

No. 683,934.

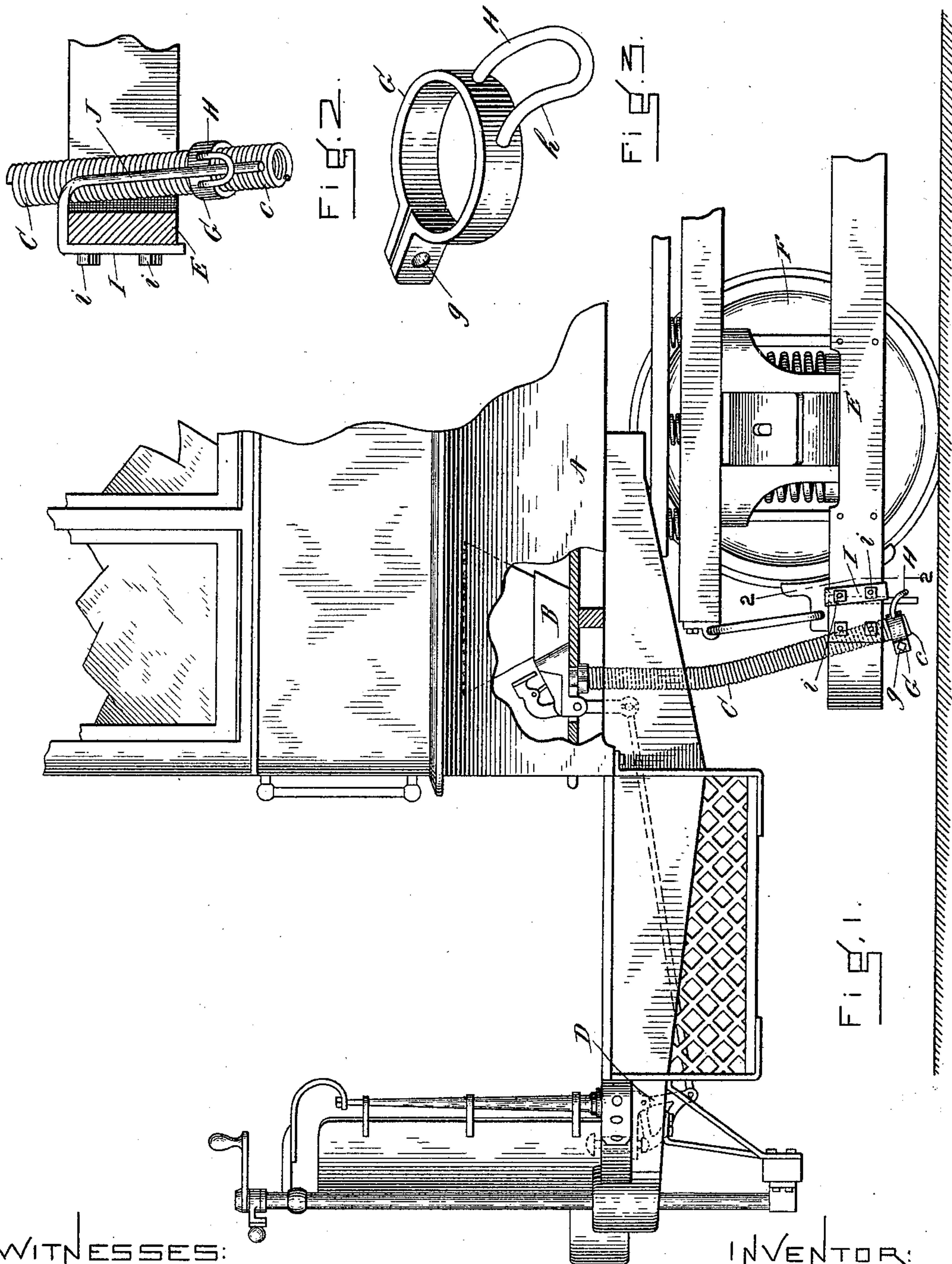
Patented Oct. 8, 1901.

A. W. HAM.

TRACK SANDING ATTACHMENT FOR DOUBLE TRUCK MOTOR CARS.

(Application filed June 14, 1901.)

(No Model.)



WITNESSES:

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# UNITED STATES PATENT OFFICE.

ALBERT W. HAM, OF LANSINGBURG, NEW YORK.

TRACK-SANDING ATTACHMENT FOR DOUBLE-TRUCK MOTOR-CARS.

SPECIFICATION forming part of Letters Patent No. 683,934, dated October 8, 1901.

Application filed June 14, 1901. Serial No. 64,496. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT W. HAM, a citizen of the United States, residing at Lansingburg, in the county of Rensselaer and State of New York, have invented a new and useful Improvement in Track-Sanding Attachments for Double-Truck Motor-Cars, of which the following is a specification.

Heretofore it has been found difficult, if not impossible, to apply mechanical track-sanding apparatus to that class of motor-cars which employ double trucks, because these trucks swivel under the car, and consequently in going around curves cause the ends of the car to project beyond the track on the outside of the curve and the middle part of the car-body to overhang the ground on the inside of the curve. The sand tube or bucket used for conveying sand from the sand-box to the track if secured to the car-body or some portion of the car structure stationary with relation to the car-body is of no use on curves with a double-truck car, because if the sand-tube is in such case properly placed to deliver sand to the rail on the straight track it will spill the same either inside or outside of the rail on curves.

My invention hereinbelow described provides an attachment by which the sand-delivering end of the sand-tube is made to follow the track irrespective of its position with relation to the car-body, so that at all times, whether the track be curved or straight, sand will be delivered to the rail in front of the driving-wheel, an essential provision for the reason that it is on curves that it is often found most desirable to sand the track and increase the tractive effect of the driving-wheel.

In the drawings hereto annexed, which illustrate an embodiment of my invention, Figure 1 is a side elevation of one end of a double-truck car, partially broken away to show the character of my improvement. Fig. 2 is a sectional detail taken along the line 2-2 of Fig. 1; and Fig. 3 is a detail in perspective, showing one of the attaching parts belonging to my improvement.

The sand-box B, which may be of any suitable construction, is located in the car-body A, usually inside the car under the longitudinal seat.

The sand-box-operating mechanism D is

located under the car-platform in such manner as to be under the control of the motor-man. The sand from the box B is delivered through a flexible sand-tube C, which hangs in the bottom of the sand-box and leads to a point as near as practicable to the car-rail.

E is part of the frame of a swivel-truck, such as is ordinarily seen on double-truck motor-cars, and F is one of the driving-wheels.

The tube C is necessarily flexible and should also be extensible within reasonable limits, and for this reason I prefer to use a spiral coil of steel wire for the tube, as this is both flexible and extensible and is more easily freed from clogging sand than any other kind of tube with which I am acquainted. The tube C is connected to the frame E by a sliding joint, so that as the distance between its point of connection and the point where it is secured to the bottom of the sand-box or to the car-floor increases or diminishes with the turn of the truck under the car the tube connection automatically adjusts itself to the changing situation. A simple and easily extensible sliding joint is constructed, as shown in the drawings, with a clamp G, secured to the delivery end *c* of the sand-tube C by a screw situated at *g*, and is provided with a bail H. This bail is preferably bent, as at *h*, Fig. 3. A rod J, formed integral with a flat bar portion I, is secured to the frame E by means of bolts *i* and points downward on the inside of the frame E. The bail H is slipped over the rod I and travels up and down thereon as the truck turns on its king-bolt. The curvature of most curves will be such that only the flexibility of the sand-tube C will be called upon as the tube adjusts itself to the varying positions of the track. If, however, an unusually sharp curve is made, so that the bail H reaches its upper limit of movement on the rod J before the truck has completed its swing, then that extensibility of the coiled-spring tube C is called into requisition, and it lengthens as much as is required. In no position, however, will the tube C be so far distorted that sand will fail to be delivered to the rail in front of the driving-wheel. The bail H will be found to travel much more freely and be less liable to bind when it is bent, as shown at *h*. Other forms of sliding joint may be applied to meet the requisitions



of this situation; but I believe that the construction above shown and described is to be recommended because of its cheapness and simplicity, as well as because of its efficiency.

5 What I claim, and desire to secure by Letters Patent, is—

1. In a track-sanding device for double-truck motor-cars, the combination of a sand-box secured to the car-body, and a coiled-  
10 spring sand-tube, leading from the box and connected to the truck-frame at a point forward of the driving-wheel by a sliding joint.

2. In a track-sanding device for double-truck motor-cars, the combination of a sand-  
15 box secured to the car-body, a flexible sand-tube leading from the box, a bail secured to

the lower end of the tube, and a rod secured to the truck-frame whereon the bail slides loosely.

3. In a track-sanding device for double- 20 truck motor-cars, the combination of a sand-box secured to the car-body, a flexible sand-tube leading from the box, a bent bail secured to the lower end of the tube, and a rod secured to the truck-frame whereon the bail 25 slides loosely.

Signed by me at Troy, New York, this 10th day of June, 1901.

ALBERT W. HAM.

Witnesses:

ARTHUR M. WIGHT,  
FRANCIS J. MOLLOY.