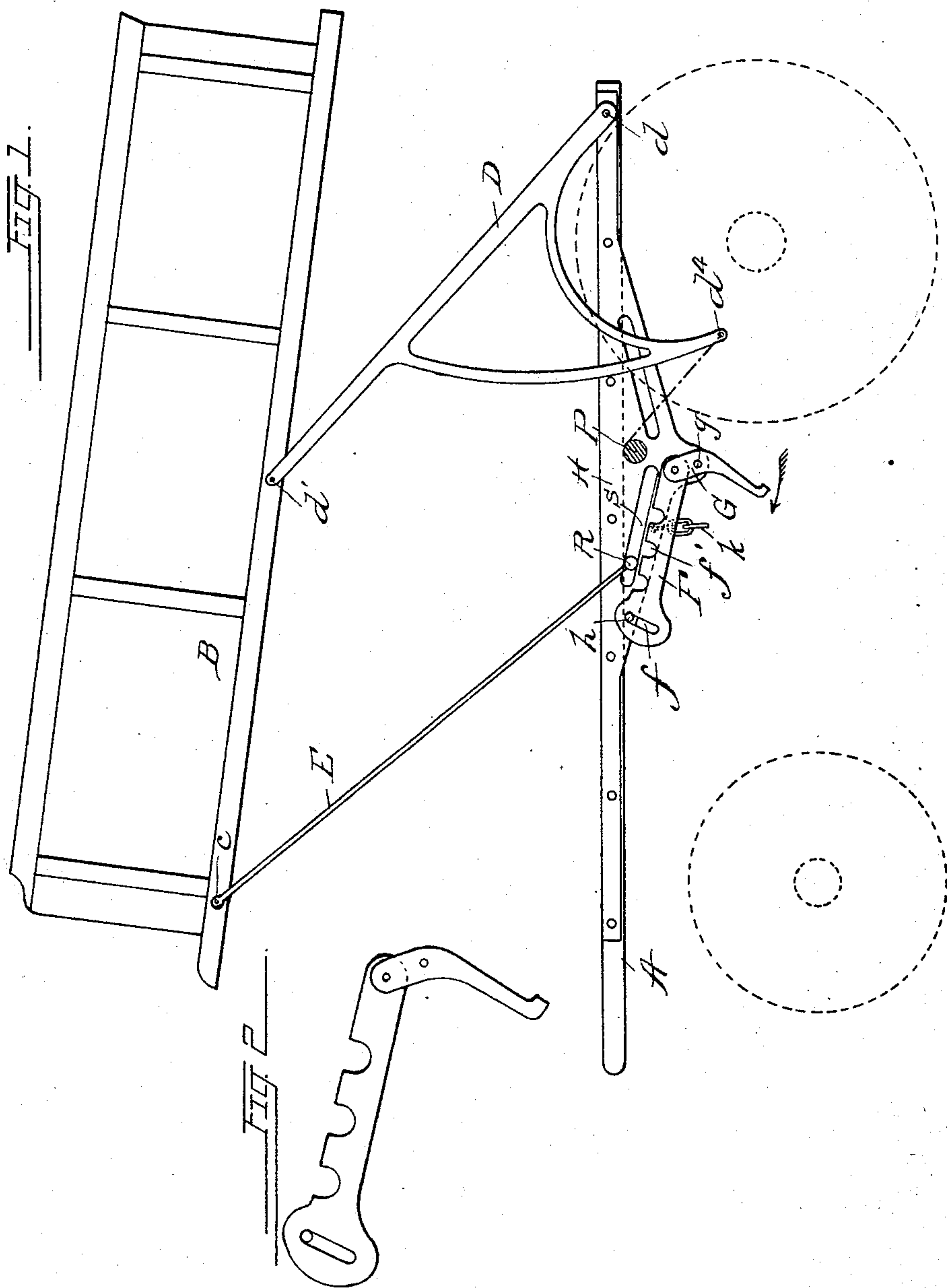


(No Model.)

H. S. PALM.
DUMPING WAGON.

No. 539,822.

Patented May 28, 1895.



Witnesses
Gunnie E. Kelly.
Katharine O. Kelly.

Henry S. Palm, Inventor

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UNITED STATES PATENT OFFICE.

HENRY S. PALM, OF READING, PENNSYLVANIA.

DUMPING-WAGON.

SPECIFICATION forming part of Letters Patent No. 539,822, dated May 28, 1895.

Application filed September 27, 1894. Serial No. 524,226. (No model.)

To all whom it may concern:

Be it known that I, HENRY S. PALM, a citizen of the United States, residing at Reading, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Coal-Dumping Wagons; 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 that class of dumping wagons in which the body or bed is raised from the frame, and is particularly intended as an improvement on Patent No. 449,265, issued March 31, 1891, to James A. Klees, in which the main object of the invention is to provide an improved construction whereby the wagon bed may be raised by the continued operation of a single mechanism to the most advantageous heights and angles possible for different conditions. In dumping coal for instance the height to which it is advisable to raise the bed varies greatly. When the cellar-hole is in the pavement but a short distance from the curb it is unnecessary to raise the rear of the bed at all, and the front need only be lifted to secure a proper angle for dumping. Where the cellar-hole is on the ordinary building line it is usually necessary to raise the bed at both ends but not to so great a height as is necessary where the cellar opening is set back still farther and at an elevation. By means of my improved construction the front of the wagon alone is first raised until a proper angle for quick delivery to a short distance is reached. By continuing the operation of the same lifting mechanism, the rear end of the bed begins to raise, without, however, discontinuing the elevation of the front, so that the bed may be raised bodily to the extreme limit provided for.

Figure 1 of the drawings is a sectional elevation of a wagon embodying my invention. Fig. 2 is a detail view of the regulating-rack and its operating-lever.

In the drawings A represents the frame of the running gear to which the wagon body or bed is connected by means of movable elevating arms D, having their rear ends pivoted at *d* to the rear ends of the frame A while their forward ends are pivoted at points

d' to the bed B. This arm D however is made plain instead of racked and has attached to its lower end *d'* a chain which is wound by means of gearing around a shaft P which is journaled in the truss plates.

On the inner side of the truss plate is a pin *h* on which hangs a regulating rack F. This rack is provided at its forward end with a slot *f* for engaging the pin *h*, is also provided on its upper edge with depressions or teeth *f'* and is pivoted at its rear end to a lever G which in turn is pivoted at *g* to a depending lug of the truss plate H.

At the point *c* on the body sills is pivoted a bar E, the lower end of which is provided with a roller R which rides in the slot S in the truss plate H, said roller extending inward about the distance of the thickness of the regulating rack F.

When the body is in its lowered position the roller R is seated at the rear end of the slot S and when the crank is operated and the body raised, the roller travels forward in the slot S until the front end of the wagon body has attained a sufficient height, when the lever G is thrown forward in the direction of the arrow, around the pivotal point *g* and the regulating rack rides upward on the pin *h* until the extension of the roller R is engaged by one of the depressions *f'*, when the lever G is held in position by means of a chain or hook *k* engaging the hooked end thereof. At this point the movement of the body with relation to the frame will change and the continued operation of the crank will evidently raise not only the front of the body, but the rear will be raised also and more rapidly than the forward end because the lower end of the bar E being fastened, the front of the body can only raise so much as the movement of the same around the center R will allow it. "It is evident therefore that while both front and rear are now raised the latter is constantly gaining on the former, so that as the height from the frame increases, the angle of the bed decreases. On consideration it will be seen that this is exactly what is required in service, as the angle must necessarily be sacrificed where the point to be reached by the chute is at a considerable distance, while at nearer or lower points the advantage of a greater incline is secured."

It will be seen that my mechanism will permit the wagon bed to be raised to the most advantageous heights and angles possible for different conditions for as soon as the front 5 of the body has attained a height sufficient to deliver the coal under the existing conditions, the regulating rack is thrown into engagement with the roller R and the elevation at front changes and the rear begins to raise.

10 Having fully described my invention, I do not desire to limit myself to the exact construction set forth; but

What I claim is—

A device for regulating the front lift of a

wagon body consisting of a slotted frame 15 plate, a roller traveling in the slot of said plate, a stay bar pivoted to the front of the wagon body and also to the said roller, and a rack with teeth or depressions adapted to engage and stop the movement of said roller 20 substantially as set forth.

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

HENRY S. PALM.

Witnesses:

ED. A. KELLY,

F. PIERCE HUMMELL.