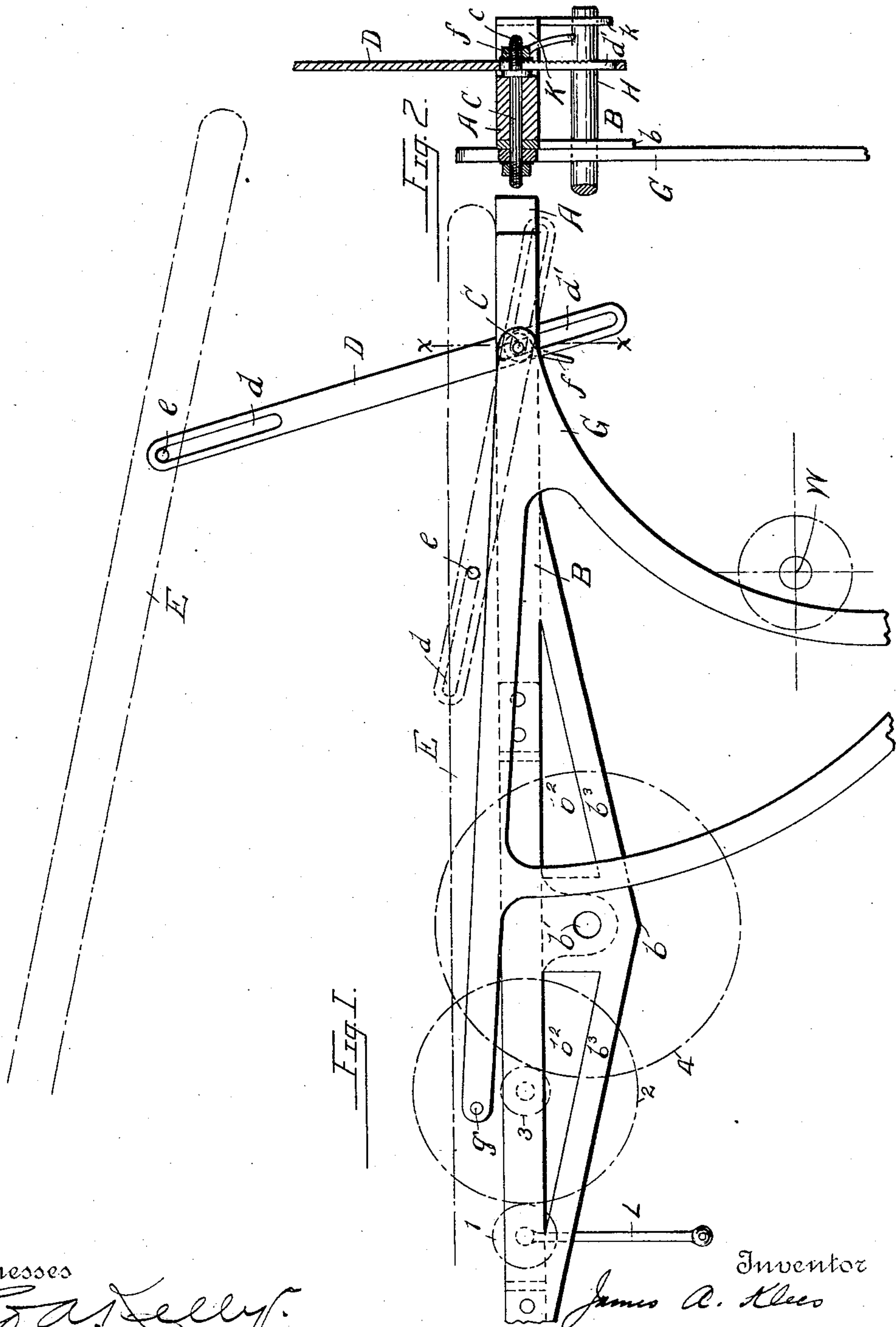


(No Model.)

J. A. KLEES.  
DUMPING WAGON.

No. 454,004.

Patented June 9, 1891.



Witnesses  
*Edw. A. Kelly*  
*Chas. J. Bieber*

Inventor  
*James A. Klees*  
By his Attorney *J. H. Smith*

# UNITED STATES PATENT OFFICE.

JAMES A. KLEES, OF READING, PENNSYLVANIA, ASSIGNOR TO THE  
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## DUMPING-WAGON.

SPECIFICATION forming part of Letters Patent No. 454,004, dated June 9, 1891.

Application filed February 12, 1891. Serial No. 381,138. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES A. KLEES, a citizen of the United States, residing at Reading, in the county of Berks, State of Pennsylvania, have invented certain Improvements in Dumping-Wagons, of which the following is a specification.

This invention relates to dumping-wagons having their bodies pivotally connected to the wagon-frame by means of elevating-arms, by the operation of which they are raised vertically preparatory to dumping, and more especially to those in which practically the whole load of the elevated body is supported at a single point of the frame.

My main object is to so construct the frames with relation to the elevating mechanism as to secure with a minimum of material ample strength at the point of greatest strain and provide at the same time a most convenient connection for said mechanism.

A further object is to provide an improved device for locking the wagon-bed in any position to which it may be elevated.

The invention is fully described in connection with the accompanying drawings, and is specifically pointed out in the claims.

Figure 1 is an elevation showing the near frame, &c., removed, thus giving a full inside view of the off frame. The body is indicated in two positions—that is, as resting directly on the frame, and also as partly elevated—thus showing the action of the locking mechanism. Fig. 2 is a section on the line X X of Fig. 1 and gives another view of this locking mechanism.

The general features of the wagon illustrated in the drawings consist of the usual movable body, of which the bed E only is shown, the frames A, mounted in any suitable manner on the wheels, the center of the rear pair of which is at W, the elevating-arms G, pivoted at one end to the frame and at the other g to the movable bed E, and the mechanism for lifting the forward ends of the arms G to elevate the bed.

In the present construction the main portion of the frames A are light timbers of uniform section throughout their length. To these timbers, preferably upon their interior faces, I secure irons B, of substantially trian-

gular shape, having their greatest depth at a point b about midway of the length of the frame, (the forward end of which is not shown,) which point extends considerably below the frame, while the top edge of the iron corresponds with the top line of the frame. Openings b' in these irons below the frame A serve as bearings to support the cross-shaft H, by the rotation of which the elevating-arms G are operated through connecting-chains. (Not shown.) At either side of these bearings the irons are lightened by cutting triangular openings b<sup>2</sup>, thus forming truss-irons, in which the lower inclined members b<sup>3</sup> are placed in tension by the weight of the raised body of the wagon transferred thereto through the shaft H, while the horizontal upper portion, together with the frame A, to which it is secured, is placed in compression by the same weight, thus giving great transverse strength to the frames and effectually preventing any bending or distortion due to the raising of the bed. Each elevating-arm G is pivoted to the frame at C by means of a bolt passing through the frame and the iron B, and an extension c of this bolt on the outside of one of the frames serves as the point of attachment for the rod D, by means of which the bed E, to which it is also connected at e, is conveniently locked at any height from the frame A to prevent tilting upon its pivotal connection with the elevating-arms at g. When the bed is in its normal position, resting upon the frame A, this rod D approaches a horizontal position, the projections c and e being almost in line, as well as at their nearest approach to each other. The slots d and d', extending from near either end of the rod toward each other, permit the rod to assume this position when the bed is lowered. As the bed is lifted by raising the arms G the projection e rides in the slot d until it strikes the closed end of the rod, when the continued elevation of the bed causes the lower slotted end d' of the rod to move on the projection c. When the desired height is reached, it is only necessary to turn the nut f on the bolt c to prevent the rear end from tilting upward, and if the conditions require it a similar nut can be used at e to prevent tilting in the opposite direction.

The multiplying-gear, by means of which



the shaft H is rotated and the arms G raised, is secured to one of the frames A by means of a bearing-iron K, fastened to the inside face of the frame and having a depending ear 5 k, in which the extended end of the shaft H is supported. The turning of the crank L operates the latter through the gearing 1 2 3 4, arranged in any ordinary manner.

By means of my construction the frames 10 are made absolutely secure against deflection by the use of a minimum amount of material, and the main operating parts are conveniently and advantageously attached to the same irons which impart this strength to the structure. 15 The locking-rod moves up and down automatically with the bed, and the slightest turn of a nut serves to lock or release it.

I am aware that it is not new to attach metal plates to the sides of the wagon-frame 20 and to form journals for the operating-shaft in said plates, and I do not claim such construction as my invention.

What I claim is—

1. A dumping-wagon having a movable bed

pivotally supported upon elevating-arms, an 25 operating-shaft and multiple gear therefor for lifting said arms, and a locking-rod D, connecting the movable bed and frame, said shaft being supported in bearings formed in metal truss-plates B, which are bolted against 30 a vertical face of each frame, and said arms and locking-bar being also pivotally connected to said truss-plates, substantially in the manner and for the purpose set forth.

2. In a dumping-wagon having a movable 35 bed pivotally supported upon elevating-arms, the locking mechanism consisting of the rod D, having slots extending longitudinally from either end for a limited distance, pivotal pro- 40 jections from the wagon body and frame entering said slots, respectively, and means for binding the rod, substantially as set forth.

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

JAMES A. KLEES.

Witnesses:

ED. A. KELLY,  
CAMERON E. STRAUSS.