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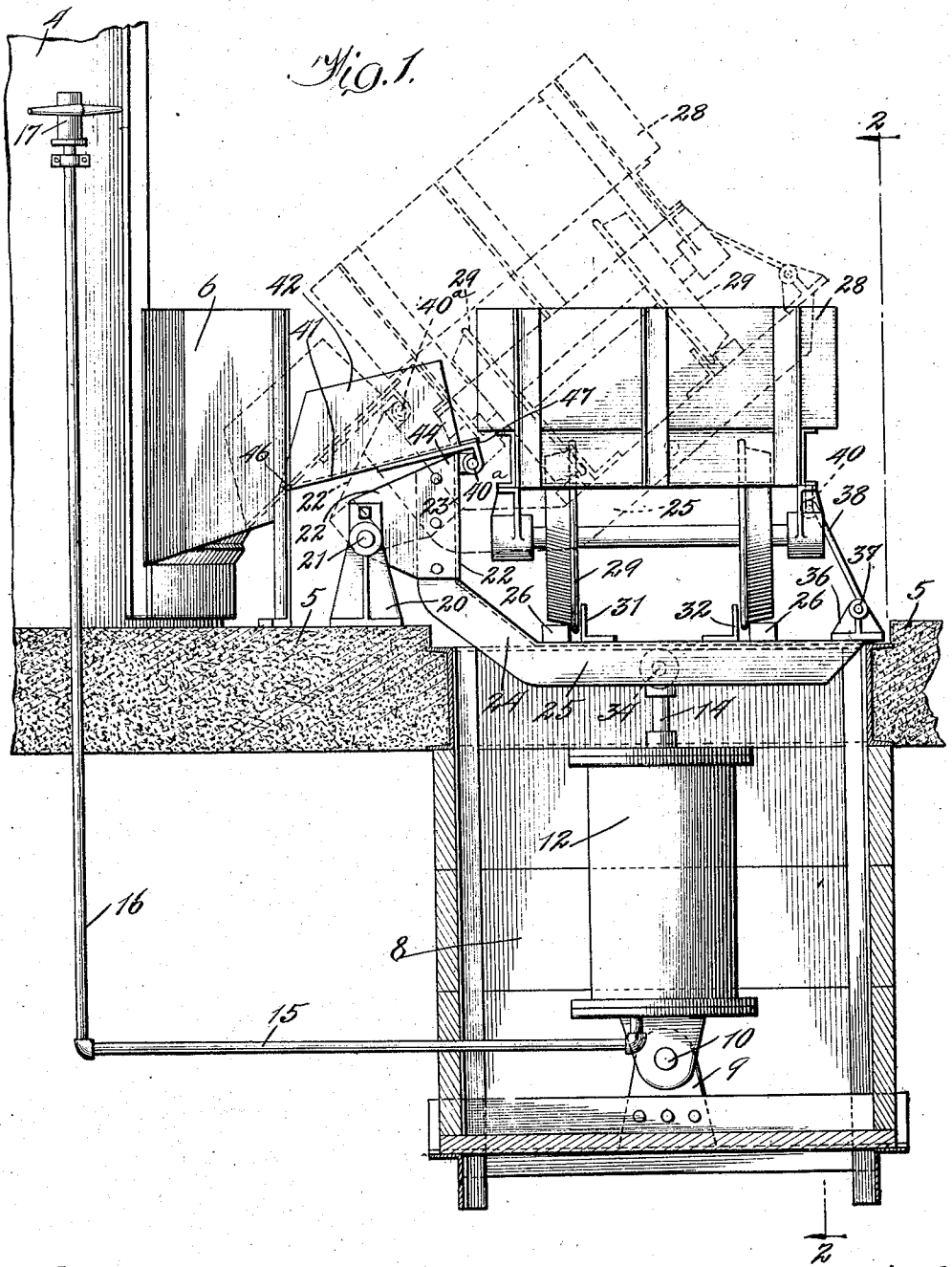
CUPOLA CAR DUMPING MECHANISM.

APPLICATION FILED JUNE 15, 1907.

911,725. Patented Feb. 9, 1909.

2 SHEETS—SHEET 1.

Fig. 1.



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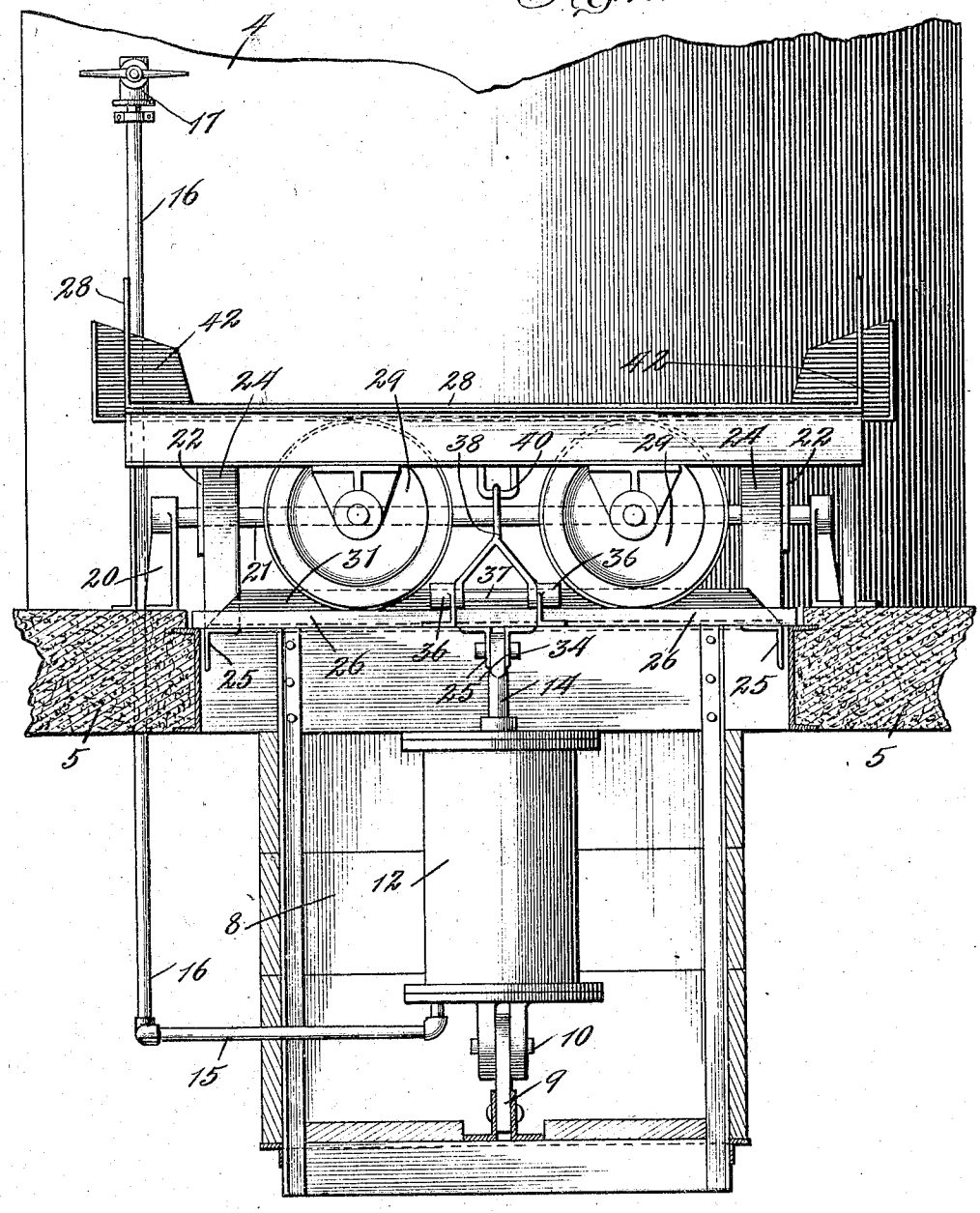
APPLICATION FILED JUNE 15, 1907.

911,725.

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2 SHEETS—SHEET 2.

Fig. 2.



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UNITED STATES PATENT OFFICE.

JAMES HYSLOP, OF HARVEY, ILLINOIS, ASSIGNOR TO WHITING FOUNDRY EQUIPMENT COMPANY, OF HARVEY, ILLINOIS, A CORPORATION OF ILLINOIS.

CUPOLA CAR-DUMPING MECHANISM.

No. 911,725. Specification of Letters Patent. Patented Feb. 9, 1909.

Application filed June 15, 1907. Serial No. 379,254.

To all whom it may concern:

Be it known that I, JAMES HYSLOP, a subject of the Kingdom of Great Britain, residing at Harvey, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Cupola Car-Dumping Mechanism, of which the following is a specification.

This invention relates to mechanism for charging a foundry cupola with iron or fuel charges and its object is to provide a device by means of which a car may be run along a track on the charging floor of the foundry which is sufficiently far away from the cupola so that it does not interfere with working around it and may then be automatically dumped into the cupola.

The invention consists in a novel form of platform on which the car may be rolled said platform being pivoted at a point above the floor of the room and above the tops of the rails on which the car travels the same being provided with means for locking the car to the track and to the platform and with the power mechanism for then tilting the platform with the attached car to such a position that the load within the car may readily be discharged into the cupola.

The invention also consists in a novel form of apron attached to the platform which automatically adjusts itself so as to carry the load from the car into the cupola without the spilling of said load upon the floor.

The invention also consists in means for controlling the operation of the tilting platform at a convenient point some distance therefrom and adjacent to the cupola proper.

The invention further consists in details of construction which will be hereafter more fully described and claimed.

Referring to the drawings Figure 1 is a side view of a portion of the cupola showing the device of this invention applied thereto, the car carrying the load appearing in the end view. Fig. 2 is a view taken at right angles to that of Fig. 1 on the line 2—2 of that figure.

The foundry cupola 4, only a portion of which is shown, rises from an ordinary foundry floor 5 and has in one side a chute or passageway 6 through which material which is to be worked by the cupola may pass therein. These parts are of the ordinary type and form no part of this invention except as combined with other parts set out in the claim. In the floor 5 is a cylinder pit 8 having at its bottom a base casting 9 which is pivotally mounted at 10 to an upright cylinder 12 within which is a vertically movable piston carrying a piston rod 14. The lower end of this cylinder 12 is connected by a horizontal pipe 15 and a vertical pipe 16 to a suitable valve mechanism 17 located at a convenient point adjacent to the cupola through which valve mechanism, compressed air, water or steam may be admitted to the cylinder from any suitable source of supply. On one side of the pit 8 and adjacent to the cupola are two upright standards or castings 20 carrying a horizontal rod or shaft 21.

Mounted upon this shaft 21 by means of the plates 22 are two or more angular members 23, 24 and 25 parallel to each other as shown so that when the rails 26 are laid upon the parts 25 the combined structure constitutes a platform upon which the car 28 may be run adjacent to the cupola. The car wheels 29 engage the rail 26 in the ordinary manner and are held against lateral movement in either direction off from said rails by the guards usually angle bars 31 and 32. The members 25 of the platform are connected by the pivotal mechanism 34 to the piston rod 14. On the side of the platform 25 away from the cupola is placed a casting 36 to which is pivotally connected at 37 a hook 38 adapted to engage the depending loop 40 or other suitable device upon the underside of the car for the purpose of holding the car upon the platform when the entire platform and car attached is moved by the cylinder mechanism from the full line position of Fig. 1 to the dotted line position of that figure.

Pivotally mounted upon a suitable shaft or rod 40ª attached to the frame member 23 is an apron 41 having side guard members 42 said apron bearing and being normally supported upon the upper angular corners 44 of the member 23. This apron is, as shown, also so constructed that its end 46 is, as shown, adapted, when the car is tilted, to engage the bottom of the chute 6. The pivoting of this apron 41 at a point higher than the shaft 21 results in the upper portion 47 of the apron practically clearing the car body when the parts are in the full line position of Fig. 1 and extending some little distance under the body of the car proper

as shown, when the parts are tilted to dotted line position of Fig. 1, with the result that the apron is out of the way of the car as it is run on the platform 25 and yet perfectly carries the load from the car to the cupola when the car is in the dotted line position.

In the operation of this device, assuming that a car has been run on the platform 25 to the position shown; the operator takes hold of the hook 38 and adjusts it to operative position shown and then operates the valve mechanism 17 to admit working fluid or gas under the piston inside the cylinder 12. As soon as this takes place this working fluid elevates the platform 25 and attached car to dotted line position. During this operation the car is held upon the platform by the hook 38 and by the angular guard 32 and the left hand rail 26. As the car is elevated the apron swings from full line position to dotted line position so that when that position is reached and the load begins to discharge from the car it passes directly over the apron, through the chute 6 and into the cupola without waste. When the car is dumped the operator works the valve 17 in the reverse direction thereby allowing the fluid to pass out of the cylinder 12 and the car and attached parts gradually settle down from the dotted line position to the full line position of Fig. 1. The hook 38 is now disengaged from the car and the car may be moved off the platform along any suitable track.

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

In a device of the class described in combination with a tiltable platform and a track for a car thereon a rigid hook pivotally mounted at one side of the track adapted to detachably engage a portion of the car for the purpose of securing it upon the track and guard flanges inside of and adjacent to each rail adapted to engage the flanges of the wheels of the car for the purpose of holding it upon the track.

In witness whereof, I have hereunto subscribed my name in the presence of two witnesses.

JAMES HYSLOP.

Witnesses:
A. H. McDOUGALL,
J. A. FARRIS.