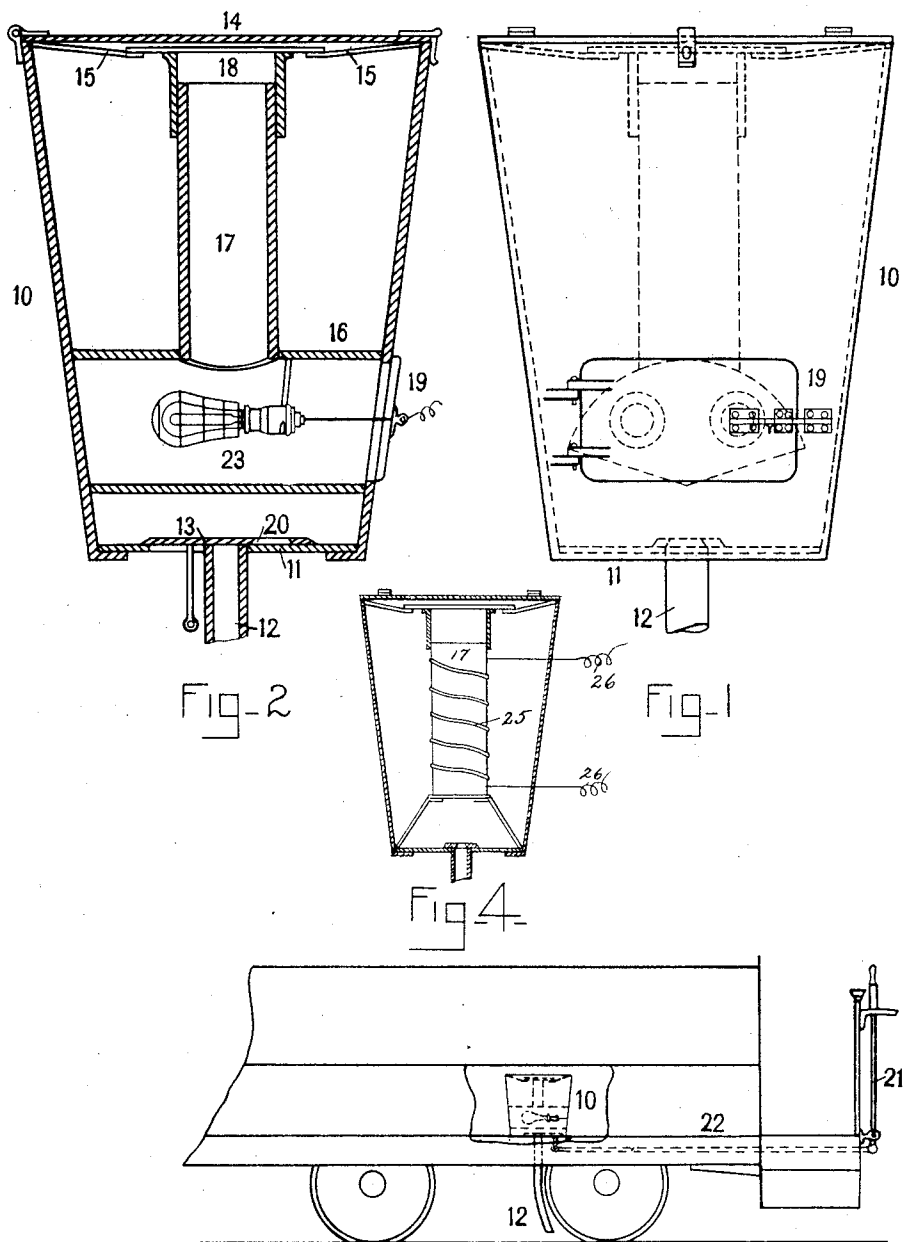


(No Model.)

L. E. PEASE.
ELECTRICALLY HEATED SAND BOX.

No. 475,703.

Patented May 24, 1892.



WITNESSES—

J. Edward Porter.
Charles O. Farrar.

Fig-3

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LEWIS EDWIN PEASE, OF CAMBRIDGE, MASSACHUSETTS.

ELECTRICALLY-HEATED SAND-BOX.

SPECIFICATION forming part of Letters Patent No. 475,703, dated May 24, 1892.

Application filed November 16, 1891. Serial No. 412,092. (No model.)

To all whom it may concern:

Be it known that I, LEWIS EDWIN PEASE, a citizen of the United States, residing at Cambridge, in the county of Middlesex and State of Massachusetts, have invented a new and useful Electric Sand-Box, of which the following is a specification.

My invention relates to an electric sand-box to be used in connection with the operating of electric railways and the like. It is designed to be used commonly as applied to an electric car; but it may be applied to sand-cars and the like operated by electricity.

My invention has for its object the production of an efficient electric sand-box under all conditions of atmosphere, and I accomplish these objects by rendering the sand fluent by an electric heat-generating apparatus.

Figure 1 represents the electric sand-box in elevation, and Fig. 2 is a central vertical sectional view of Fig. 1. Fig. 3 represents, upon a reduced scale, the sand-box as applied to a common four-wheel electric car, the car being shown in partial outline. Fig. 4 represents in partial central vertical section a different form of sand-box and electrical apparatus.

The sand receptacle or box 10, as represented by Figs 1, 2, and 3, is preferably a hollow inverted frustum made of any suitable material, such as galvanized iron or copper, and it is provided with the following: base 11, to which is attached the sand-outlet pipe 12 and which is provided with the sand-outlet slide 13, top or hinged sand-box cover 14, heater-pipe-hood supporter or braces 15, and the incandescent-light holder 16, to the upper portion of which is secured the heater-pipe 17, having the heating-pipe hood 18, and the hinged door 19, which opens through the outer case of the box. The sand-outlet slide 13 is provided with the sand-escape hole 20, having a relieving beveled edge, as shown, for permitting the free escape of the sand, and the slide is operated in a reciprocating manner by the employment of suitable mechanism, as represented by Fig. 3, which consists, mainly, of the operating-lever 21 (which may be manipulated by the car-driver) and the connecting-rod 22. The electric-light holder 16 is provided with the incandescent lights 23. These lights are designed to receive electric current from the same source of supply as the

electric-car motor of the car in which the sand-box is placed. It is preferred that the sand-box should be placed under the car-seats and that the sand-outlet pipe 12 should be as short and direct as possible, as shown in Fig. 3. For eight-wheel cars the sand-outlet pipe may be flexible, as the trucks of the eight-wheeled car being swiveled a flexible outlet-pipe is necessary, in order to insure the sanding of the track close to the wheel-contact with the rail.

The sand-box shown in Fig. 4 is provided with a pillar 17, which may be hollow and constitute a pipe supported in said box. A resistance-coil 25 is disposed on said pillar and provided with electric connections 26. This spiral resistance-coil on the pillar heats the sand and keeps it in fluent condition.

The operation of my device is as follows: The electric sand-box is located, as represented by Fig. 3, and the sand-outlet pipe is extended to a point directly over the rail and near the wheel-tread. By raising the sand-box cover sand, preferably dried sand, may be poured into the box until the space between the light-holder, heater-pipe, and the interior of the box is entirely filled with sand. Then by the use of the electric-heating apparatus sufficient heat may be applied to the sand to render it under all conditions of atmosphere fluent, and the operator by the use of the sand-outlet slide and its connected parts may thoroughly sand the rails, thereby lessening the wheel-slippage. It is essential, in order to insure the fluency of the sand, that it should be kept in a thoroughly-dry condition.

It is obvious that many modifications will be necessary of the sand-box and of the electric-heating apparatus to adapt the same to the various requirements relative to its application to electric-railway uses.

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

1. An electric sand-box comprising a box having a cover, a sand-pipe provided with a valve, mechanism for operating said valve, braces projecting from the top of the box, a hood supported on said braces, and a heating-pipe fitting into said hood, substantially as described.

2. The combination of a box for containing sand provided with a valved outlet-pipe, a

pillar supported within said box, and a resistance coil disposed on said pillar and provided with electric connections.

3. The combination of a box for containing
5 sand provided with a valved outlet-pipe, a detachable hood supported in said box near the top thereof, brackets within said box at or near the bottom thereof, a pillar supported on said brackets and engaging said hood, and

a resistance-coil disposed spirally on said pillar and provided with electric connections.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LEWIS EDWIN PEASE.

Witnesses:

J. EDWARD PORTER,
CHARLES O. FARRAR.