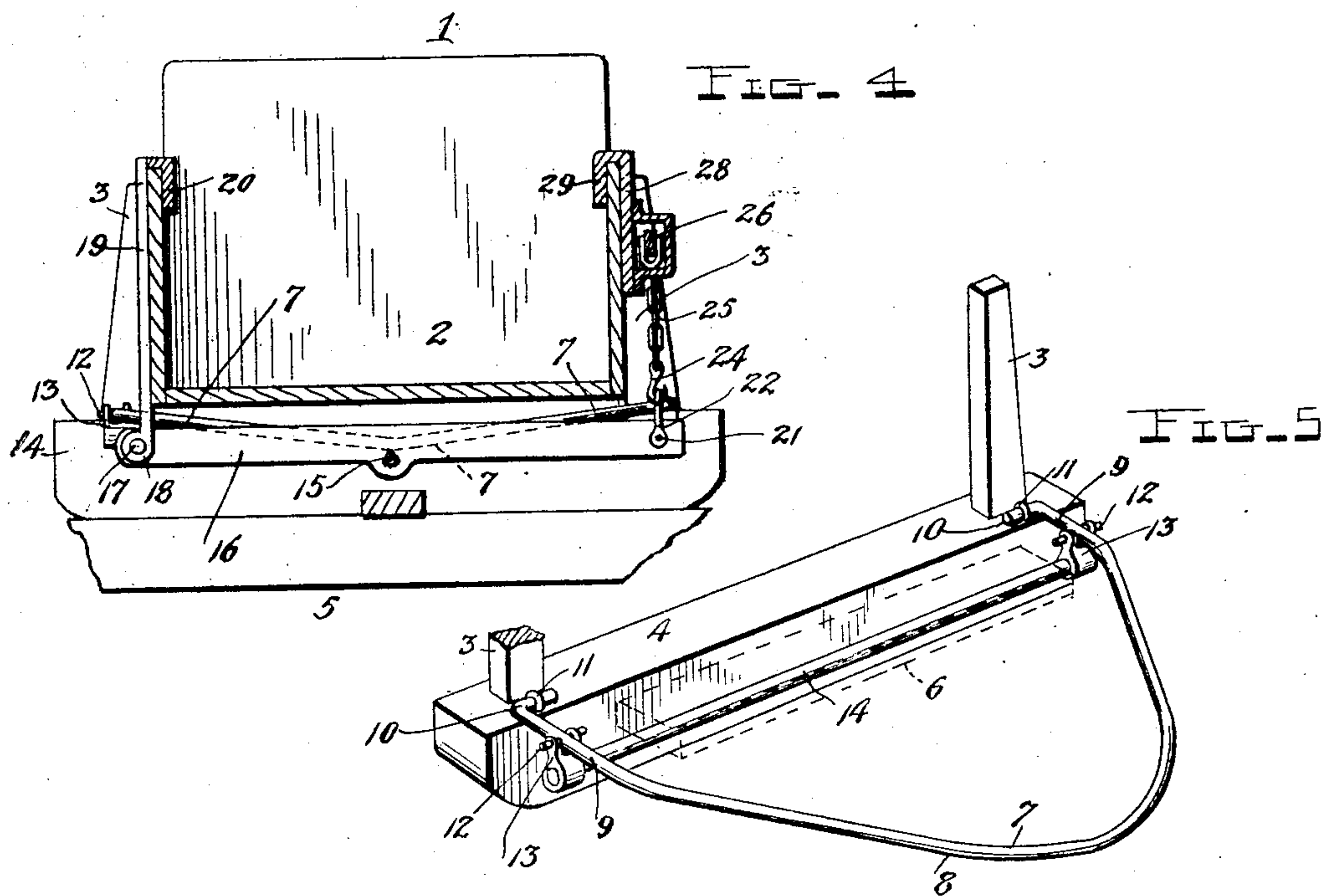
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2 SHEETS—SHEET 2.



Witnesses
J. H. Grisham, Jr.
L. O. Little.

Jess F. Hinck
James L. Larsen
By Watson Coleman Attorney

UNITED STATES PATENT OFFICE.

JESS F. HINCK AND JAMES L. LARSEN, OF WARWICK, NORTH DAKOTA, ASSIGNORS OF ONE-THIRD TO OLUF WM. LARSEN, OF LAKOTA, NORTH DAKOTA.

WAGON-SCALE.

No. 861,176.

Specification of Letters Patent.

Patented July 23, 1907.

Application filed March 11, 1907. Serial No. 361,755.

To all whom it may concern:

Be it known that we, JESS F. HINCK and JAMES L. LARSEN, citizens of the United States, residing at Warwick, in the county of Benson and State of North Dakota, have invented certain new and useful Improvements in Wagon-Scales, of which the following is a specification, reference being had therein to the accompanying drawing.

Our invention relates to improvements in wagon scales and more particularly one which may be used upon an ordinary farm wagon and readily applied to and removed from the same.

The object of the invention is to provide a scale attachment of this character which will be simple, strong, durable and comparatively inexpensive in construction, which may be readily applied to a wagon of ordinary construction, and which may be quickly and easily set up for use and as readily disconnected when no longer needed.

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

Figure 1 is a side elevation of a wagon body, showing the application of our invention thereto; Fig. 2 is a top plan view; Fig. 3 is a perspective view of the transverse lever; Fig. 4 is a vertical cross section taken on the plane indicated by the line 4-4 in Fig. 2; Fig. 5 is a perspective view of one of the longitudinal levers which support the wagon box; and Fig. 6 is a view similar to Fig. 1, showing the removable portion of the scale attachment removed from the wagon.

Referring to the drawings by numeral, 1 denotes a farm wagon of ordinary construction having its box or body 2 mounted for vertical movement between upright stakes 3 arising from the front and rear bolsters 4 of the running gear 5 of the wagon. Ordinarily the bottom of the box 2 rests upon the tops of the bolsters 4 and it is prevented from sliding endwise thereon by transverse cleats or bars 6 secured upon the bottom of the box and adapted for engagement with the side faces of the bolsters.

Our improved scale attachment comprises two longitudinally extending wagon box supporting levers 7 each of which is preferably in the form of a metal bar bent at its center into substantially semi-circular form, as shown at 8, and having its diverging ends or arms provided with straight parallel portions 9 and with inwardly extending, right angularly bent pivots 10 mounted in bearings 11 upon one of the bolsters 4. The bearings 11 are here shown in the form of staples driven into the tops of said bolsters but it will be understood that they may be of any suitable construc-

tion. The levers 7 extend inwardly in opposite directions beneath the box 2 and upon the straight parallel portions 9, which latter are arranged beyond the sides of said box, as seen in Fig. 2, are provided transverse fulcrum pins 12 which engage fulcrum blocks 13 arranged upon a transverse rod or bar 14 suitably secured to one of the cross bars or cleats 6 on the bottom of the box 2. It will be noted upon reference to Fig. 6 that when the inner ends of the levers 7 are swung downwardly, the bottom of the box 2 rests upon the tops of the bolsters and that when said ends of the levers are elevated, they will lift the cross bars 14 and hence raise the box 2 off of the bolsters.

The parts of the invention above described are adapted to remain permanently in position upon the wagon when once applied thereto and they are used in connection with the parts that we will now describe, which parts are only placed in position upon the wagon box when it is desired to weigh its contents. The inner ends of the levers 7 are adapted to rest upon a transverse fulcrum pin 15 arranged in the center of a transverse lever 16 which is clearly shown in Fig. 3. This lever has at one of its ends a transverse fulcrum pin 17 mounted in bearings in the bifurcated lower end 18 of a hanger or support 19 which is adapted to be removably engaged with the upper edge of one side of the box 2 or with any other suitable support upon the latter. As shown, this hanger 9 has its upper end bent inwardly to form a hook 20 which takes over the side of the wagon box. Upon the opposite end of the transverse lever 16 is a transverse pivot pin 21 engaged with eyes upon the lower end of a yoke 22 which has at its upper end an eye 23 adapted to receive a hook 24 upon one end of a chain or other flexible element 25. The opposite or upper end of the chain 25 is connected to a graduated scale beam 26 fulcrumed at 27 in a hanger or support 28 adapted to be removably engaged with the opposite side of the wagon box, as shown, or in any other suitable manner. This support 28 is here shown in the form of a plate having at its upper edge inwardly extending hooks 29 which take over the side of the wagon box. The scale beam 6 is of ordinary form and carries a sliding weight 30 and a removable weight supporting hanger 31 at its free end.

When it is desired to weigh the contents of the wagon box, the transverse lever 16 is arranged beneath the latter with its angular pivot pin beneath the inner ends of the longitudinal levers 7 and with the hook 20 engaged with one side of the box. The hooks 29 of the support 28 are then engaged with the other side of the box and by raising the free end of the beam 6, the hook 24 may be engaged with the eye 23 of the yoke or clip 22. When this is done, the parts will be in the position shown in Fig. 2 and ready for use. After the weighing has been done, the removable parts of the attachment are

disconnected and the box 2 is lowered upon the bolsters 4 so that the invention does not interfere with the ordinary use of the wagon.

The removable parts of the device may be conveniently carried in the wagon and as above noted may be quickly and easily applied and removed. It will be seen that the parts of the invention are of simple, strong and durable construction and that they may be produced at a comparatively small cost.

10 Having thus described my invention what I claim and desire to secure by Letters Patent is:

1. The combination with a support and a weighing body or receptacle, of body supporting levers permanently fulcrumed upon said support, an intermediate lever detachably connected to said body and adapted to co-act with said levers and weighing mechanism detachably connected to said body and connected to said intermediate lever.

2. The combination with a support and a weighing body or receptacle mounted for vertical movement above said support, of body supporting levers arranged beneath said body and fulcrumed upon said support, an intermediate lever to co-act with the first mentioned levers, a fulcrum support carried by one end of said intermediate lever and removably engaged with said body, a scale beam support 25 removably mounted upon said body, a scale beam upon the last mentioned support and a detachable connection between said scale beam and the other end of said intermediate lever.

3. The combination with the running gear and the body of a wagon or the like, of body supporting levers fulcrumed upon said running gear, a fulcrum support having a hook to take over the upper edge of one side of said body, a transverse lever mounted in said fulcrum support and adapted to co-act with the first mentioned levers, and a weighing mechanism mounted upon the other side of said body and detachably connected to said transverse lever.

4. The combination with the running gear and the body of the wagon or the like, of longitudinally extending levers arranged beneath the body and fulcrumed at their outer ends upon the running gear, supporting connections between said levers and said body, a transverse lever for supporting the inner ends of said longitudinal levers, a fulcrum support for said transverse lever, said support for the transverse lever being removably mounted upon said body, a scale beam support removably mounted upon said body, a scale beam upon the last mentioned support and a detachable connection between said scale beam and said transverse lever.

5. The combination with the running gear and the body of a wagon or the like, of body supporting levers fulcrumed upon said running gear, a fulcrum support having a hook to take over the upper edge of one side of said body, a transverse lever mounted in said fulcrum support and adapted to co-act with the first mentioned levers, a scale

beam support having a hook to take over the upper edge of the other side of said body, a scale beam upon the last mentioned support and a connection between said scale beam and said transverse lever. 55

6. The combination with the running gear and the body of a wagon or the like, of a pair of longitudinally extending levers or substantially U-shape having the ends of their arms fulcrumed upon said running gear, pivotal supporting-connections between said body and said levers, a transverse lever having a pivot for engaging and supporting the inner ends of said longitudinal levers, a fulcrum support for the transverse lever carried by said body, said support being detachably mounted upon said body, a scale beam support detachably mounted upon said body and carrying a scale beam and a detachable connection between said beam and said transverse lever. 70

7. The combination with the running gear and the body of a wagon or the like, of a pair of longitudinal levers of substantially U-shape having the bend ends of their arms fulcrumed upon said running gear, cross bars carried by said body, pivotal connections between said cross bars and said levers, a transverse lever having a pivot for engaging and supporting the inner ends of said longitudinal levers, a fulcrum support for the transverse lever carried by said body, a scale beam support carried by said body, a scale beam upon the last mentioned support and a detachable connection between said scale beam and said transverse lever. 80

8. The combination with the running gear and the body of a wagon or the like, of the bearings 11 upon the running gear, the substantially U-shaped levers 7 having their ends bent to form the pivots 10 to engage said bearings, the pivots 12 upon said levers, the cross bars 14 carried by said body, the hangers 13 upon said cross bars and engaged with said pivots 12, a transverse lever having its fulcrum carried by said body and a weighing apparatus carried by said body and engaged with said transverse lever. 90

9. The combination with the running gear and body of a wagon or the like, of body supporting levers fulcrumed upon said running gears, a transverse lever 16 having the pivots 17 at one end and the pivots 15 intermediate its ends, the hanger 19 having a hook at its upper end to engage one side of said body and a bearing at its lower end to receive the pivots 17, the hanger 28 having a hook at its upper end to engage the other side of said body, a scale beam fulcrumed upon said hanger, the yoke 22 upon said transverse lever and formed with an eye and a flexible element attached to said scale beam and carrying a hook to engage said eye, substantially as described. 100

In testimony whereof we hereunto affix our signatures in presence of two witnesses. 105

JESS F. HINCK.
JAMES L. LARSEN.

Witnesses:

W. D. PRESCOTT,
ANTON THORSEN.