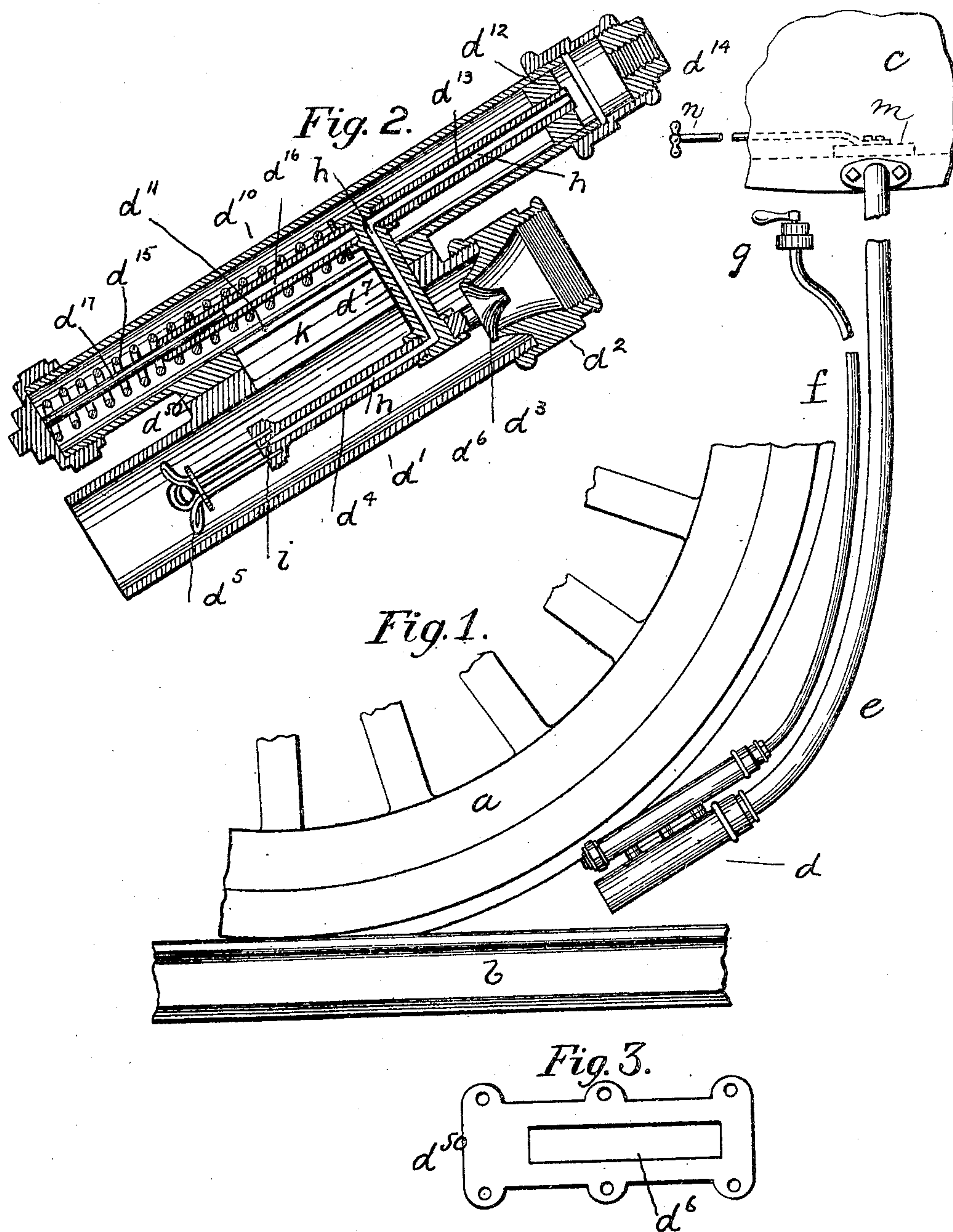


No. 798,283.

PATENTED AUG. 29, 1905.

J. E. HOLCOMB.  
TRACK SANDING DEVICE.  
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Witnesses:  
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# UNITED STATES PATENT OFFICE.

JOHN E. HOLCOMB, OF WINSTED, CONNECTICUT.

## TRACK-SANDING DEVICE.

No. 798,283.

Specification of Letters Patent.

Patented Aug. 29, 1905.

Application filed December 22, 1904. Serial No. 237,919.

*To all whom it may concern:*

Be it known that I, JOHN E. HOLCOMB, a citizen of the United States of America, residing at Winsted, in the county of Litchfield and State of Connecticut, have invented certain new and useful Improvements in Track-Sanding Devices, of which the following is a specification.

The object of my invention is to produce a device of the class specified having features of novelty and advantage.

In the drawings, Figure 1 is a view showing part of a car-wheel resting on a rail and the arrangement of the sanding device with respect thereto. Fig. 2 is a central section of my track-sanding apparatus on enlarged scale. Fig. 3 is a view of the connecting-flange.

Referring to the drawings, *a* denotes the car-wheel; *b*, the rail; *c*, the sand-box.

*d* denotes the sanding device as a whole; *e*, the sand-pipe leading to the said box; *f*, the air-pipe leading to the controlling-valve *g*, which is located convenient to the operator.

My sanding device comprises a sand-tube *d'*, connected to the sand-pipe *e*, as by the nut *d''*, and is provided with a valve *d'''* to control the fall of the sand. The valve-stem *d''''* carries at its lower end a cleaning device *d'''''*, which cleans the open end of the sand-tube. The

valve is operated by air-pressure in the following manner: The sand-tube and an air-cylinder *d''''''* are flanged, as at *d''''''''*, and fitted and secured together in any convenient manner, as by screws. The sand-tube and air-cylinder have registering apertures *d''''''''''* *d'''''''''''* included within the flanges, forming a connecting-passage *h* between them. The air-cylinder *d''''''* is provided with a piston *d''''''''*, whose

rod *d''''''''''* is joined to the valve-stem *d''''''* by the connection *d''''''''''*, which is of a size adapted to move freely in the passage *h*. The air-cylinder is connected with the air-pipe *f*, as by the nut *d''''''''*. The air-pressure is controlled by the valve *g*. It will be seen that when the

pressure is admitted to the piston the piston will move down, opening the valve *d'''* and carrying the cleaner *d'''''* down, so that it will clear the end of the tube for the passage of the sand. The piston and its rod, the connection *d''''''''''*, and the valve-stem *d''''''* have a continuous air-passage *h*, terminating in a restricted opening *i* in the valve-stem. This air-jet directs the sand onto the rail just in front of the wheel, but is not of sufficient size to relieve the pressure on the piston to such an extent as to interfere with its proper

operation. This vent also operates as a relief when the air is cut off and the piston returned to its normal position. In order to return the piston to its normal position after the air is cut off, I provide the spring *d''''''*, which surrounds an extension on the piston-rod, this extension being chambered, as at *d''''''''*, to receive a pin *d''''''''''*, which acts as a guide.

I prefer to join the piston-rod with the valve-stem by means of the **I** connection *d''''''*, (shown in Fig. 2,) into which the valve, the valve-stem, the piston-rod, and the piston-rod extension can be screwed, the **I** connection being cored out to form a part of the air-passage *h*.

The operation of the device is extremely simple and will readily be understood from an examination of the drawings and the above description.

A sanding device constructed in accordance with my invention has many features of advantage over the sanding devices now in use. In the first place I provide an automatically-operating means for cleaning the end of the sand-tube, which often becomes clogged, especially in cold weather and when there is snow. It will also be noted that the valve which controls the fall of the sand is but a short distance from the end of the tube, the sand-pipe being always full above the valve, thus insuring a quick delivery of the sand in cases of emergency. The air-jet directs the sand onto the rail immediately in front of the wheel, counteracting any tendency a side wind might have to blow the sand off of the rail. The arrangement for operating the valve is simple and positive in its action and insures a proper working of the device.

My track-sanding device can be used in connection with the ordinary sand-box, many of which are provided with a slide-valve, such as *m*, covering the outlet and operated by a handle *n*, which is placed conveniently near the car operator, and this valve can be used in connection with my air-operated valve or not, as desired.

I claim as my invention—

1. In a track-sanding device in combination, a sand-box, a normally open sand-tube leading from said box, a sand-valve in said tube at a distance from its end, means adapted for downward movement to clean the open end of said tube and operative as the valve is opened, and means for operating said cleaner.

2. In a track-sanding device a sand-box, a normally open sand-tube leading from said



box, a sand-valve in said tube at a distance from its end, and means adapted for downward movement to clean the open end of said tube and operative automatically as the valve is opened, substantially as described.

3. In a track-sanding device a sand-tube having a valve-seat near its lower end, a downwardly-opening sand-valve, a tube-cleaning device carried by said valve-stem below said valve, and means for moving said valve.

4. In a track-sanding device a sand-tube having a valve-seat, a downwardly-opening sand-valve, a tube-cleaner located in said tube and secured to the valve-stem below said valve, and means for moving said valve to carry said cleaner to the open end of said tube.

5. In a track-sanding device, the open-ended sand-tube, a sand-valve located near the lower end thereof, a cleaning device secured to said valve-stem below said valve, and means for operating said valve.

6. In a track-sanding device, the sand-tube, a valve located near the lower end of said tube, and an air-blast for directing the sand as it falls from the tube onto the track directly in front of the wheel.

7. In a track-sanding device the sand-pipe, a valve located near the lower end thereof, a cylinder secured to said sand-pipe, said cylinder and pipe having registering openings through their sides forming a communicating passage, a piston and piston-rod in said cylinder, connections between said piston-rod and the valve-stem, and means for actuating said piston.

8. In a track-sanding device the sand-pipe, a valve located near the lower end thereof, a cylinder secured to said sand-pipe, said cyl-

inder and pipe having registering openings through their sides forming a communicating passage, a piston and piston-rod in said cylinder, connections between said piston-rod and the valve-stem, means for actuating said piston, a guide for said piston-rod, and means for returning the parts to their normal position.

9. In a track-sanding device the sand-pipe, a valve located near the lower end thereof, a cylinder secured to said sand-pipe, said cylinder and pipe having registering openings through their sides forming a communicating passage, a piston and piston-rod in said cylinder, connections between said piston-rod and the valve-stem, means for actuating said piston, and a continuous air-passage from said piston to the lower end of the valve-stem.

10. A track-sanding device adapted to be secured to a sand-pipe, including a sand-tube and a cylinder secured together and having registering openings in their sides forming a communicating passage between the two, a valve in said sand-tube, a cleaner secured to the end of the valve-stem and located near the outlet-orifice of said tube, a piston and piston-rod in said cylinder, connections between said piston-rod and said valve-stem, connections between said cylinder and a controlling-valve, a guide for said piston-rod, and means to return the parts to their normal position.

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

JOHN E. HOLCOMB.

Witnesses:

H. E. HART,

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