

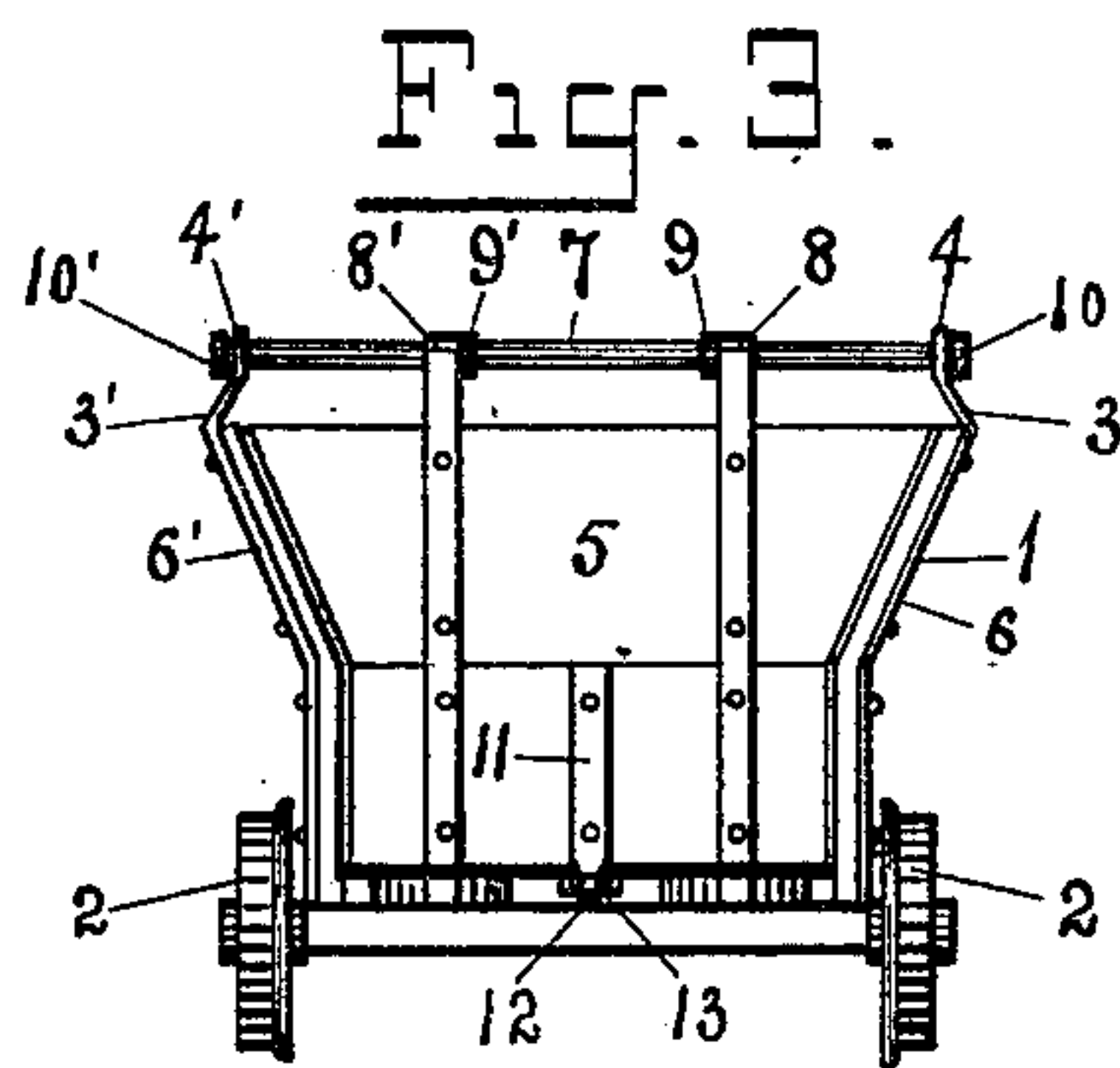
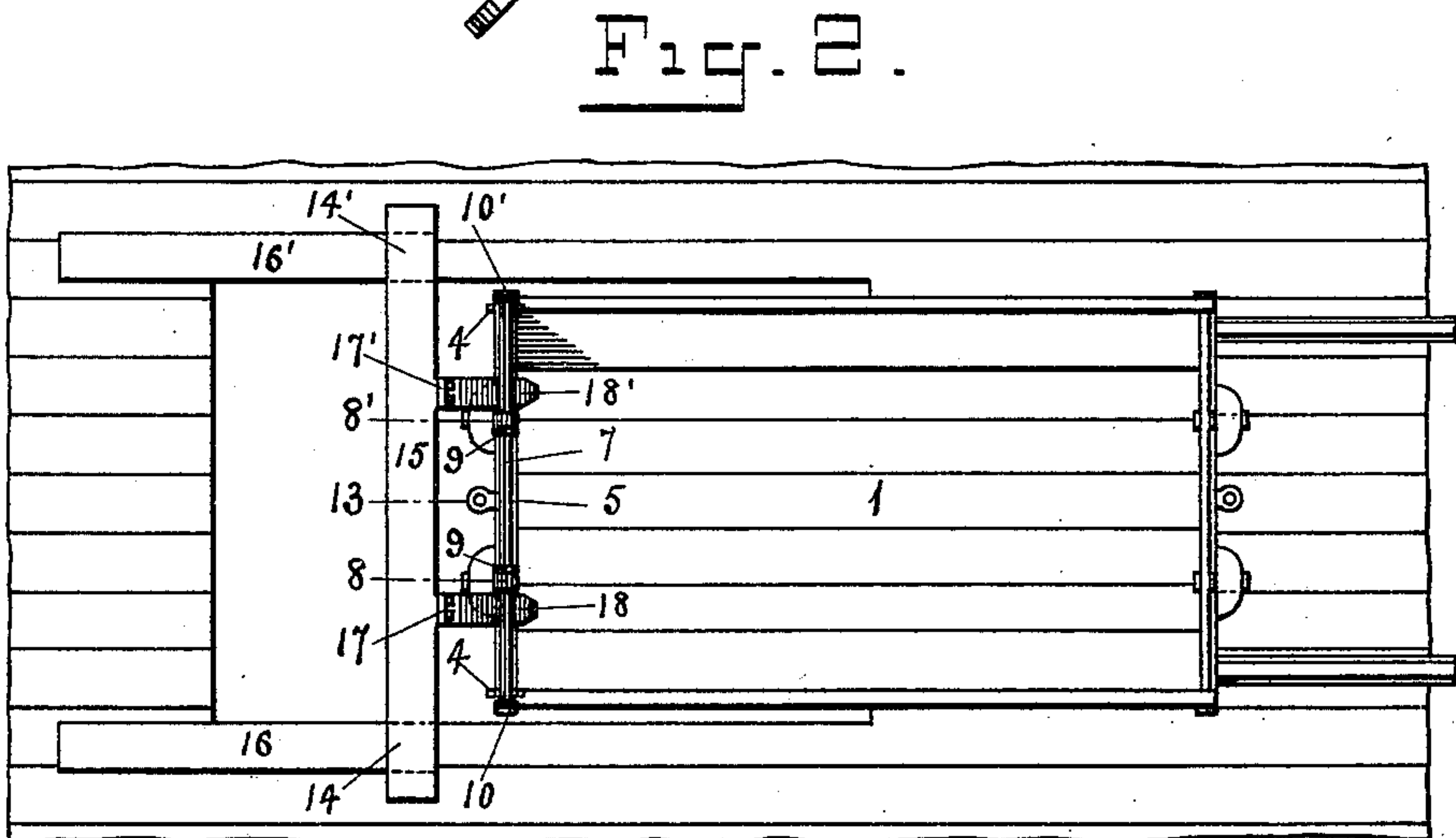
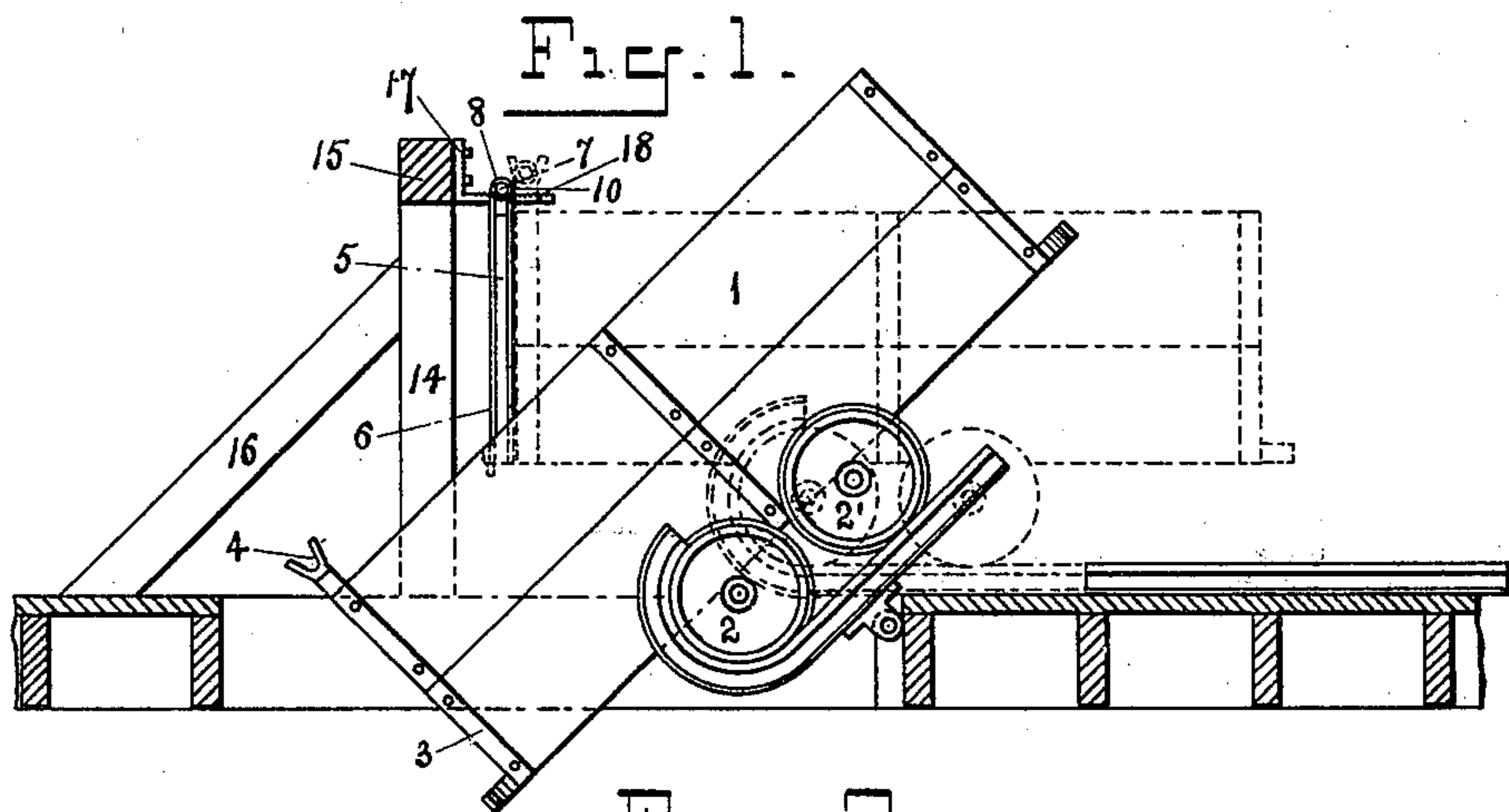
No. 632,315.

Patented Sept. 5, 1899.

C. P. LUDWIG.
DETACHABLE DOOR FOR DUMPING CARS.

(Application filed June 8, 1899.)

(No Model.)



Witnesses
B. Seiden
J. F. O'Brien

Inventor
C. P. Ludwig
By his Attorney P. Byrne

UNITED STATES PATENT OFFICE.

CARL PAUL LUDWIG, OF WOODWARD, ALABAMA.

DETACHABLE DOOR FOR DUMPING-CARS.

SPECIFICATION forming part of Letters Patent No. 632,315, dated September 5, 1899.

Application filed June 8, 1899. Serial No. 719,749. (No model.)

To all whom it may concern:

Be it known that I, CARL PAUL LUDWIG, a citizen of the United States, residing at Woodward, in the county of Jefferson and State of Alabama, have invented certain new and useful Improvements in Detachable Doors for Dump-Cars; 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.

My invention relates to improvements in a detachable door for mine-cars in which a tippie or dumping device is used to unload or discharge the cars; and the objects of my improvements are, first, to provide a mine or dump car with a detachable door of a simple and cheap construction which can be readily removed from the car before dumping the same; second, to provide a dump-car with forked side irons to engage the head-bar of a detachable door, the forks adapted to replace the door when the tippie is reversed; third, to provide a detachable door for dump-cars, the door attached to the car by forked side irons and a bottom pin adapting its removal from the car when dumping the same, and, fourth, to provide a tippie or dump with a device having two projecting arms adapted to engage the head-bar of a detachable car-door and retain the same while the car is dumping. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side view of a mine-car in the usual position of dumping, the dotted lines showing the car before dumping. Fig. 2 is a top view of the same before dumping. Fig. 3 is an end view of the same showing the detachable door.

Similar numerals refer to similar parts throughout the several views.

The body 1 of the dump-car is made in the usual manner and form. The car is provided with the usual form of wheels 2 2', mounted on axles in the usual manner. I do not confine myself to the form of car shown. My im-

proved detachable door can be operated on any desired form of car. The side irons 3 3' on the front end of the car extend some distance above the sides thereof. The heads of the side irons are provided with forks 4 4', the sides of the forks being formed at an angle to increase the distance between the points thereof.

The car-door 5 is made in the usual manner and of any suitable material. Two strop-irons 6 6', bent in the center to form a double strop, are secured to the door in the usual manner. The head-bar 7 is inclosed in the bends 8 8', formed in the heads of the strop-irons 6 6'. Two collars 9 9' are provided in the head-bar between the strops to prevent side motion of the head-bar therein. Two collars 10 10' are formed on the ends of the head-bar to guide the same when entering the forked side irons. The strop-iron 11, secured on the lower end of the door, has a pin 12 formed on its lower end. The pin is adapted to enter a hole formed in the draw-bar 13, the pin holding the lower part of the door to place in the end of the car. Two posts 14 14' are secured on opposite sides of the tippie-opening. The posts are connected by a head-beam 15. Suitable braces 16 16' are secured behind the posts. Two angle-irons 17 17', are attached to the face of the head-beam 15, the angle-irons forming extending arms to engage the head-iron of the car-door, the extending arms adapted to support the door when the car is dumping. Corrugations 18 18' are formed on the upper side of the angle-irons to prevent the head-bar of the door from sliding thereon.

In operation the car is brought to the tippie in the usual manner. When the car is run on the tippie, the arms of the angle-irons 17 17' extend under the head-bar 7 of the detachable door. The car when dumped leaves the detachable door suspended on the extending arms of the angle-bars, and when the tippie is reversed the forks on the side bars engage the head-bar of the door and place the same in position in the car.

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

5 A mine or dump car having side irons 3, 3' with forked heads formed thereon, a detachable door having a head-bar 7 adapted to engage the forked heads of the side irons, the collars 9, 9' and 10, 10' formed on the head-bar, the plate-iron 11 having a pin formed on its

lower end to engage the draw-bar, and means 10 to suspend the door when the car is dumping, substantially as and for the purpose described.

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

CARL PAUL LUDWIG.

Witnesses:

W. A. SMITH,

R. E. RANDALL.