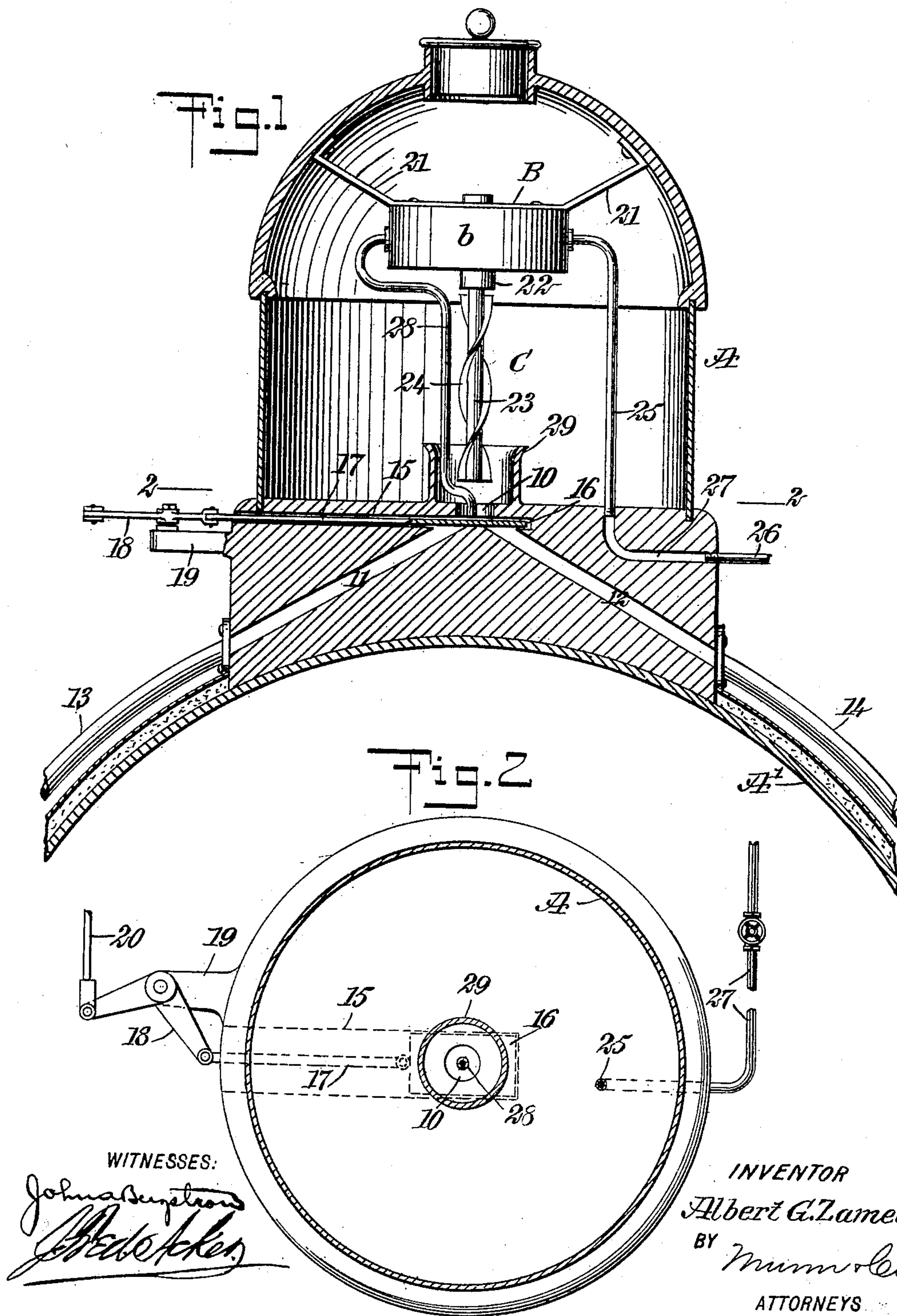


No. 824,461.

PATENTED JUNE 26, 1906.

A. G. ZAMEL.
TRACK SANDING DEVICE.
APPLICATION FILED MAR. 30, 1906.



UNITED STATES PATENT OFFICE.

ALBERT G. ZAMEL, OF CHICAGO, ILLINOIS.

TRACK-SANDING DEVICE.

No. 824,461.

Specification of Letters Patent.

Patented June 26, 1906.

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To all whom it may concern:

Be it known that I, ALBERT G. ZAMEL, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Track-Sanding Device, of which the following is a full, clear, and exact description.

The purpose of the invention is to provide a track-sanding device wherein through the medium of compressed air under the control of the engineer or fireman in the cab the sand in the sand-box will be loosened at the time it is needed, thus insuring the desired flow to the rails of the track, and also to provide means whereby exhaust-air will be conducted to the delivery-passages from the said sand-box, further insuring a quick and constant supply of sand.

Another purpose of the invention is to provide a mechanism for accomplishing the foregoing results which will be simple, economic, and reliable in action, and which can be readily applied to the sand-box of any locomotive.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a central vertical section through the sand-box of a locomotive and a side elevation of the applied agitating mechanism; and Fig. 2 is a horizontal section through the sand-box, taken practically on the line 2 2 of Fig. 1.

A represents the sand-box of a locomotive having a central outlet 10 in its bottom and channels 11 and 12, which lead from the said outlet through the base of the sand-box in opposite directions to opposite sides of the boiler A', where said channels 11 and 12 connect with conducting-pipes 13 and 14, lying outside of the boiler and which carry the sand to the rails. A horizontal chamber 15 is made in one side of the base of the sand-box, extending above the junction of the channels 11 and 12 with the outlet 10 and below said outlet, as is particularly shown in Fig. 1, and the said parts of the channels 11 and 12 and the outlet-opening 10 are normally closed by a slide-valve 16, operating

in said chamber 15 and having a stem 17 attached thereto, which leads out from said chamber to a pivotal connection with an elbow-lever 18, suitably mounted on a bracket 19, extending from or attached to the outer face of the base of the sand-box. A rod 20 is attached to the lever 18, and this rod is carried into the engineer's cab, whereby the engineer or the fireman can readily operate the valve 16 to open or close the outlet of the sand-box.

An air-motor B is suspended usually in the dome of the sand-box by brackets 21, secured to its casing b, and a drive-shaft 22 extends through the central portion of the casing and is attached at its lower end to a rod or tube 23, which extends down over the outlet 10 and is provided with fins 24, preferably spiral fins, as illustrated. This rod or tube 23 and its fins 24 constitute an agitating device C, operated by the aforesaid motor B for the purpose of loosening the sand in the box and insuring it running free to and out through the outlet 10. Air-supply pipes 25 and 26, connected by a channel 27 in the base of the sand-box, are led from any source of compressed-air supply—from the cab, for example—to the motor, and an exhaust-pipe 28 is carried from the motor and down into the outlet 10, so that the said exhaust of air serves to drive the sand through the channels 11 and 12 and likewise also tends in a measure to disturb the sand in the box. Ordinarily a collar 29 is constructed around the outlet-opening 10, so as to augment the action of the agitating device C and prevent masses or clods of sand passing to the outlet 10 to close the same.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a track-sanding device, a sand-box and an air-motor supported therein, means for supplying air to the motor, an agitating device located over the outlet of the sand-box, a driving connection between the said motor and the agitating device, and an exhaust-conductor led from the motor to the outlet of the sand-box and coöperating with the agitating device.

2. In a track-sanding device, the combination with the sand-box having a central outlet-opening and diverging outlet-channels connected with the said outlet-opening, of an air-motor, supports for the same within the sand-box, means for supplying air to the mo-

tor and exhausting air therefrom, and an
agitating device, consisting of a perpendicu-
lar rod attached to the drive-shaft of the
motor, and fins extending exteriorly from
5 the said rod, the said agitating device being
located over the outlet of the sand-box.

3. In a track-sanding device, the combina-
tion with a sand-box having an outlet-open-
ing at the central portion of its bottom, di-
10 verging outlet-channels connected with said
opening, and an exteriorly-operated valve
for controlling the outlet-opening and the
outlet-channels where they connect with said
opening, of an air-motor suspended within
15 the dome of the sand-box, a vertical shaft
extending down from the drive-shaft of the

motor over the outlet-opening, spiral fins
exteriorly located on the said shaft, a collar
surrounding the said outlet-opening for the
sand-box, into which the lower end of the 20
said shaft from the motor extends, and an
exhaust-pipe extending from the said motor
to the outlet-opening, terminating at a point
above the controlling-valve for the opening,
as described. 25

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

ALBERT G. ZAMEL.

Witnesses:

J. W. JEPSON,
ALEX MCGARY.