

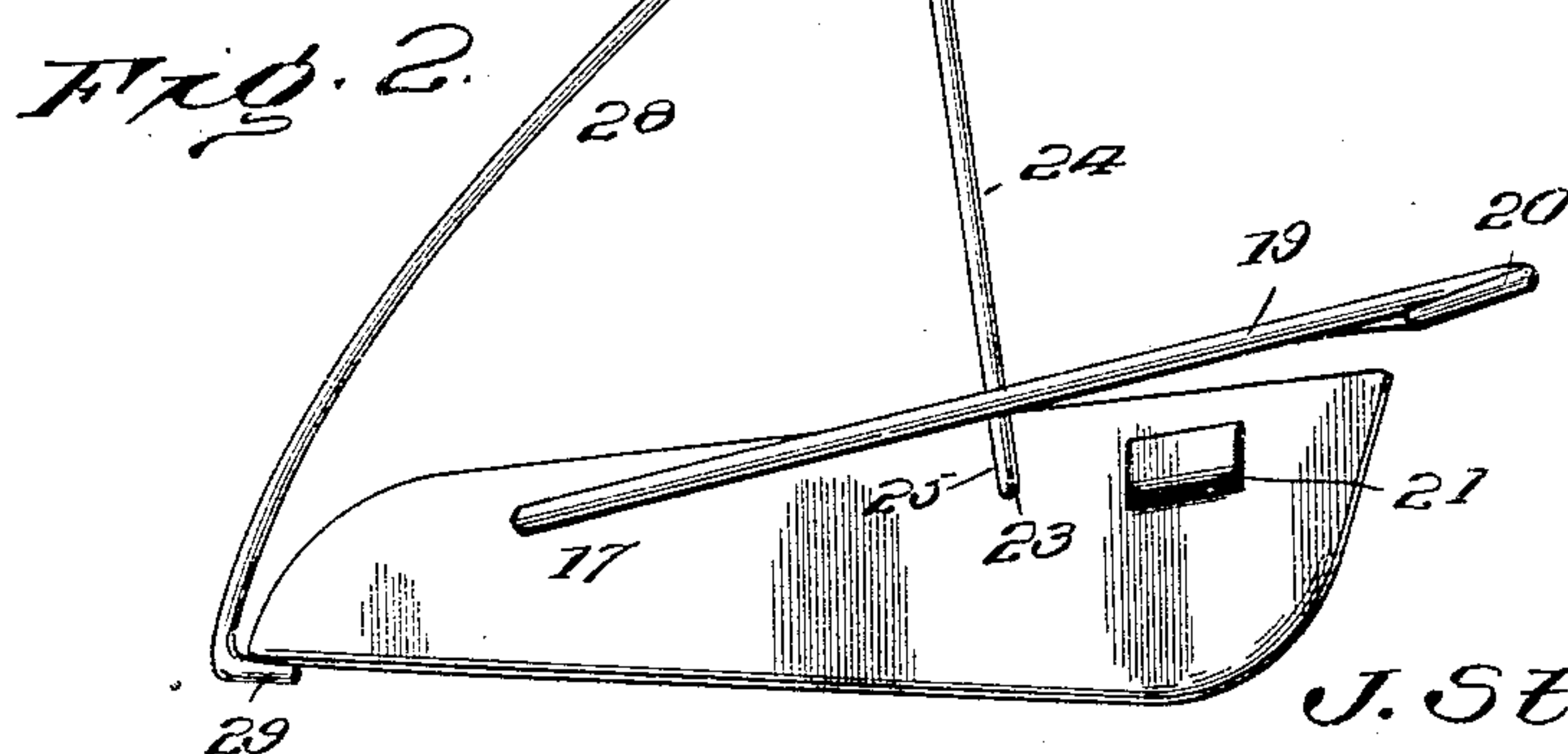
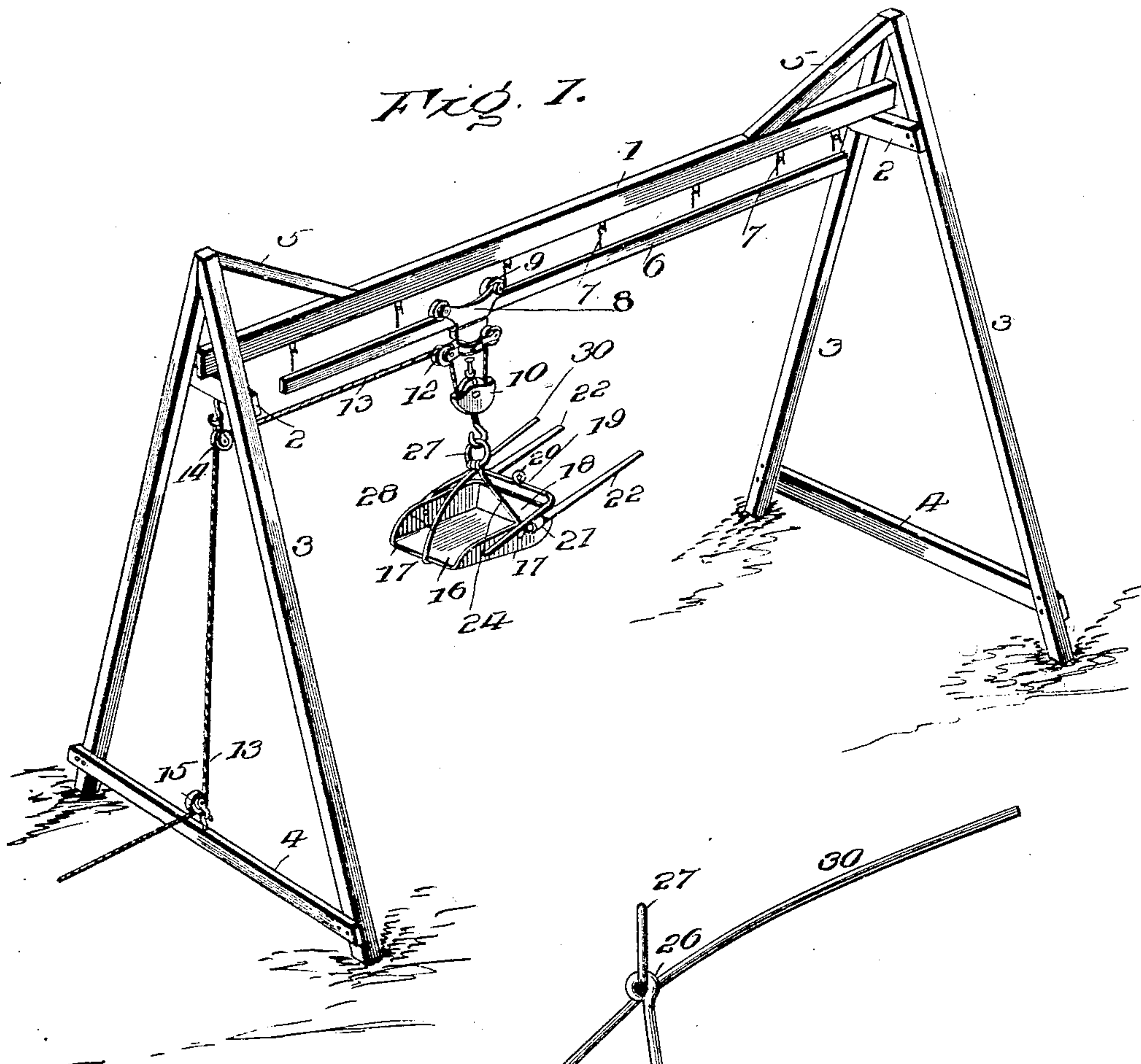
No. 704,142.

Patented July 8, 1902.

J. STRAUB.
LOADING APPARATUS.
(Application filed Apr. 10, 1902.)

(No Model.)

2 Sheets—Sheet 1.



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Witnesses

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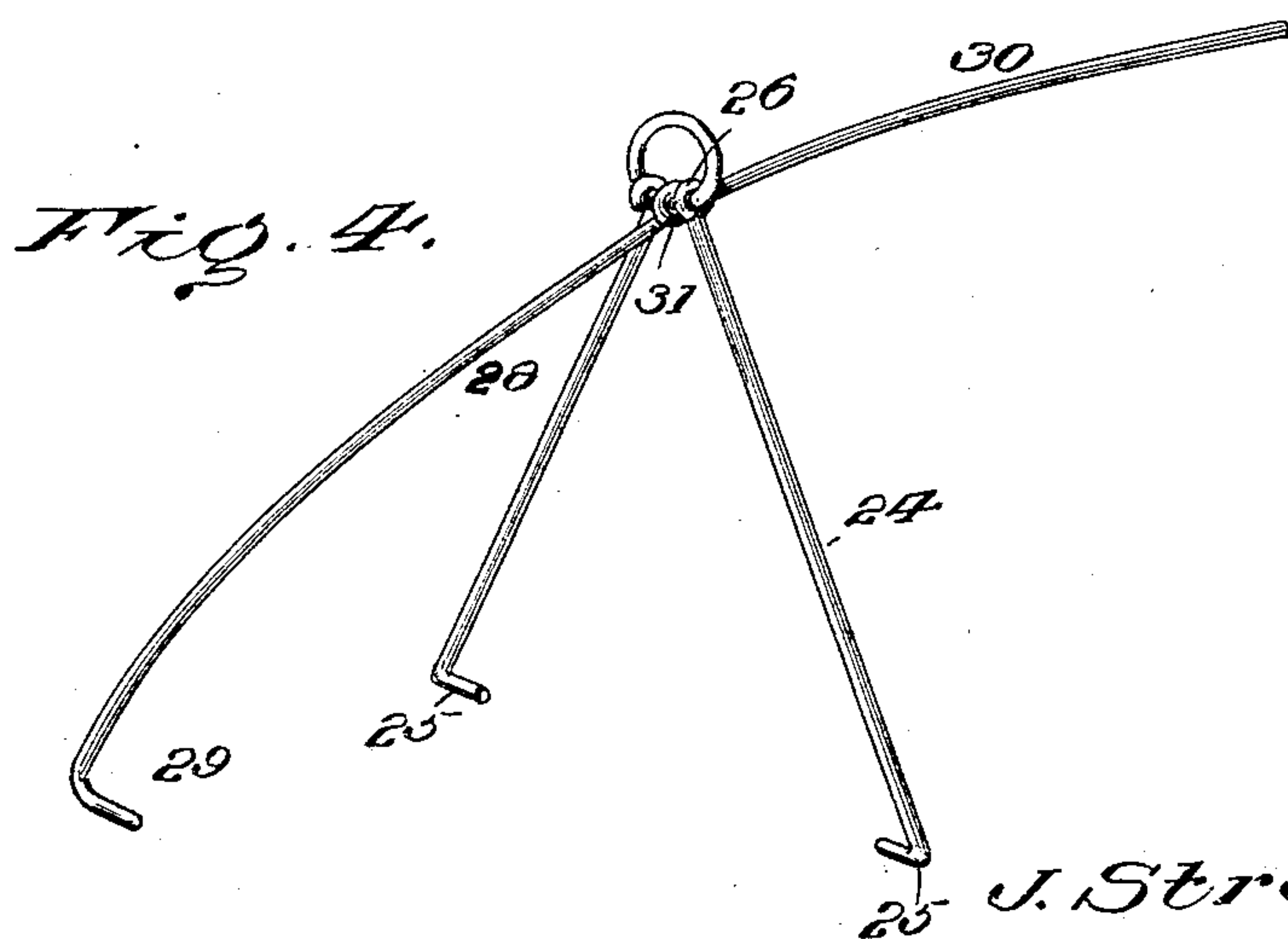
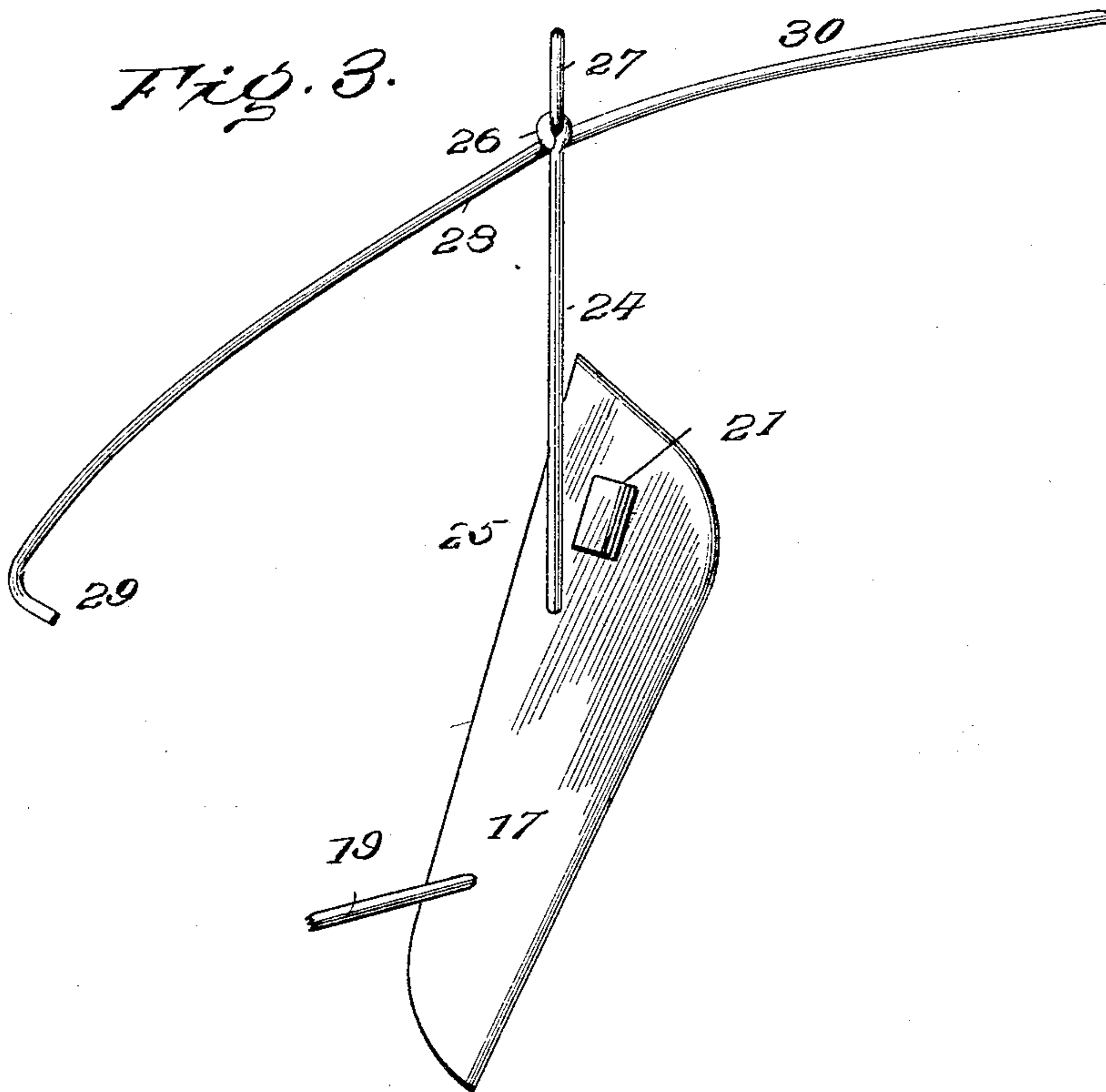
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UNITED STATES PATENT OFFICE.

JACOB STRAUB, OF CAMPBELLSPORT, WISCONSIN.

LOADING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 704,142, dated July 8, 1902.

Application filed April 10, 1902. Serial No. 102,287. (No model.)

To all whom it may concern:

Be it known that I, JACOB STRAUB, a citizen of the United States, residing at Campbellsport, in the county of Fond du Lac and State of Wisconsin, have invented certain new and useful Improvements in Loading Apparatus; 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.

This invention relates to loading apparatus, the primary object of the invention being to provide a simple and convenient apparatus for loading gravel, sand, dirt, and the like upon wagons without the aid of complicated machinery, the apparatus embodying a supporting structure which may be easily taken apart, so as to render the apparatus as a whole compact and portable to and from the place of operation. One of the chief aims of the present invention is to provide, in connection with a scraper or scoop, novel means whereby the scoop when filled may be suspended in a substantially horizontal position as it is hoisted and moved along the supporting structure, means also being provided for tripping and dumping the scoop when the desired point is reached.

With the above and other objects in view, the nature of which will more fully appear as the description proceeds, the invention consists in the novel construction, combination, and arrangement of parts, as hereinafter fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a perspective view showing the scoop suspended upon the portable structure and suspended horizontally by the combined hook-arm and trip-lever, also showing the hoisting and shifting devices. Fig. 2 is a side elevation of the scoop in its loaded position. Fig. 3 is a similar view of the scoop after dumping the same. Fig. 4 is an enlarged detail view of the jointed bail, lever, hook-arm, and ring.

Like reference-numerals designate corresponding parts in all figures of the drawings.

Referring to the drawings, 1 designates an overhead horizontal beam which is supported at its opposite ends by means of a pair of cross-pieces 2, each terminally connected

with a pair of downwardly-diverging standards 3 of any suitable length adapted to rest upon the ground and connected at the bottom by a horizontal cross piece or brace 4. The standards 3 extend above the beam 1 and are connected at their upper meeting ends to one end of an inclined brace 5, the opposite end of which is bolted or otherwise connected to the beam 1, as shown in Fig. 1. The extremities of the beam 1 may simply rest upon the cross-pieces 2; but it is preferred to bolt the ends of the beam 1 to said cross-pieces. It is also preferred to make all of the bolts detachable, so that the structure thus far described may be taken apart to facilitate transportation from place to place.

Located just under the horizontal beam 1 is an overhead rail or track 6, which is detachably connected with the beam 1 by means of hooks and eyes 7 or their equivalent. A carrier 8 is mounted to travel upon the rail 6, said carrier being similar to the ordinary hay-carriers at present in use and embodying the grooved rolls 9, which travel upon the rail 6, a detachable pulley 10, having a pendent hook 11, by means of which the scoop hereinafter described is supported, and a direction-pulley 12, over which passes the hoisting rope or cable 13. This cable is attached at one end to the carrier, passing thence under the pulley 10, over the pulley 12, and thence to one end of the structure, where it passes around a guide-pulley 14 and downward over a guide-pulley 15, arranged near the bottom of the structure and shown connected to one of the bottom cross-pieces 4, after which said rope or cable leads outward beyond one end of the structure, so that a draft-animal may be hitched thereto for hoisting the scoop when loaded and moving the same over the overhead track until it reaches a position over the wagon driven beneath the structure to receive the contents of the scoop.

The scoop itself is of ordinary construction and is preferably formed of sheet metal to comprise the bottom 16, the sides 17, and back 18. The scoop is provided with the usual draft or drag bail 19, the latter being preferably provided with a centrally-located loop or eye 20, to which the draft-animals may be hitched. The scoop is also provided

on opposite sides with handle-sockets 21, into which are detachably fitted rearwardly-extending handles 22, the scoop thus far described being of the usual construction. In carrying out the present invention the scoop is provided in its opposite sides and just back of the center with oppositely-located holes 23, which are adapted to receive the lower hooked extremities of a jointed scoop-supporting bail consisting of two arms 24, having their lower extremities hooked, as shown at 25, for insertion in the holes 23, thus enabling the bail and other parts connected therewith to be detached from the scoop after the same has been emptied and lowered to the ground to be again filled. The arms 24 are provided at their upper extremities with eyes 26, through which is received a suspending-ring 27, adapted to be placed upon the hook 11 of the carriage above described.

A combined trip-lever and hook-arm is also pivotally mounted upon the suspending-ring 27, and consists of an arm 28, which is preferably curved to pass over the load in the scoop and provided with a hook 29 at its lower end, which hook is adapted to catch under the forward edge of the bottom of the scoop, as shown in Fig. 2, whereby the scoop when loaded is held in a substantially horizontal position, and so retained until the loaded scoop has been hoisted and moved along the overhead track to the point of dumping. The hook-arm is provided at the opposite side of the suspending-ring 27 with a lever extension 30 of any suitable length, by means of which the hook-arm may be moved out of engagement with the scoop for the purpose of tripping and dumping the latter. The combined trip-lever and hook-arm is preferably formed from a rod of the requisite strength, the same being bent intermediate its ends to form an eye 31, through which the ring 27 passes, said eye being located on the ring between the eyes at the upper extremities of the sections or arms of the jointed bail.

In operation the scoop is drawn along the ground by the draft-animal until fixed. It is then drawn by the same means beneath the supporting structure and the sectional bail quickly attached thereto in the manner described, the extremity of the hook-arm being placed beneath the forward edge of the scoop in the manner indicated. The draft-animal hitched to the cable 13 then hoists the scoop, and upon reaching the upper limit of its movement the traveling pulley 10 of the carrier trips or unlocks the carrier from the rail 6 in

the ordinary manner, after which the carrier and scoop are drawn along the rail until the dumping position is reached, the scoop being dumped by operating the trip-lever 30. It will be observed that the suspending-ring 27 serves as a pivot or fulcrum for the trip-lever and hook-arm as well as the arms of the sectional bail, thus providing a simple, cheap, effective, and durable construction.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a loading apparatus, the combination with a sectional and portable structure embodying an overhead rail, a carrier mounted to travel on said rail and an operating-cable for the carrier, of a scoop detachably connected with the carrier, a suspending-ring, a sectional bail consisting of two arms having a loose pivotal connection with the suspending-ring and a hooked detachable connection with the scoop, and a combined hook-arm and trip-lever mounted on the suspending-ring, the hook-arm being adapted to support the scoop in a substantially horizontal position when filled, substantially as described.

2. In a loading apparatus, a scoop provided with oppositely-located holes in its sides and in rear of its center, in combination a detachably jointed bail comprising a pair of downwardly-diverging arms having hooked lower ends for insertion in the holes in the sides of the scoop and having their upper ends pivotally connected with a suspending-ring, and a combined hook-arm and trip-lever pivotally connected with the suspending-ring, the hook-arm being adapted to engage the front of the scoop, substantially as and for the purpose specified.

3. In a loading apparatus, a scoop in combination with a detachably-jointed bail comprising a suspending-ring, and a pair of downwardly-diverging arms provided at their upper ends with eyes to receive the suspending-ring and having hooks at their lower ends to engage the scoop, and a combined hook-arm and trip-lever journaled on the suspending-ring between the arms of the jointed bail, the hook-arm being adapted to engage the scoop and hold the same in a substantially horizontal position when filled, substantially as described.

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

JACOB STRAUB. [L. S.]

Witnesses:

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