

916,592.

H. PRIES.  
DUMP CAR.

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Patented Mar. 30, 1909.

2 SHEETS—SHEET 1.

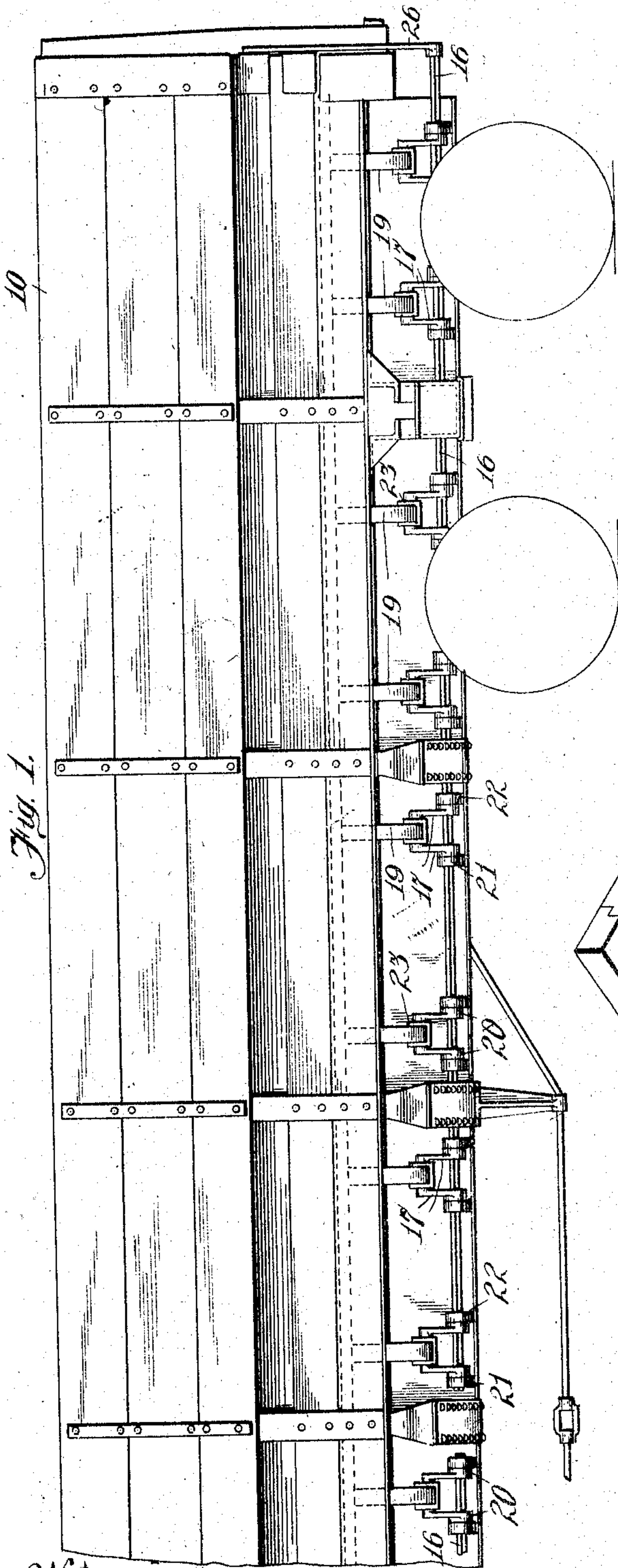


Fig. 1.

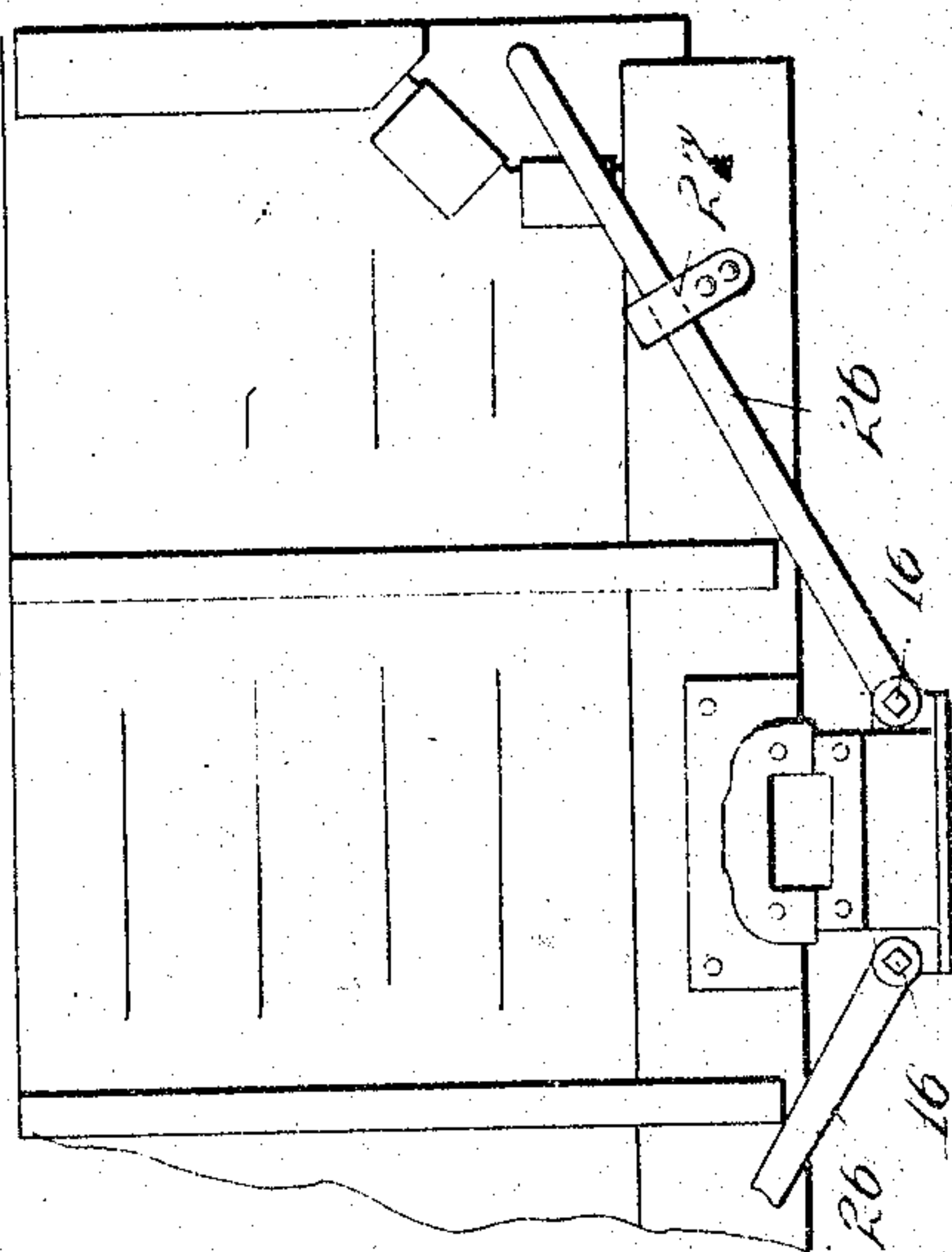


Fig. 3.

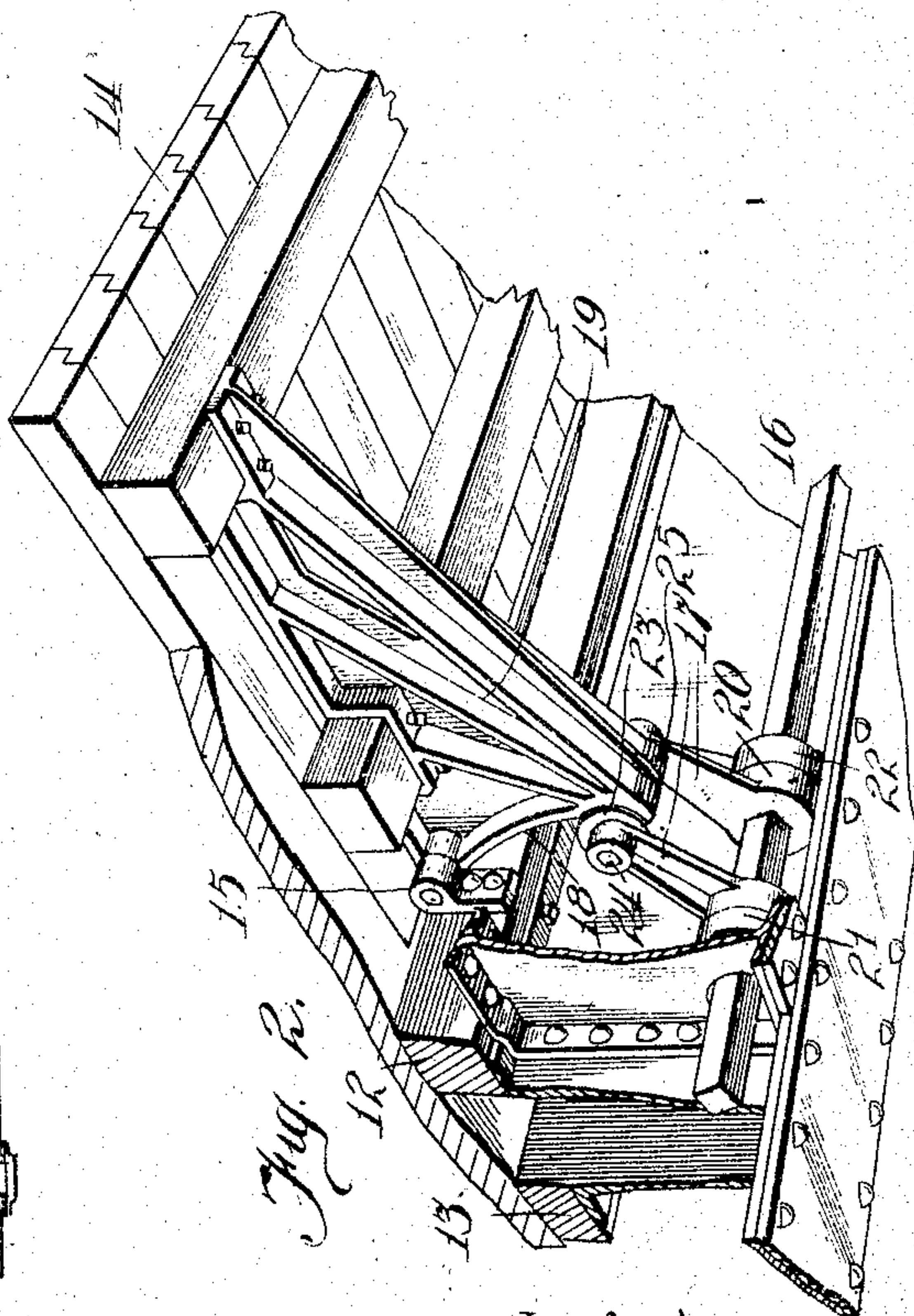


Fig. 2.

Witnesses

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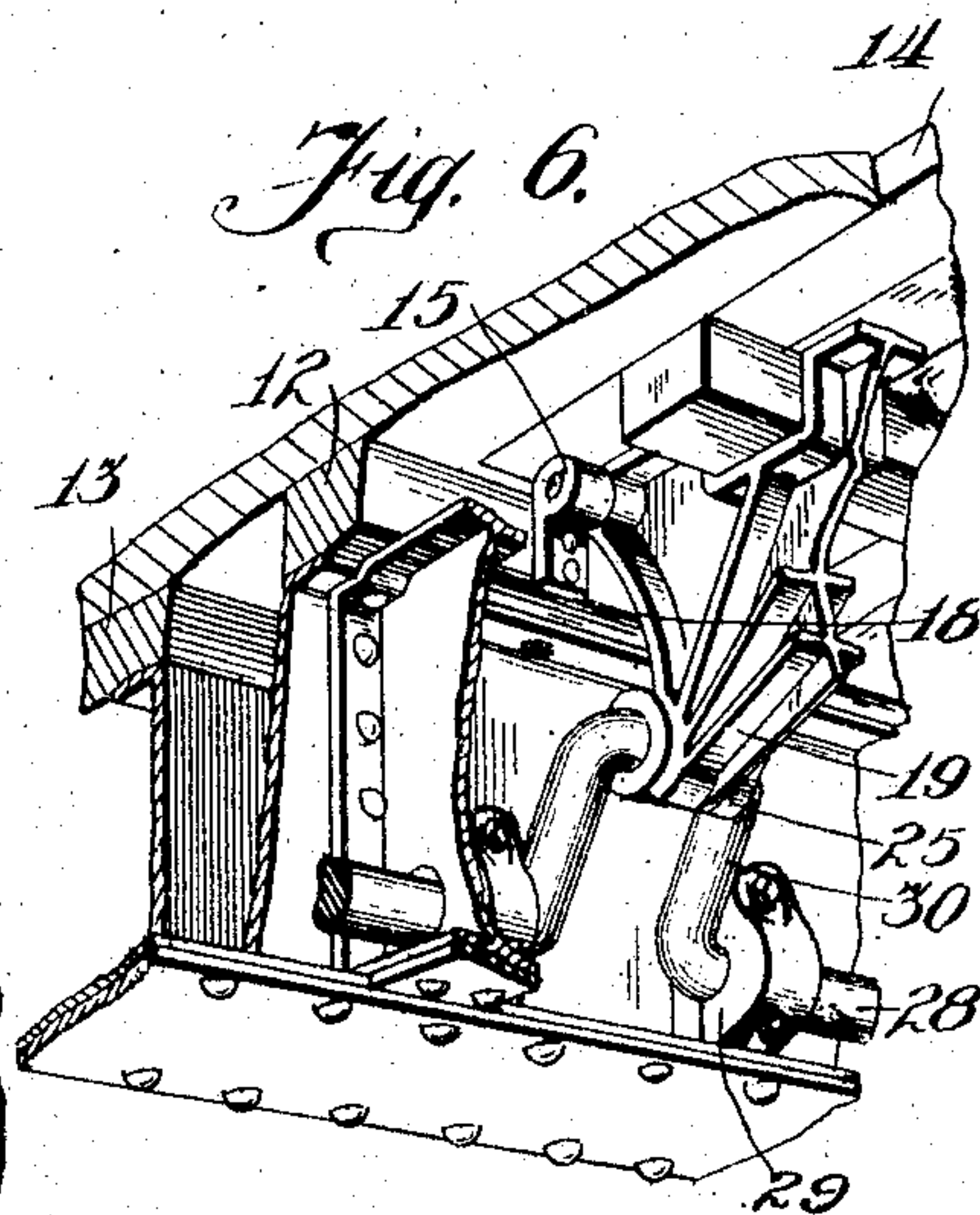
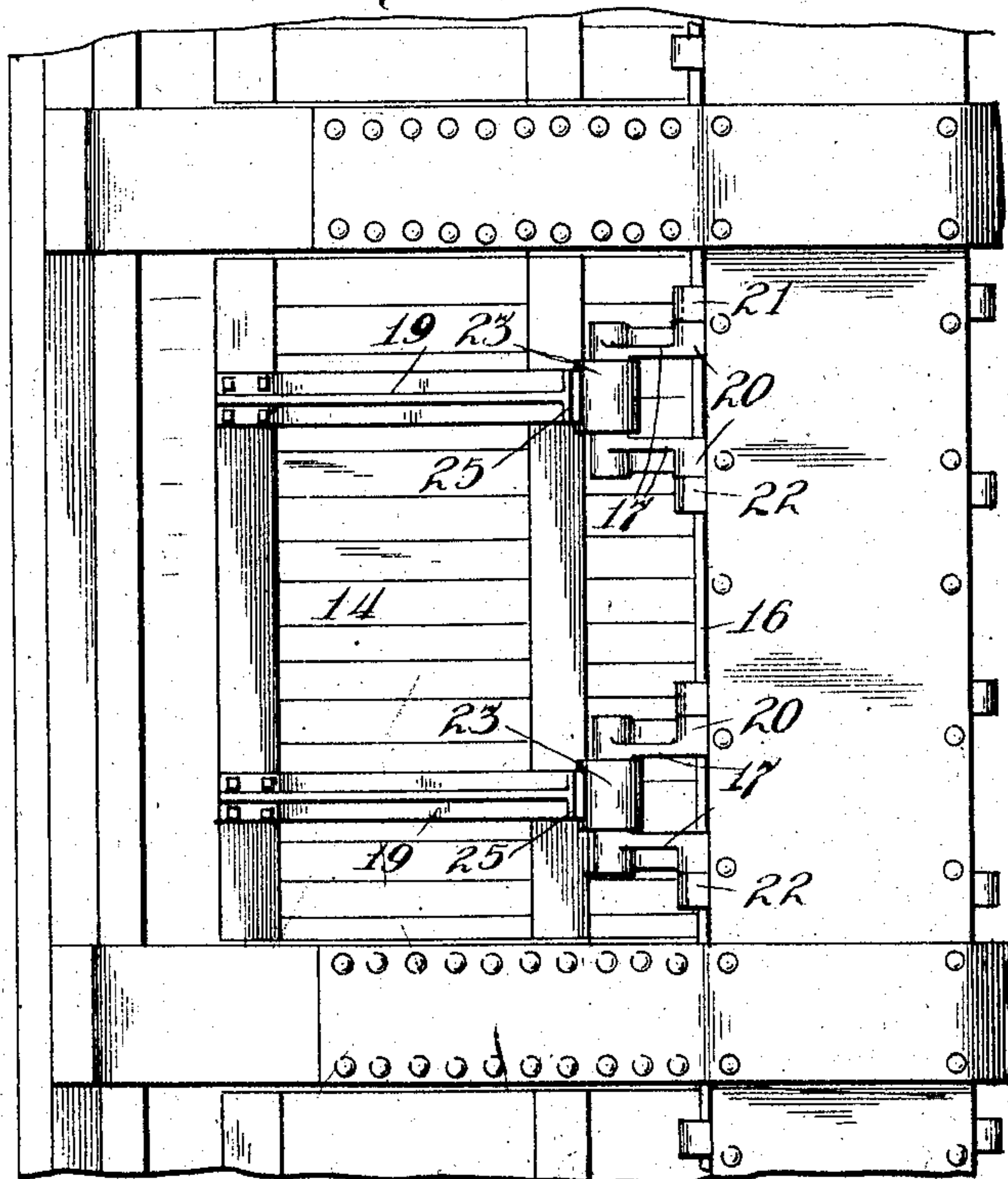


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# UNITED STATES PATENT OFFICE.

HERMAN PRIES, OF MICHIGAN CITY, INDIANA.

## DUMP-CAR.

No. 916,592.

Specification of Letters Patent.

Patented March 30, 1909.

Application filed August 3, 1908. Serial No. 446,611.

*To all whom it may concern:*

Be it known that I, HERMAN PRIES, a citizen of the United States, residing at Michigan City, in the county of Laporte and State of Indiana, have invented certain new and useful Improvements in Dump-Cars, of which the following is a specification, and which are illustrated in the accompanying drawings, forming a part thereof.

The invention relates to a dump car having an openable bottom, and its object is to provide simple, strong and easily controlled mechanism for operating the dumping doors.

It consists of the structure hereinafter described, and illustrated in the accompanying drawings, in which—

Figure 1 is a detail side elevation of a car; Fig. 2 is a detail view of the bottom of the car in perspective, showing one of the doors and its controlling mechanism; Fig. 3 is a detail end view of the car; Fig. 4 is a transverse vertical section of the car; Fig. 5 is a detail bottom plan view of the car; and Fig. 6 is a detail in perspective of one of the dumping doors and its controlling mechanism, showing a modified form of construction of the latter.

One side of a car is shown at 10, one of its ends at 11, and its center sills at 12, 13. Dumping doors 14, as many as may be desired, are formed in the bottom of the car, each being hinged, as shown at 15, adjacent one of the center sills, its outer or swinging end being adjacent the side of the car. These doors swing downwardly, and are supported and controlled by means of a shaft 16 suitably journaled adjacent the bottom of a center sill, and carry crank arms 17 which cooperate with cams 18 formed on brackets 19 attached to the lower face of the door; and, as shown, constituting one element of the hinge by which the door is attached to the car bottom.

In the preferred form of construction, the shaft 16 is square, and each of the crank arms 17 is formed with a hub 20 fitting upon the shaft and prolonged to form journals having bearings in boxes 21, 22 attached to the sills 12, 13. Each of the crank arms 17 is bifurcated to accommodate a roller 23 running on a pin 24 fitting within suitable sockets in the outer end of the crank arm. The roller 23 bears against the cam 18. This cam inclines downwardly and forwardly from the hinge 15, and the parts are so proportioned that when the door 14 is closed,

the crank arm 17 is substantially perpendicular to the general direction of the face of the cam, which it engages through the roller 23. The crank arm is therefore, when the door is closed, inclined upwardly and outwardly, and when the shaft 16 is turned to raise this crank arm, the door is permitted to drop, the cam 18 riding on the roller 23. In order to supplement the locking mechanism hereinafter described, the outer portion of the face of the cam 18 may be slightly recessed, as shown at 25, to receive the roller 23 when the door is closed.

The shaft 16 is controlled by any suitable means, as shown, by a hand lever 26 applied to its outer end, and moving over the end 11 of the car. This hand lever may be secured, when the door is closed, by any suitable latch mechanism, as shown at 27. In order to permit the doors to open, the latch 27 is released, and a slight upward movement of the lever 26 will disengage the crank arm 17 from the recessed portion 25 of the cam 18, thereby permitting the door to drop, and as it falls forcing the crank arm upwardly. The bifurcation of the crank arm affords clearance for the outer end of the cam 18 as the door descends.

As shown in Fig. 6, the squared shaft and the crank arms applied thereto may give place to a round shaft 28 journaled directly in bearings 29 secured to the car sill and looped, as shown at 30, to form crank arms for engaging the cam 18. When this form of construction is followed, I prefer to omit the anti-friction roller 23.

Having thus described my invention, I claim:

1. In a dump-car, in combination, a downwardly-opening hinged door, a cam bracket depending from the door, a rock-shaft journaled below the door hinges, a crank-arm carried by the shaft and bearing against the cam face of the bracket, the door and crank-arm moving in opposite directions.

2. In a dump-car, in combination, a downwardly-opening hinged door, a bracket depending from the door and having a cam face extending obliquely forward from the hinge, a rock-shaft below the hinge and more remote therefrom than the length of the cam, a crank-arm carried by the shaft and engaging the cam.

3. In a dump-car, in combination, a drop door, a hinge bracket pendent from the door and having a cam face, and a rock-shaft.



parallel with the door opening and having a crank-arm bearing obtusely against the cam face of the door hinge bracket when the door is closed.

5 4. In a dump car in combination, a drop door, a bracket pendent from the door and having a cam-face, and a rock-shaft having a crank-arm bearing against the cam-face of the bracket, the cam-face being indented  
10 adjacent to its outer end.

5. In a dump car in combination, a drop

door, a bracket pendent from the door and having a cam-face, a rock-shaft, a crank-arm fixed upon the shaft and having later-  
ally projecting hubs, and boxes within which 15 the hubs are journaled, the outer end of the crank-arm bearing against the cam-face of the bracket.

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Witnesses:

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