(No Model.)

C. E. PLUMMER.

DUMPING WAGON.

No. 561,432. Patented June 2, 1896.

Fig 1.

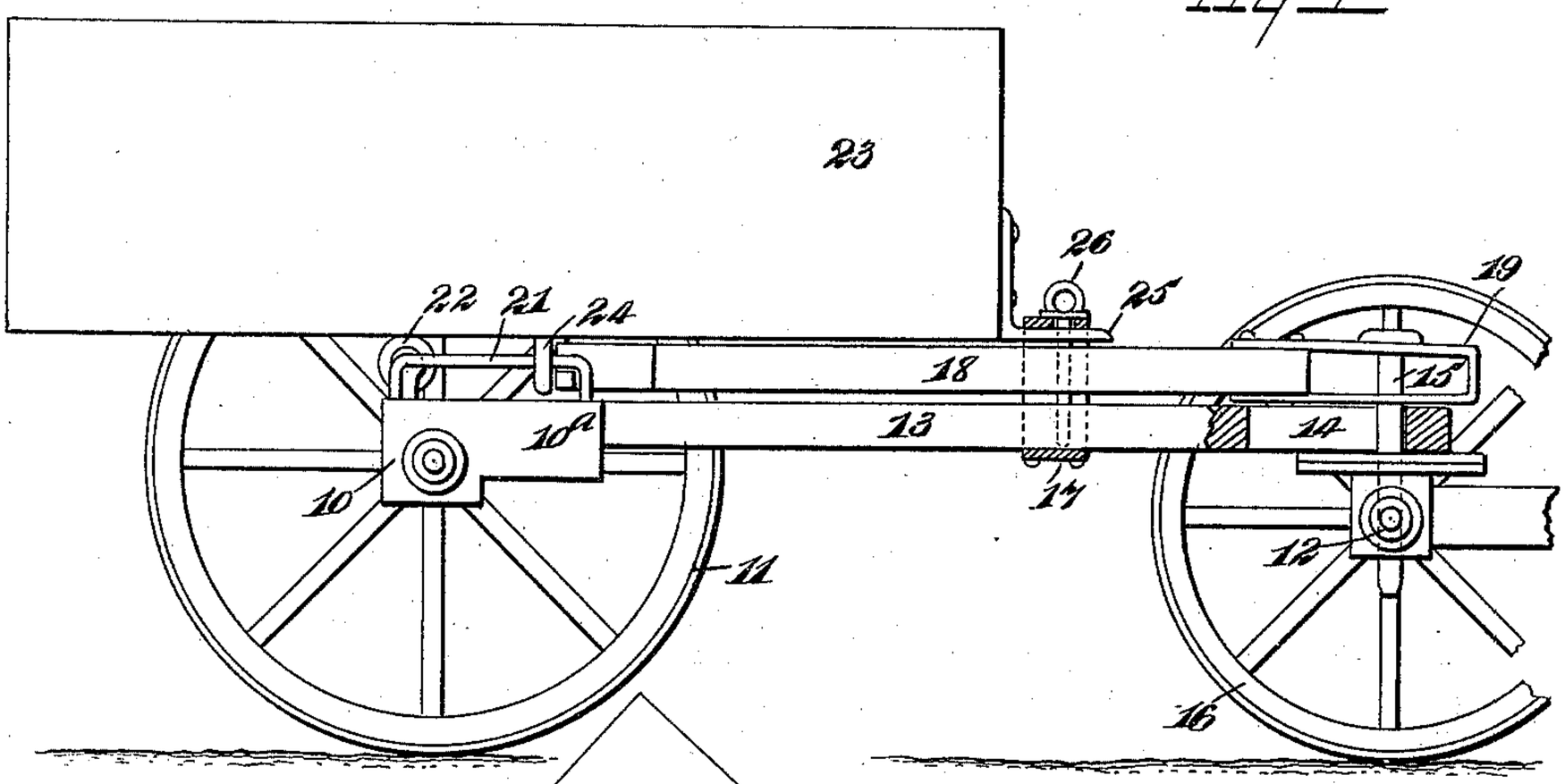


Fig 2.

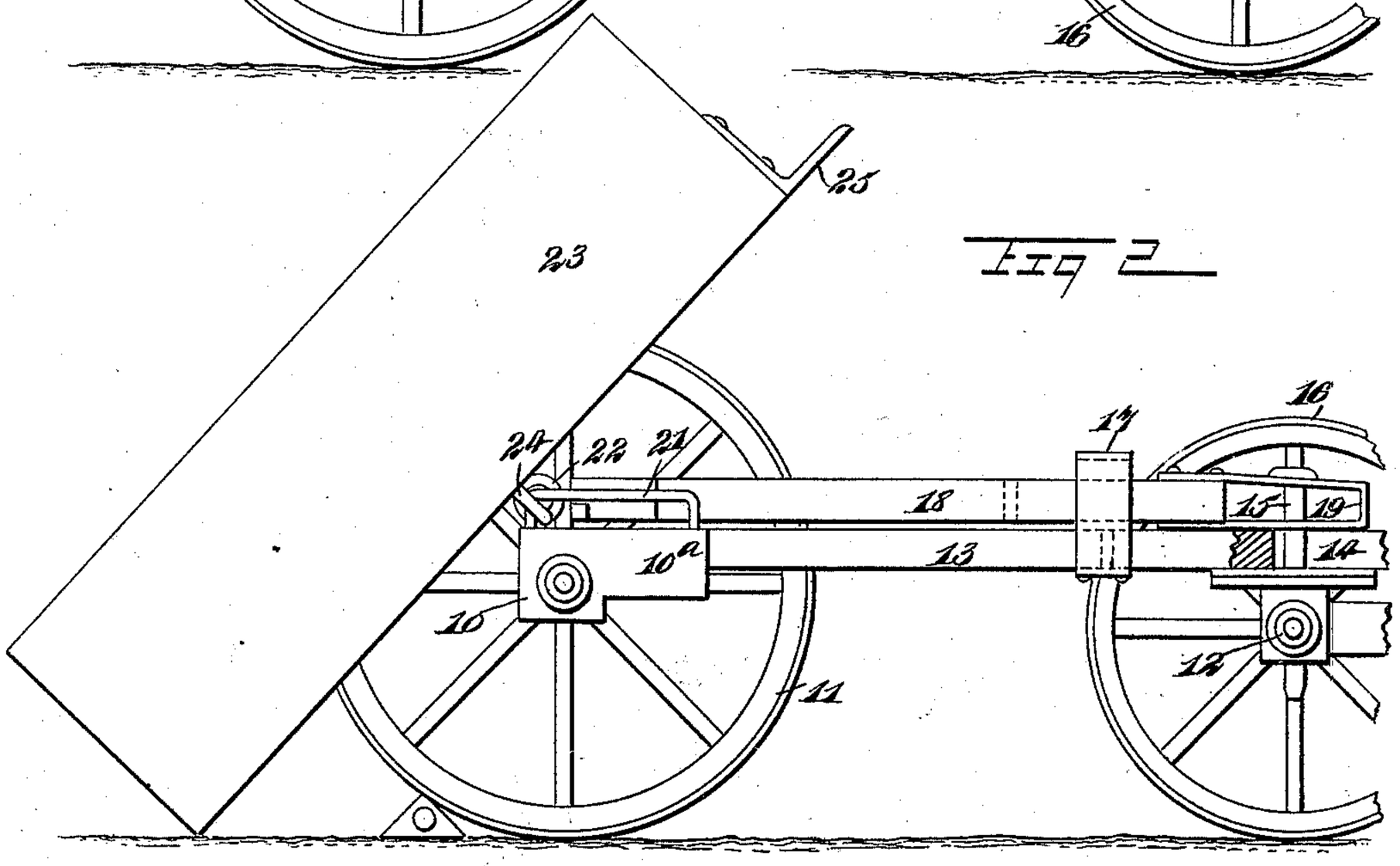
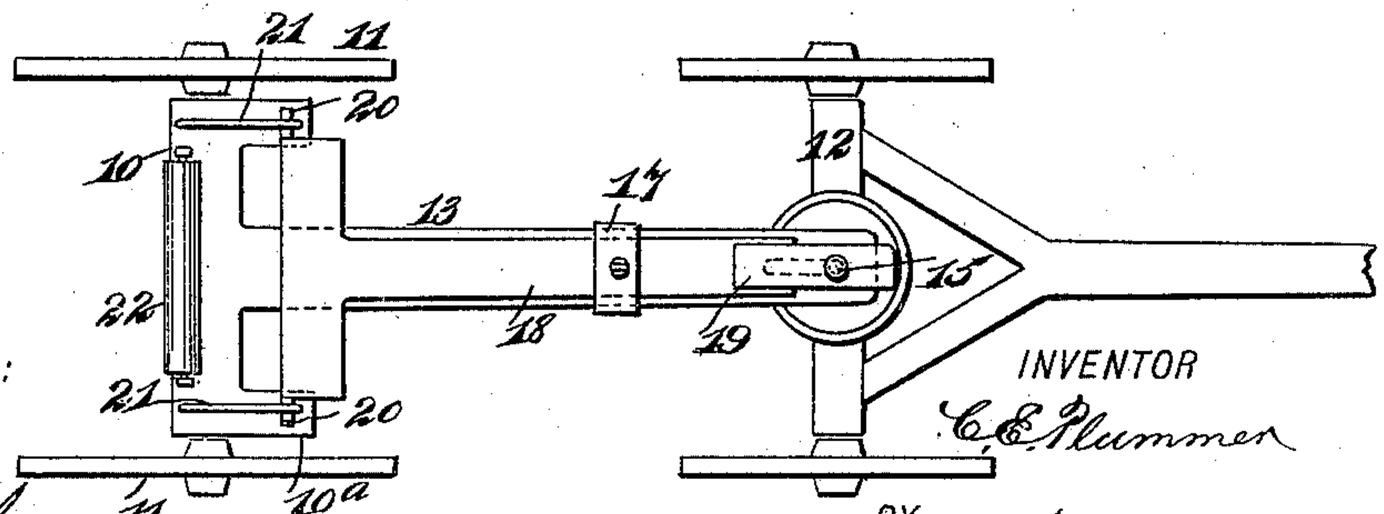


Fig 3.



WITNESSES:

H. Walker

J. Fred Acker.

INVENTOR

C. E. Plummer

BY

Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES E. PLUMMER, OF WINCHENDON, MASSACHUSETTS.

DUMPING-WAGON.

SPECIFICATION forming part of Letters Patent No. 561,432, dated June 2, 1896.

Application filed August 9, 1895. Serial No. 558,703. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. PLUMMER, of Winchendon, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Dumping-Wagons, of which the following is a full, clear, and exact description.

My invention relates to dumping-wagons; and the object of the invention is to so construct a dumping-wagon that while the body of the wagon is fulcrumed over the rear axle a portion of the load will be carried by the forward axle in a four-wheeled vehicle.

Another object of the invention is to so hang and mount the body of the vehicle on the running-gear thereof that no matter how heavy the load may be in the body the body may be carried from carrying to dumping position by the action of the team, thereby dispensing with the services of an attendant or attendants in the dumping operation.

Another object of the invention is to so mount the body of the wagon on the running-gear that when the body is dumped the entire vehicle may be drawn forward and the body carried away from the load.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a partial side elevation of the improved dumping-wagon, the wheels upon one side being removed and a portion of the reach and one of the fastening devices being in section. Fig. 2 is a view similar to Fig. 1, the body of the wagon being in dumping position; and Fig. 3 is a plan view of the running-gear of the wagon, the body having been removed.

In carrying out the invention the rear axle 10 is provided with the usual ground-wheels 11 and is connected with the forward axle 12 through the medium of a reach 13. The said reach at its forward end has a longitudinal slot 14 made therein, as shown in Figs. 1 and 2, and the king-bolt 15 is passed through this slot and into the axle. The wheels 16 of the forward axle are preferably smaller than those of the rear axle. The reach is also provided with a metal loop or yoke 17, located to the rear of its slotted extremity and somewhat adjacent thereto. This yoke or loop extends some distance above the reach, and the straight member of a horizontal T-shaped push-bar 18 is passed through this loop, being parallel with the reach, and preferably at the forward end of the push-bar a metallic strap 19 is horizontally secured, and the king-bolt 15 is passed through this strap, but has no lateral play therein, being simply loosely mounted in said strap.

The rear and head member of the push-bar, the longer forwardly-extending member being preferably the shank, is provided at its ends with pins 20, and these pins are held to slide in staple-like bearings 21, located upon the top of the rear axle and upon forward extensions 10^a of the said axle, as shown in Fig. 3, and at the rear central portion of the rear axle a roller 22 is journaled on the top thereof. The wagon-body 23 is provided with eyes 24 or their equivalents, placed slightly forward of the center, one at each side, and these eyes are held to travel on the staple-like bearings 21, as is shown in Figs. 1 and 2. The eyes, however, are back of the pins of the push-bar and are adapted to be engaged thereby.

At the front of the body 23 a horizontal lip 25 is secured in any approved manner, and the said lip is provided with an opening adapted to register with a corresponding opening in the top of the yoke 17 when the body is in carrying position, the lip being carried within the yoke, yet above the push-bar, when the body is in horizontal position, as illustrated in Fig. 1, and the body is held in this position by passing a pin 26 through the openings in the yoke and the lip of the body and likewise in the push-bar and reach.

It will be observed that while the major portion of the load is sustained by the rear axle a portion of it is borne by the forward axle, and that when the locking-pin 26 is in locking position the reach, push-bar, and body of the vehicle are held stationary, while the eyes of the body are considerably forward of the rear axle, and in proportion to the distance the eyes of the body are carried to the front will be the amount of weight to be sustained by the forward axle.

When the load is to be dumped, the pin 26 is removed and a block is placed behind the rear wheels, as shown in Fig. 2. The team is then backed, whereupon the forward axle will be carried rearward substantially the length of the slot 14 in the reach and the push-bar will be carried by the king-bolt in the same direction. This will cause the push-bar to force the sides of the body along the bearings over the rear axle, and the moment that these sides have reached a point on the bearings at which the weight of the load will be carried past the center the body will drop to dumping position, as illustrated in Fig. 2. The vehicle may now be drawn forward in order to free the body from contact with the material dumped.

It is evident from the foregoing description that the team will perform all of the work of dumping, and that an exceedingly heavy load may be dumped with much more ease than a light one under the old construction, the roller 22 over the rear axle serving to greatly facilitate the travel of the body over the running-gear.

By placing a portion of the load upon the forward wheels a team can draw from one-fourth to one-third more of a load than if the load was supported by the hind wheels alone.

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

1. In a vehicle, the combination, with an axle, a reach attached to the axle, and a body mounted to slide over the said axle, of a push-bar provided with portions for engaging the body and having sliding and guided movement in the reach, and locking devices adapted to secure the body to the push-bar and reach, as and for the purpose specified.

2. In a dumping-vehicle, the combination, with an axle having a forward extension near its ends, a reach secured to the axle, bearings attached to the axle and its extensions, and a body mounted to slide on the said bearings, of a push-bar having sliding and guided movement on the reach, being adapted in its rearward movement to carry the body to dumping position, a keeper secured to the reach, through which the push-bar passes and has sliding movement, a lip attached to the body, adapted likewise to be passed within the keeper, and a locking-pin adapted to be passed through the keeper, body-lip, reach and push-bar, as and for the purpose set forth.

3. In a dumping-vehicle, the combination, with a front and a rear axle, a reach attached to the rear axle, a king-bolt attached to the forward axle and passed through a slot in the said reach, and a keeper attached to the reach at the rear of its slot, of a body having sliding support on the rear axle and being capable of movement forward and rearward of the said axle, a push-bar having forward and rearward movement, engaging with the supports for the body and connected at its forward end to the said king-bolt, and means substantially as described, for locking the body, push-bar and reach together, as and for the purpose specified.

4. In a dumping-vehicle, the combination, with a forward and a rear axle, the rear axle being provided with forward extensions near each end, staple-like bearings located over the axle and its extensions, and a body provided with eyes held to travel on the said staple-like bearings, of a reach attached to the rear axle and provided with a slot at its forward end, a push-bar engaging with the eyes of the body, a king-bolt attached to the forward end of the push-bar, being passed through the slot of the reach into the forward axle, and a locking device, substantially as described, for temporarily connecting the body, push-bar and reach, as and for the purpose specified.

5. The combination of the front and rear axles, the body fulcrumed above the rear axle, the reach fixed to the rear axle and having a sliding connection with the front axle, a push-bar connected with the front axle and arranged to engage the body, and detachable connections between the front end of the body and the reach, all substantially as described, whereby when the body is released from the reach a backing of the front axle will positively set the body to position to dump by gravity, substantially as set forth.

6. The combination of the front and rear axles, the reach fixed to the rear axle and having a sliding connection with the front axle, a push-bar connected with the front axle and slidable therewith with respect to the rear axle, a keeper fixed to the reach, the body fulcrumed and slidable over the rear axle and having a portion fitting and movable into and out of the reach-keeper and also with portions for engagement by the push-bar, and a fastening by which the reach, keeper, push-bar and portion of the body fitted therein may be held together, all substantially as and for the purposes set forth.

7. In a dumping-vehicle, the combination of the front axle, the rear axle, the reach fixed to the rear axle and having at its front end a longitudinal slot, the push-bar fitted over the reach, the king-bolt passed through the slot in the reach and connecting the front axle and push-bar, the keeper fixed to the reach embracing the push-bar and adapted to receive a tongue on the body, staple-like bearings over the rear axle, the body sliding along said bearings and provided with a tongue entering the keeper, and a pin passed through said keeper, tongue and push-bar, all substantially as and for the purpose set forth.

CHARLES E. PLUMMER.

Witnesses:
LUCY W. MITCHELL,
FLORA A. FLAGG.