(No Model.)

R. STONE.

DUMPING CAR.

No. 298,912. Patented May 20, 1884.

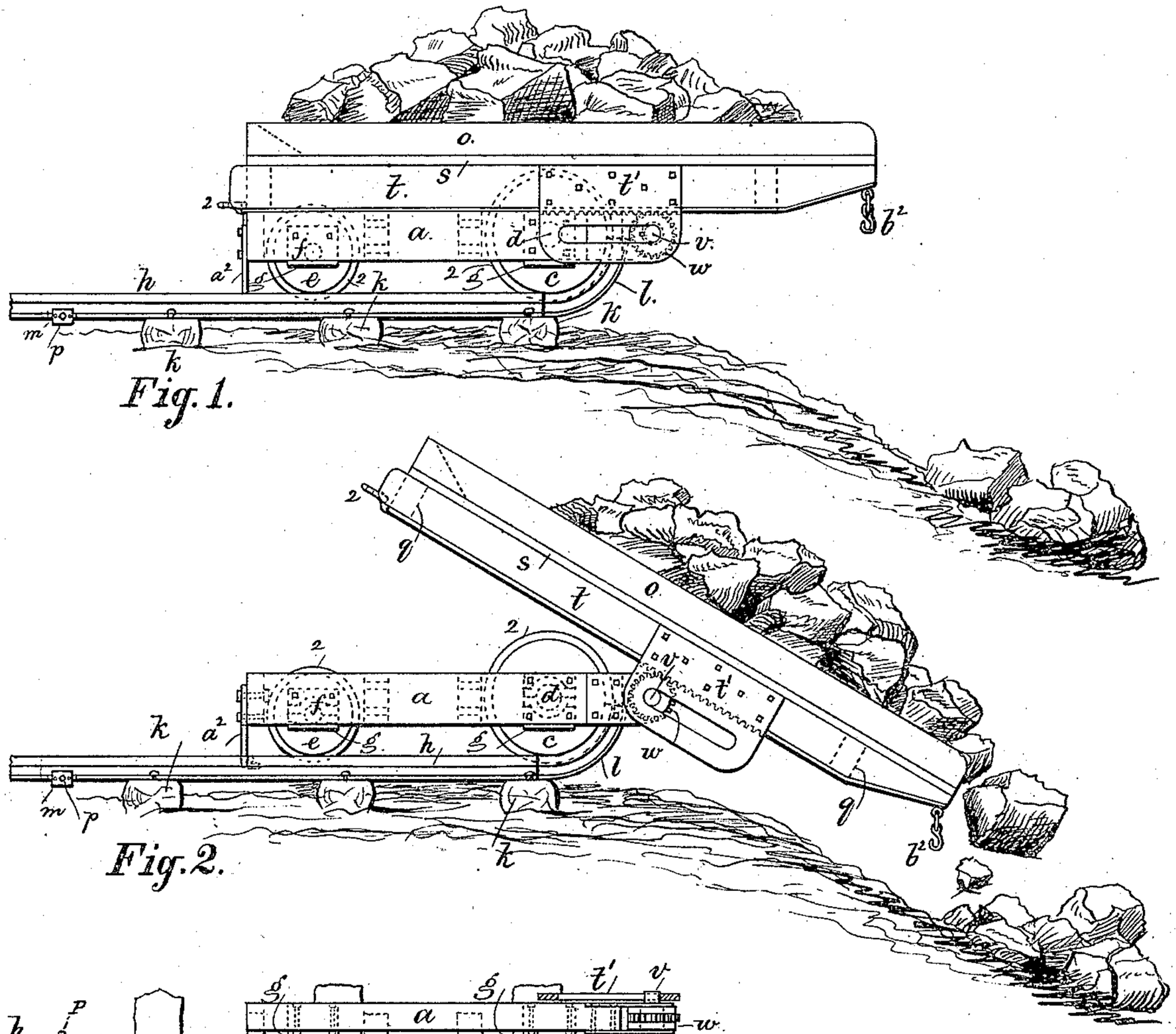

Fig. 1.

Fig. 2.

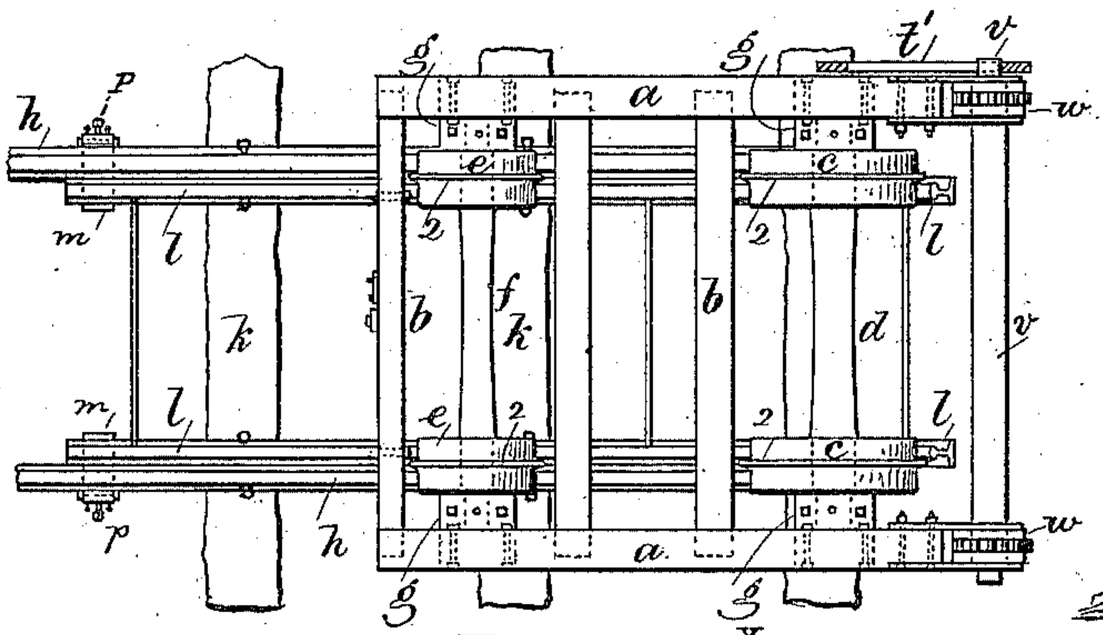

Fig. 3.

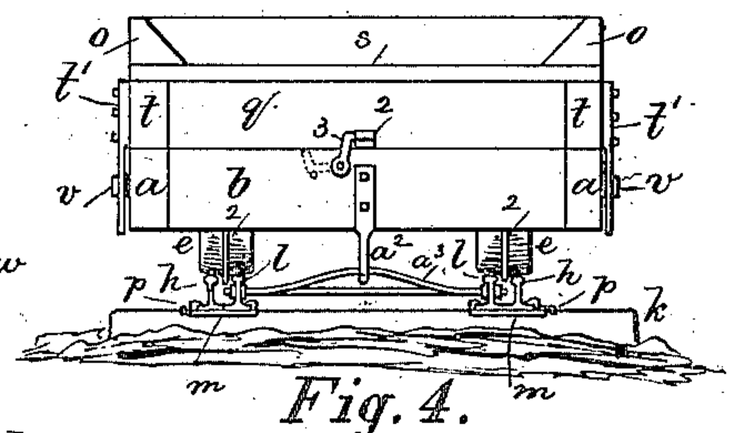

Fig. 4.

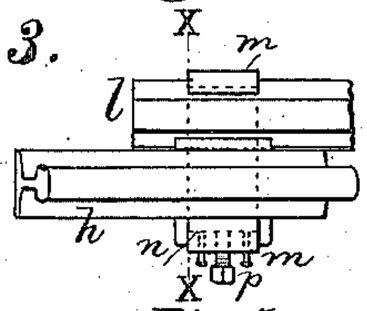

Fig. 5.

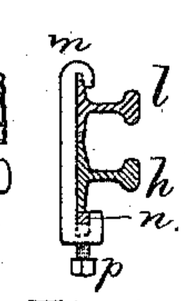

Fig. 6.

Witnesses;
Chas. H. Smith
J. Stahl

Inventor.
Roy Stone
for
Lemuel W. Serrell
Atty

UNITED STATES PATENT OFFICE.

ROY STONE, OF NEW YORK, N. Y.

DUMPING-CAR.

SPECIFICATION forming part of Letters Patent No. 298,912, dated May 20, 1884.

Application filed October 8, 1883. (No model.)

To all whom it may concern:

Be it known that I, ROY STONE, of the city and State of New York, have invented an Improvement in Dumping-Cars and Tracks for the same, of which the following is a specification.

The object of this invention is to cause the car to stop when it reaches the end of the track, and the contents to dump automatically by the momentum. With this object in view, I make the track extensible, so that the end section can be moved forward as the embankment is extended; and I make the car in two parts, the lower being a frame on wheels, the upper a chute or box that is held in place by slotted guide-plates, and there is a pair of wheels upon which the box rests. These wheels support nearly all the weight of the load. As soon as the wheels and frame are stopped at the end of the track, the momentum causes the loaded box to move and roll along upon the supporting-wheels, and the box tips and the contents slide off as soon as the center of gravity passes beyond the supporting-rollers.

In the drawings, Figure 1 is a side view of the car. Fig. 2 represents the car as the load is being dumped. Fig. 3 is a plan view of the track and car-frame. Fig. 4 is an elevation of the rear end of the car. Fig. 5 is a plan, and Fig. 6 a section, showing the clip for the extension-rails.

The truck-frame is made of side pieces or sills, *a a*, and cross-pieces *b*. The wheels *c* are preferably larger than the wheels *e*. There are bearings or boxes *g* for the axles *d* and *f*, and these are on the inner sides of the sills *a*, for supporting the frame upon the axles. The wheels *e* and *c* are made with treads at both sides of the central flanges, 2, for the purpose hereinafter described. Wheels of this character have been before used.

The track is of ordinary character, composed of the rails *h*, spiked to the cross-ties *k*. The extension-track is made of the rails *l*, connected together by one or more cross-ties near the end. The rails *l* are either closer together or farther apart than the rails *h*, so as to go between the said rails *h* or outside of them. I have shown the former. The ends of the rails *l* are curved to a quarter-circle of about the same radius as the wheels *c*, or provided with any other suitable stops. It will now be understood that the extension-rails *l* are moved forward from time to time as the embankment is filled, the spikes on the cross-ties *k* holding the rails in place, and being drawn from time to time as the extension-track is moved forward. Cross-ties are to be introduced under the extension-rails, and main rails added as soon as there is sufficient space for their reception. This dumping-car runs on the main rails, and when the car reaches the end portion of the track the wheels will rest upon the extension-track as well as upon the main track, and where the extension-track extends beyond the main track the inner treads of the wheels will run upon such extension-track and support the weight. The rails *h* and *l* may be clamped together by the clip *m*, Figs. 5 and 6, which passes under and is adapted to grasp both the rails *h* and *l*. Usually there will be a block of steel with teeth introduced at *n* between the rails to prevent slip, and there are screws at *p* to clamp the parts together.

The chute or body of the car is made of the timbers *t t* above the sills *a a*, and these are framed with the cross-pieces *q*. The floor *s* of the car is upon the timbers *t q*, and it will usually be provided with ledges *o o* at the sides and back to retain the materials placed upon the floor. In some cases there may be sides and a back, as in ordinary dump-cars. There are guide-plates *t'* bolted to the timbers *t* and passing down outside the side pieces, *a a*, and these are slotted for the reception of the ends of the cross-bar *v*, which also forms the axis of the rollers *w*, that are received by jaws at the forward ends of the side frames, *a a*. These rollers *w* are usually keyed to the axis, so as to revolve together. It is preferable to have these rollers *w* made with teeth around them, and to employ rails upon the under surfaces of the timbers *t*, with perforations or indentations for the teeth, so that the car-box will be rolled forward with uniformity at both sides as the rollers *w* are revolved. As the loaded car runs down the track by gravity or otherwise, the wheels are stoped at the end of the track, and

the truck-frame remains stationary, while the body is carried forward and tips upon the rollers *w*, the back end rising and the car-body sliding forward and downward until the bottom assumes such an inclination that the load is delivered by the joint action of the inclination and the momentum. The car-body is easily drawn back to its place upon the truck, because it is nearly balanced upon the rollers, and the body cannot become separated from the truck in consequence of the slotted side plates, *t'*, and the axle *v* of the wheels passing into the slots. A drag-bar may be provided beneath the car-box with a hook, b^2, at the end, and at the other or back end with a projection, 2, over which the hook 3 may be passed, so as to prevent the car-box tipping accidentally.

In order to hold the back end of the truck-frame and prevent the same lifting when the load is being dumped, I provide a hook, a^2, at the back end of the truck-frame, projecting down and running under a cross-bar, a^3, that is fastened to the extension-track at the proper place for the hook to engage therewith.

It will be apparent that the wheels, instead of being each cast with a central flange, may be made with a wheel or disk adjacent to the flanged wheel and on the same axle, and this second wheel will run on the extension-track, and may be provided with a flange or simply made as a cylinder, the flange of the other wheel serving as a guide, the same as when the wheel is cast with a central flange.

The extension-rails are adapted to use at the end of the track where a bank is being excavated and the cars loaded, because such extension-track can be moved along progressively as the excavation is made.

I claim as my invention—

1. The combination, with the car having wheels with central flanges, of the main track *h*, the extensible rails *l*, having stops at the ends, and the cross-ties for the same, substantially as set forth.

2. The combination, with the frame *a b*, and wheels *c e*, of the car-body *t q o*, the slotted guide-plates *t'*, the axle *v*, and the rollers *w w*, substantially as set forth.

3. The frame *a b* and wheels *c e*, having central flanges to the treads thereof, in combination with the body *t q*, and ledges or box *o*, the guide-plates *t'*, and the rollers *w w*, substantially as set forth.

4. The combination, with the car-truck having wheels with central flanges, of the sliding body resting upon the truck, the main track *h*, the extensible rails *l*, having stops at the ends, and the cross-ties for the same, substantially as set forth.

Signed by me this 1st day of October, A. D. 1883.

ROY STONE.

Witnesses:
GEO. T. PINCKNEY,
WILLIAM G. MOTT.