

No. 820,006.

PATENTED MAY 8, 1906.

A. MIEDEN.  
DUMPING CAR.

APPLICATION FILED SEPT. 14, 1905.

2 SHEETS—SHEET 1.

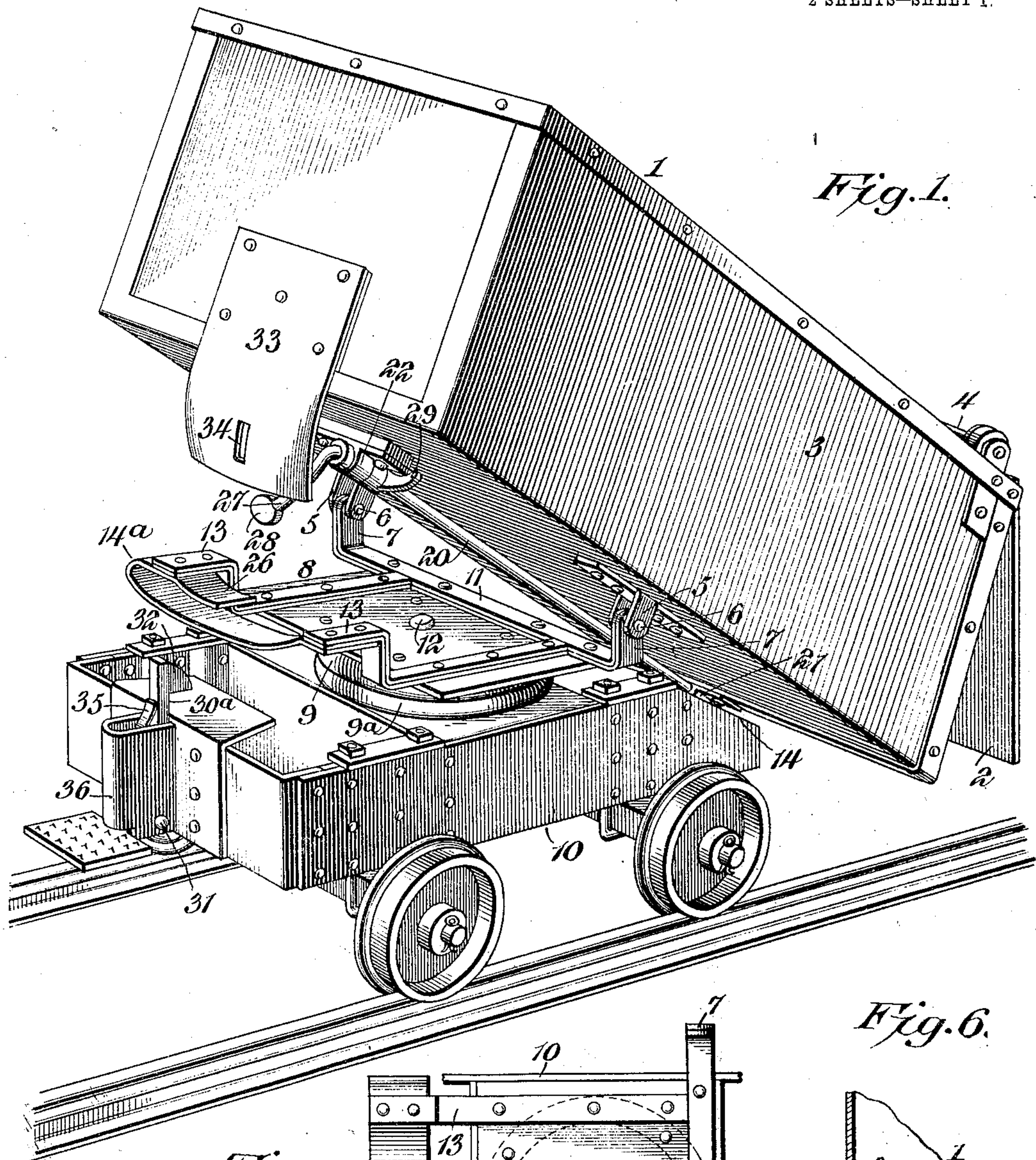


Fig. 3.

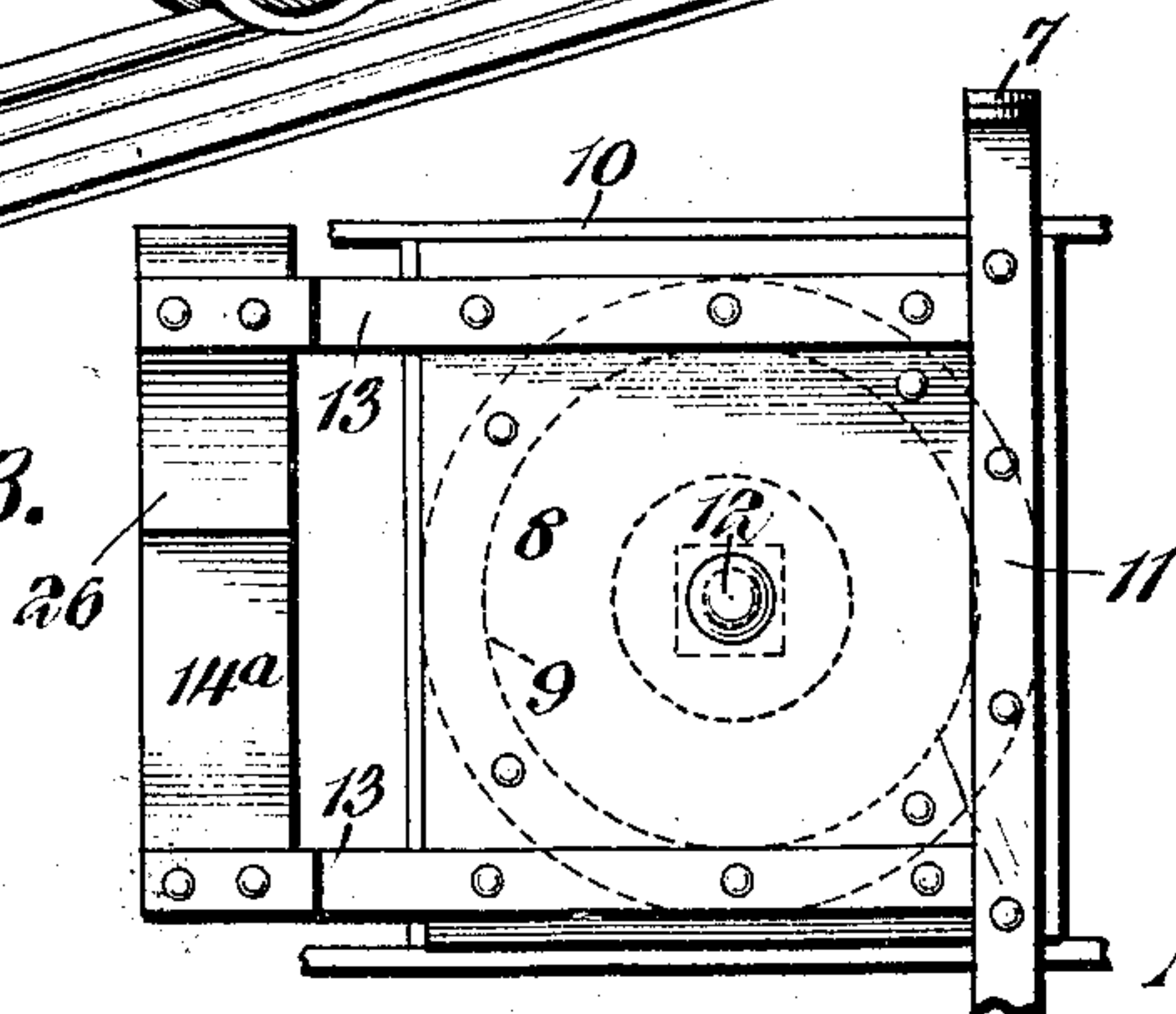
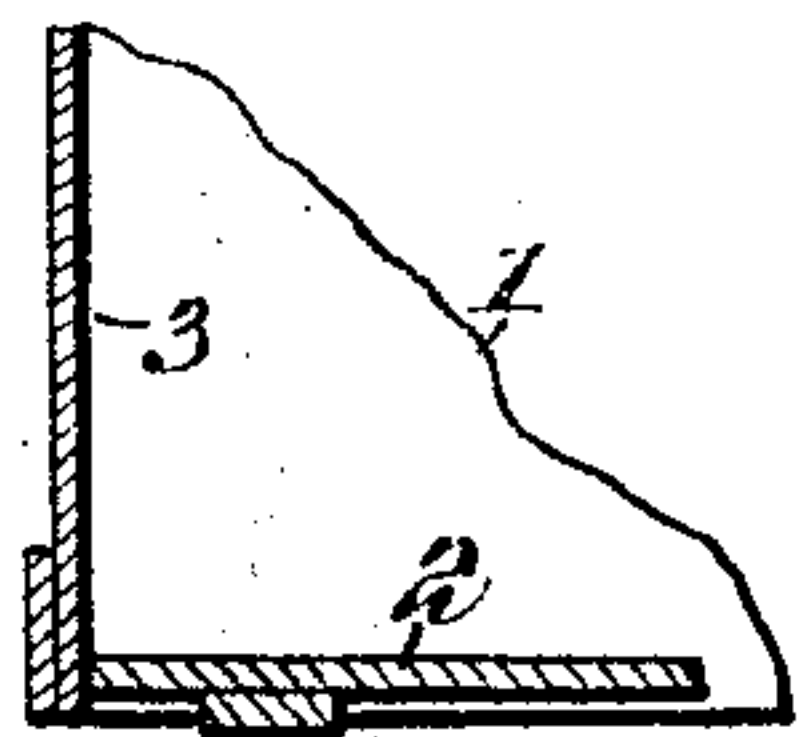


Fig. 6.



Witnesses

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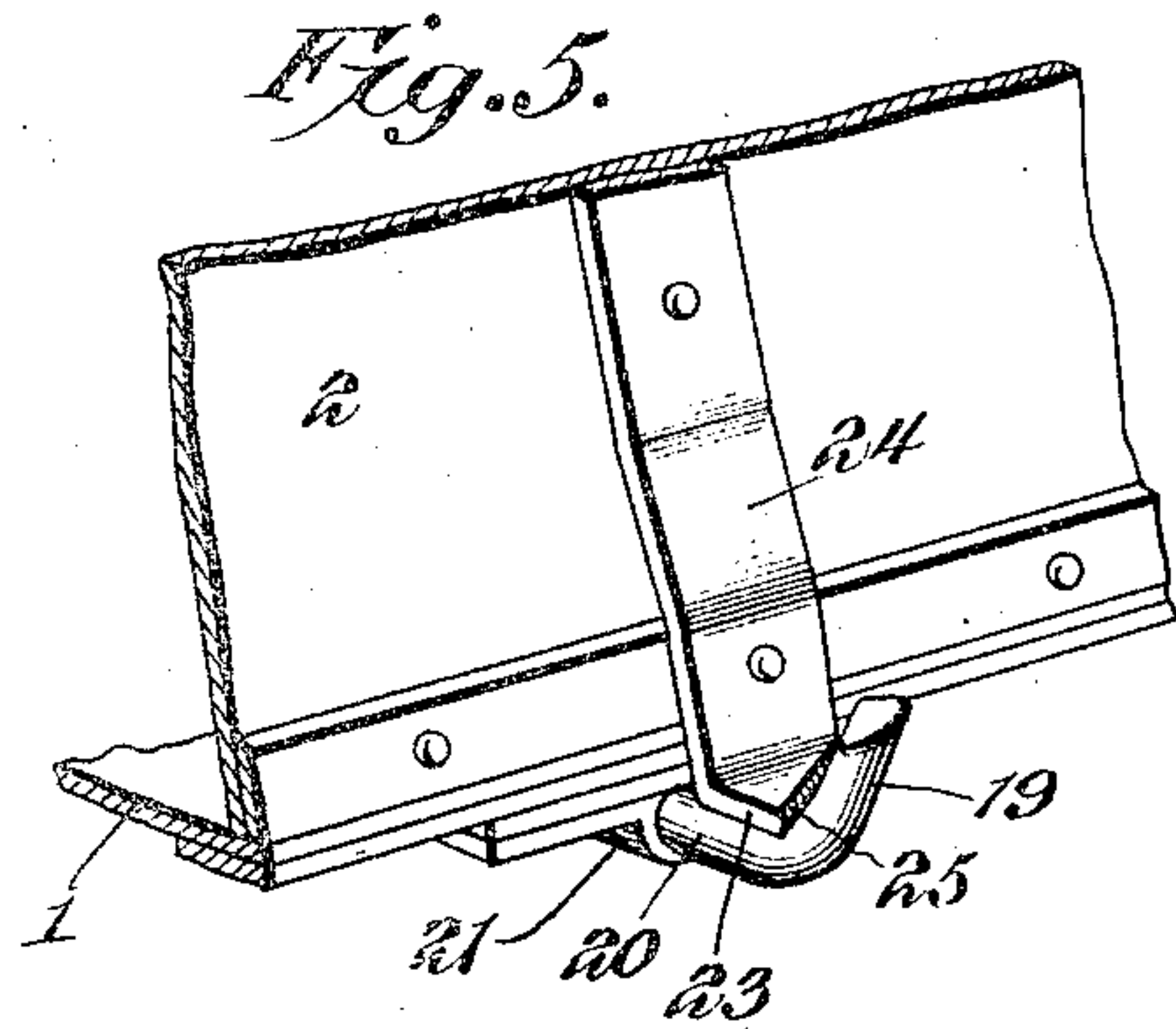
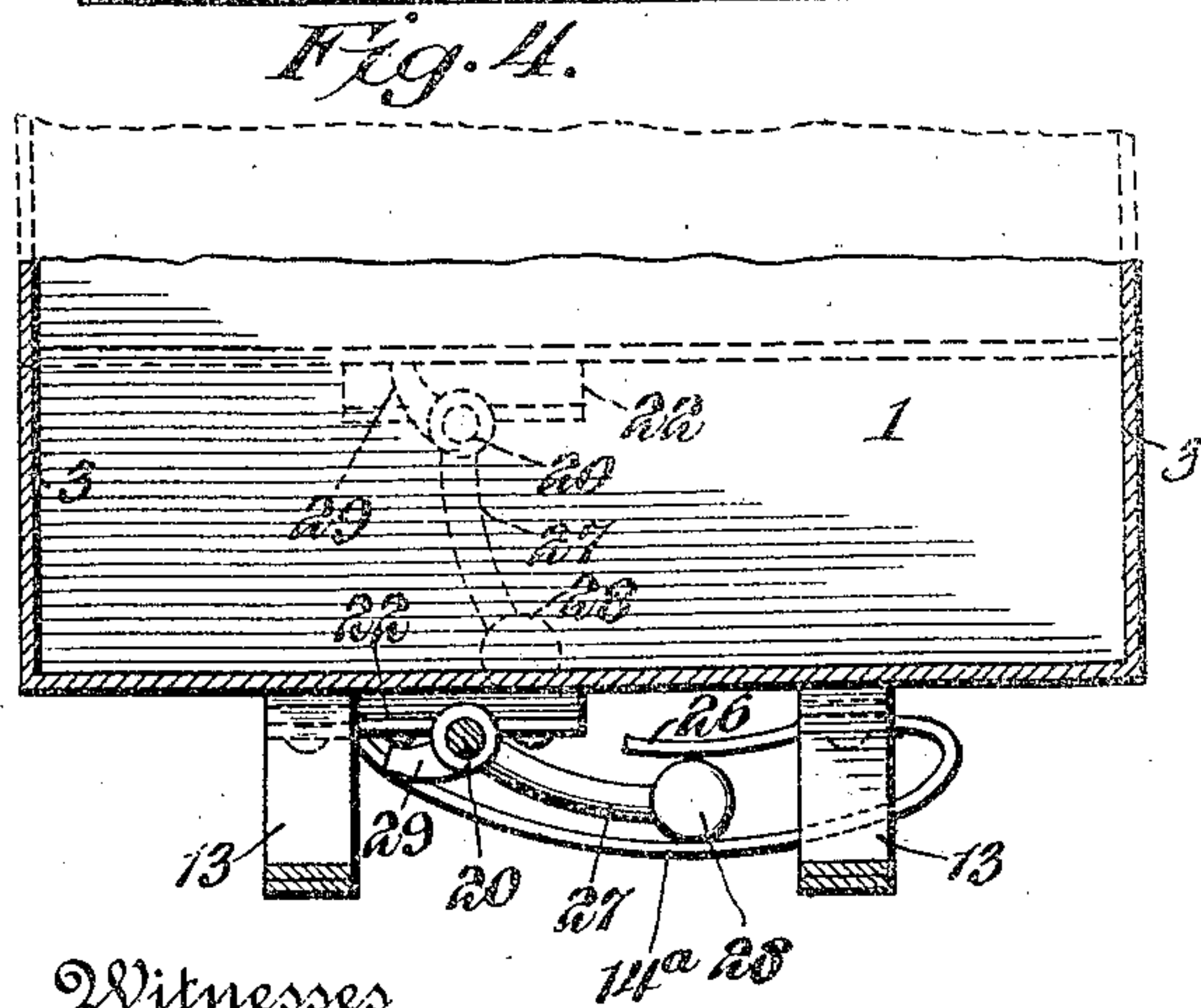
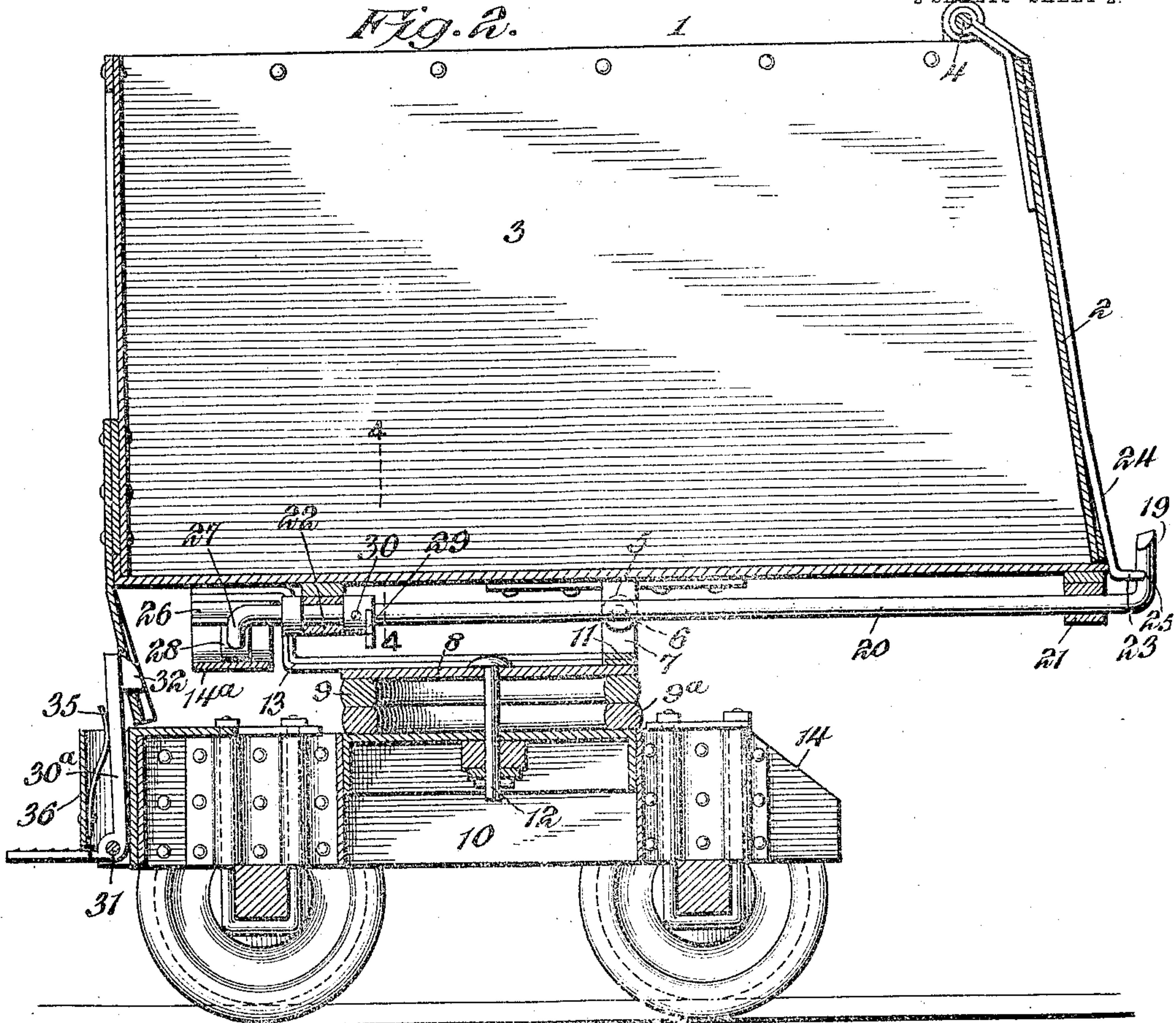
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2 SHEETS—SHEET 2.



Witnesses  
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# UNITED STATES PATENT OFFICE.

ADAM MIEDEN, OF SEATTLE, WASHINGTON.

## DUMPING-CAR.

No. 820,006.

Specification of Letters Patent.

Patented May 8, 1906.

Application filed September 14, 1905; Serial No. 278,442.

*To all whom it may concern:*

Be it known that I, ADAM MIEDEN, a citizen of the United States, residing at Seattle, in the county of King and State of Washington, have invented a new and useful Dumping-Car, of which the following is a specification.

The invention relates to improvements in dumping-cars.

10 The object of the present invention is to improve the construction of dumping-cars, more especially that shown and described in Patent No. 793,385, granted to me June 27, 1905, and to lower the tilting body of the  
15 dumping-car and arrange the same close to the truck.

A further object of the invention is to simplify and improve the construction of the locking mechanism for securing the hinged  
20 door in its closed position and to provide a catch which will be positive and reliable in its operation and which will not cause the door to stick when the body is tilted for dumping its contents.

25 With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in  
30 the claims hereto appended, it being understood that various changes in the form, proportion, size, and minor details of construction within the scope of the claims may be resorted to without departing from the spirit  
35 or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a perspective view of a dumping-car constructed in accordance with this invention, the body being tilted.  
40 Fig. 2 is a longitudinal sectional view, the body being locked in a horizontal position. Fig. 3 is a detail view of the rotary support. Fig. 4 is a detail view taken substantially on the line 4-4 of Fig. 2. Fig. 5 is  
45 a detail perspective view of the catch and the plate or piece which is carried by the door. Fig. 6 is a detail horizontal sectional view of one of the front corners of the tilting body, showing the door arranged between the sides  
50 of the car.

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

1 designates a tilting dumping-car body  
55 provided at its front with a door 2, hinged at the top to the sides 3 of the body by means

of a transverse pintle-rod 4, which extends entirely across the car and which passes through suitable hinge members of the sides of the car-body and the door. The front  
60 edges of the sides of the car-body are inclined, and the door, which is arranged between the sides 3 of the tilting body 1, is inclined when the car-body is arranged in a horizontal position, the inclination being sufficient to cause  
65 the door to close automatically and quickly, so that it will return to its closed position before the locking mechanism, hereinafter described, is operated, whereby the automatic locking of the door will be rendered positive  
70 and reliable. The door is arranged between the sides 3 of the tilting car-body to prevent it when closed from moving laterally on the body, so that it will not by lateral movement  
75 affect the operation of the locking mechanism hereinafter described.

The body is provided at opposite sides with depending ears or bearings 5, and it is pivoted by pins 6 or other suitable fastening devices to a pair of upwardly-extending arms 7 of a  
80 rotary support 8. The rotary support 8, upon which the tilting body of the dumping-car is mounted, consists of a rectangular plate suitably secured to a movable member or  
85 ring 9 of a central bearing or turn-table of a car-truck frame 10. The upper movable ring or member 9 is arranged upon a lower fixed ring or member 9<sup>a</sup>, on which the upper ring or member is adapted to turn when  
90 the body 1 of the car is rotated. The arms 7 are preferably formed integral with a transverse bar 11, which extends across the rotary support at the front end of the same and  
95 which is secured to the said support by suitable fastening devices. By this construction the tilting body of the dumping-car is pivotally mounted at the front of the rotary support or turn-table and is adapted to swing  
100 downward over the front end of the truck-frame, which is cut off or beveled, as shown at 14. This will enable the tilting body of the  
105 dumping-car to be pivoted much closer to the frame of the truck than when the pivots are centrally arranged with relation to the truck, and cars of any height may be readily constructed.  
110 The rotary support is pierced by a central pivot or king-bolt 12, which secures the plate or support to the truck-frame. The rotary support is also provided with a pair of rearwardly-extending arms 13, angularly bent, as shown, and secured at their inner or front portions to the rotary support or turn-



table at opposite sides thereof. The rear portions of the arms 13 are arranged above the plane of the rotary support and have mounted on them a combined guide and keeper 14<sup>a</sup>.

5 The hinged door of the dumping-car is held in its closed position by means of a catch 19, consisting of an arm of a longitudinal rock-shaft 20, which is journaled in front and rear bearings 21 and 22 of the bottom of the car-body. The catch 19 is arranged at an inclination and extends upwardly from the rock-shaft when the door is closed. It is inclined both transversely of the body of the dumping-car and longitudinally thereof, as it extends toward one side of the car, and also diverges upwardly from the door. The catch, which is beveled at the outer end, engages a substantially triangular flange or lug 23 of a plate 24, which is secured to the exterior of the door and which extends upwardly from the lower edge thereof to within a short distance of the upper edge of the same. The plate depends below and is adapted to engage the front edge of the bottom of the car-body. 25 It forms a stop for limiting the inward movement of the door, and the triangular flange or lug is located in a plane slightly lower than the bottom of the car. The outer engaging edge 25 of the triangular flange or lug is arranged at an angle to the door, and it is rounded to enable it to slide readily over the catch when the rock-shaft is released and is free to rotate. The inward pressure on the door facilitates the rotation of the rock-shaft, which 35 is also actuated by the means hereinafter described, and the operation of the catch is thereby rendered positive and reliable.

The combined guide and keeper 14<sup>a</sup>, which is disposed transversely of the rear portion of the car, is constructed substantially the same as that shown and described in the patent above referred to, and it presents a concave upper face and is provided at its inner end with an arm or portion 26 to form a stop and also operating means for a weighted arm 27 of the rock-shaft 20. When the dumping-body is arranged in a horizontal position, the weighted arm of the rock-shaft is arranged in substantially a horizontal position and extends into the space between the body portion of the combined guide and keeper and the portion 26, and when the rear end of the tilting body is raised, the upward movement permits the weighted arm of the rock-shaft to swing downward to the inclined position illustrated in Fig. 1 of the drawings. This downward movement is rendered positive by the overhanging or projecting portion 26, which lies above the weighted or enlarged portion 28 of the arm 27. The oscillation of the arm 27 and the consequent rotation of the rock-shaft carries the catch out of engagement with the hinged door of the car and permits the same to open. The downward movement of the weighted arm and the catch of

the rock-shaft is limited by an arm 29, constructed the same as that shown in the said patent, and adjustably secured to the rock-shaft by means of a clamping-screw 30, which passes through a sleeve or collar formed integral with the arm. The arm 29 extends from the shaft at the side opposite that at which the weighted arm and the catch extend, and when the weighted arm and the catch swing downward the arm 29 is carried upward in engagement with the bottom of the car, whereby the rotation of the rock-shaft is limited. The weighted arm is bent or curved between its ends in order to follow the combined guide and keeper more closely and also to increase the positive rotary movement of the rock-shaft.

The locking mechanism is adapted for use on various kinds of dumping-cars, carts, and analogous vehicles, and it may be employed independently of a turn-table on cars which have only a pivoted or tilting body.

The body is held against tilting by means substantially the same as those shown and described in the said patent, the plate 33 being preferably secured to the rear end of the car-body. The plate is provided in its lower portion with a slot 34, which is engaged by a substantially L-shaped latch 30<sup>a</sup>, having vertical and horizontal portions pivoted at its angle by a pin 31 and provided at its upwardly-extending portion with a beveled head 32, arranged to engage the plate 33. The latch, which is held in engagement with the plate or member 33 of a spring 35, is mounted in a suitable casing or housing 36.

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

1. In a device of the class described, the combination of a truck-frame having a turntable or support provided with a horizontal supporting-plate, a transverse bar mounted on the plate at the front of the same and having upwardly-extending arms, a tilting body having a door and pivoted to the said arms, rearwardly-extending arms projecting from the back of the plate, locking mechanism mounted on the body for holding the door in its closed position, and means carried by the rearwardly-extending arms for operating the locking mechanism.

2. In a device of the class described, the combination of a dumping-body having a door, and a shaft provided with a catch consisting of a short straight arm, said arm being arranged at an inclination with relation to the free edge of the door when the latter is closed.

3. In a device of the class described, the combination of a dumping-body having a door, a shaft provided with a catch consisting of a short straight arm arranged at an inclination with relation to the free edge of the door when the latter is closed and disposed trans-



versely of the same, said arm also diverging upwardly from the door.

4. In a device of the class described, the combination of a dumping-body having a door provided with a substantially triangular flange or lug, and a shaft having a catch engaging the lug or flange and consisting of a straight arm arranged at an inclination with relation to the free edge of the door when the latter is closed.

5. In a device of the class described, the combination of a dumping-body having a door provided with a substantially triangular flange or lug, and a shaft having a catch engaging the lug or flange and consisting of a straight arm arranged at an inclination with relation to the free edge of the door when the latter is closed, said arm being also disposed transversely of the body and being also extended outwardly from the door.

6. In a device of the class described, the combination of a dumping-body having a door arranged between the sides of the body when closed, a plate secured to the door and engaging the bottom of the body to limit the in-

ward movement of the door, said plate being provided with a projecting lug or flange, and a shaft having a catch engaging the lug or flange.

7. In a device of the class described, the combination of a dumping-body having a hinged door arranged between the sides of the body when closed, a plate secured to the door and extended beyond the lower edge thereof to form a stop for limiting the inward movement of the door, said plate being provided at its lower end with a projecting substantially triangular flange, and a shaft having a catch consisting of a straight arm extending upwardly at an inclination when the door is closed and disposed in a direction transversely of the body, said arm being also extended outwardly from the door.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ADAM MIEDEN.

Witnesses:

H. P. DECEUR,  
M. G. RILEY.