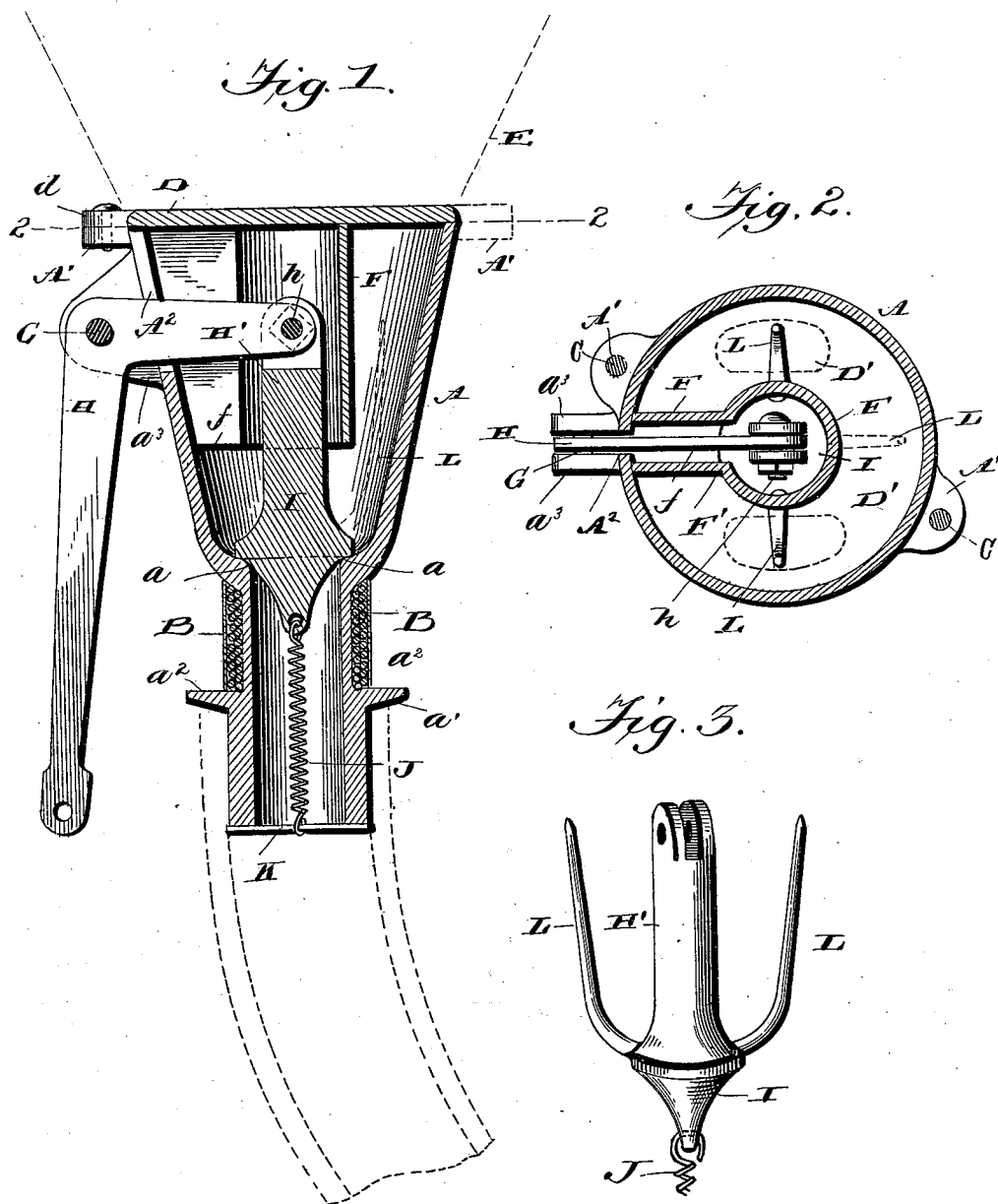


(No Model.)

D. MOYER.
SAND BOX.

No. 561,018.

Patented May 26, 1896.



witnesses:
L. C. Hills.
E. A. Bond

Inventor:
Daniel Moyer.
By E. B. Stocking, atty.

UNITED STATES PATENT OFFICE.

DANIEL MOYER, OF ALLENTOWN, PENNSYLVANIA.

SAND-BOX.

SPECIFICATION forming part of Letters Patent No. 561,018, dated May 26, 1896.

Application filed January 14, 1896. Serial No. 575,512. (No model.)

To all whom it may concern:

Be it known that I, DANIEL MOYER, a citizen of the United States, residing at Allentown, in the county of Lehigh, State of Pennsylvania, have invented certain new and useful Improvements in Sand-Boxes, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in sanding devices or boxes designed for use upon electric or other cars; and it has for its object, among others, to provide a simple and cheap device of this character in which the plunger will be protected from the sand, so as to avoid any danger of its becoming inoperative. The plunger and its agitating-pins are actuated as the lever is moved and the connection between the lever and the plunger is guarded from the sand and the moisture thereof. I employ a heater, preferably electric, for heating the sand and preventing its freezing and clogging.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a central vertical section through my improved sand-box. Fig. 2 is a horizontal section on the line 2 2 of Fig. 1, looking downward. Fig. 3 is a perspective view of the valve and plunger and its pins removed.

Like letters of reference indicate like parts throughout the several views.

Referring now to the details of the drawings by letter, A designates the body portion of the device, preferably of the shape shown, being substantially cylindrical in form with tapered walls, which at their lower ends are drawn inward to form the seat *a* for the valve. Beneath or below this seat is the tubular portion *a'*, which is provided with the annular shoulder or ledge *a''*, above which are arranged the coils B, designed to be connected with some suitable source of electricity to constitute an electric heater to heat the sand within the box and keep it from freezing or clogging, so as not to interfere with the proper working of the device. The upper end of the body portion

A is provided with the ears or lugs A', which receive the screws or bolts C, which pass through openings in similar ears or lugs *d* on the top or cover D, which is provided with openings D', (indicated by dotted lines in Fig. 2 to represent their relative position,) through which the sand from the hopper or receptacle E is designed to flow into the box, it being understood that the box A is designed to be secured up against the floor of the car in the usual manner. The top or cover has depending therefrom and into the box A the tubular casing F, open at its lower end and provided upon one side with the passage *f* between the flanges F', as seen best in Fig. 2.

The body portion A is provided with a vertical slot or passage A², as seen in Figs. 1 and 2, and upon each side thereof are the lugs *a*³, in which is supported the rod or pin G, upon which is pivoted the operating-lever H, the horizontal arm of which works through the slot in the wall of the body portion A, as shown, and is pivotally connected, as at *h*, with the upper end of the plunger H', the upper end of which is bifurcated, as shown in all of the views, the lower end of the plunger carrying, or being shaped to form, a valve I, which is adapted to be seated on the seat *a* at the lower end of the box or body portion, said plunger working in the casing F, depending from the under face of the cover, and thus protected and prevented from direct contact with the sand within the box.

J is a spring connected to the projection of the valve and at the other end to a rod or bar or other support K, held at the lower end of the tubular portion of the box.

L are pins carried by the valve and extending upward within the sand receptacle or box upon opposite sides of the plunger and casing, as shown, and serve to agitate the sand and prevent its caking. There may be more than two of these pins, if desired. An additional one is shown by dotted lines in Figs. 1 and 2.

The operation will be readily understood from the foregoing description when taken in connection with the annexed drawings. As the lever is moved, being designed to be operated by any suitable means, (not shown,) the horizontal arm thereof is raised and the plunger elevated sufficiently to move the

valve from its seat and allow the sand to flow through the lower portion of the box to the tracks. As soon as pressure is removed from the lever the spring returns the parts to their former position and shuts off the flow of sand. 5 The heater keeps the sand warm and dry, so that it will flow readily.

Modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages. 10

If desired, a rubber or other flexible hose can be attached to the lower end of the body portion, as indicated by dotted lines in Fig. 1, to convey sand to the track at any required 15 point.

What is claimed as new is—

1. The combination with the sand-box and the cover with a depending casing having flanges with a passage between them, of the 20 plunger working in said casing and carrying a valve, a spring acting on said valve, and a pivoted lever having one end pivotally connected with said plunger and working through the passage between the flanges of the casing, 25 as set forth.

2. The combination with the body portion and cap with openings, of the casing depending from said cap and having flanges with a passage between them, the plunger carrying a valve and vertically-disposed pins, the 30 spring attached to the lower end of said valve, and the lever pivotally mounted on the body portion and having an arm working through the said passage and pivotally connected with the plunger, as set forth. 35

3. In a sand-box, a plunger shaped at its lower end to form a valve and bifurcated at its upper end, and vertically-disposed pins extending upward from the valve portion, combined with the cap having depending tubular 40 casing and a bell-crank lever pivotally connected with the bifurcated end of the plunger and extending through a vertical slot in said casing substantially as shown and described.

In testimony whereof I affix my signature 45 in presence of two witnesses.

DANIEL MOYER.

Witnesses:

C. A. WEISS,
JAS. D. LEHR.