

(No Model.)

J. B. COLLIN.

SANDING DEVICE FOR LOCOMOTIVES.

No. 272,414.

Patented Feb. 20, 1883.

Fig 1.

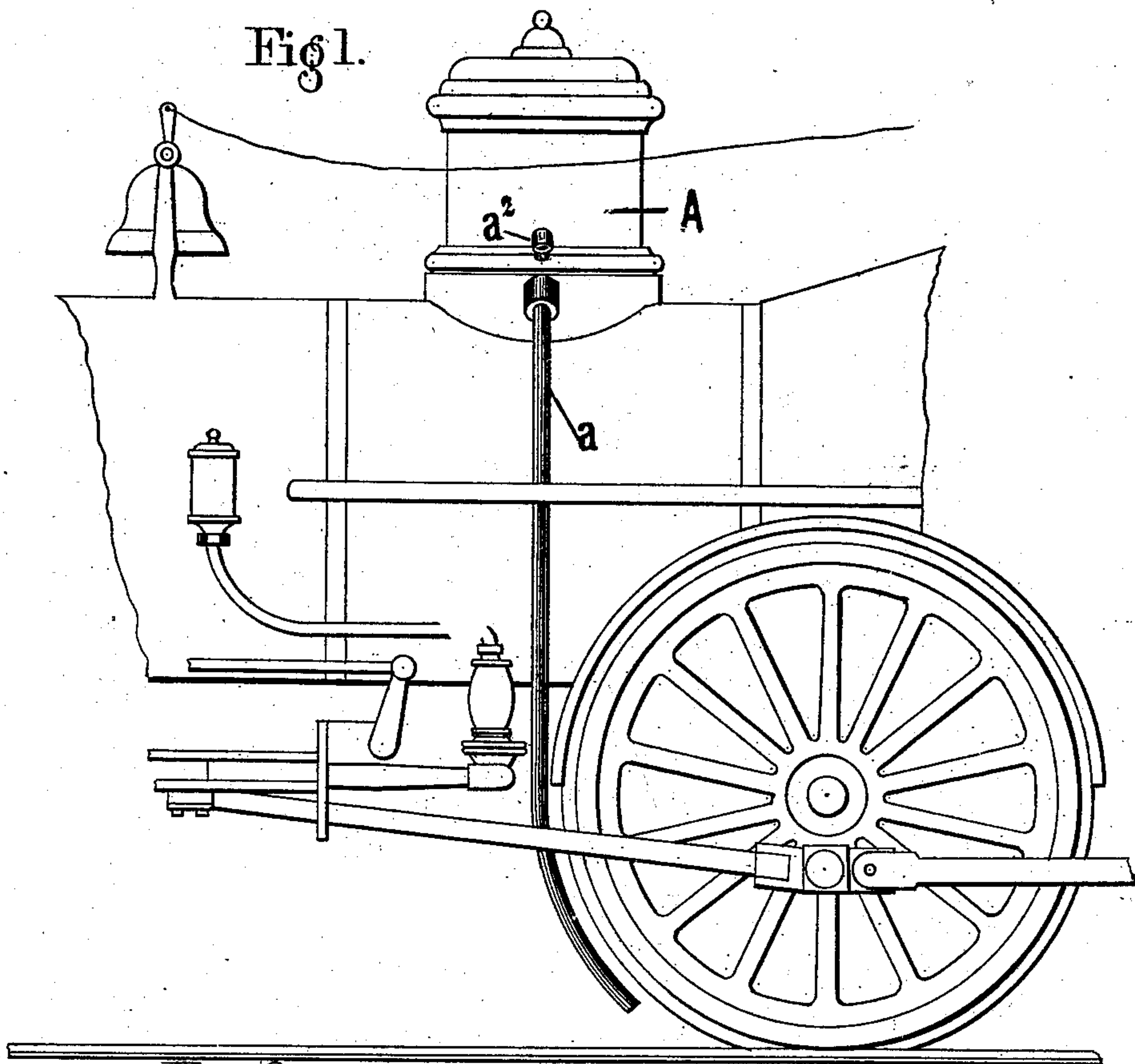
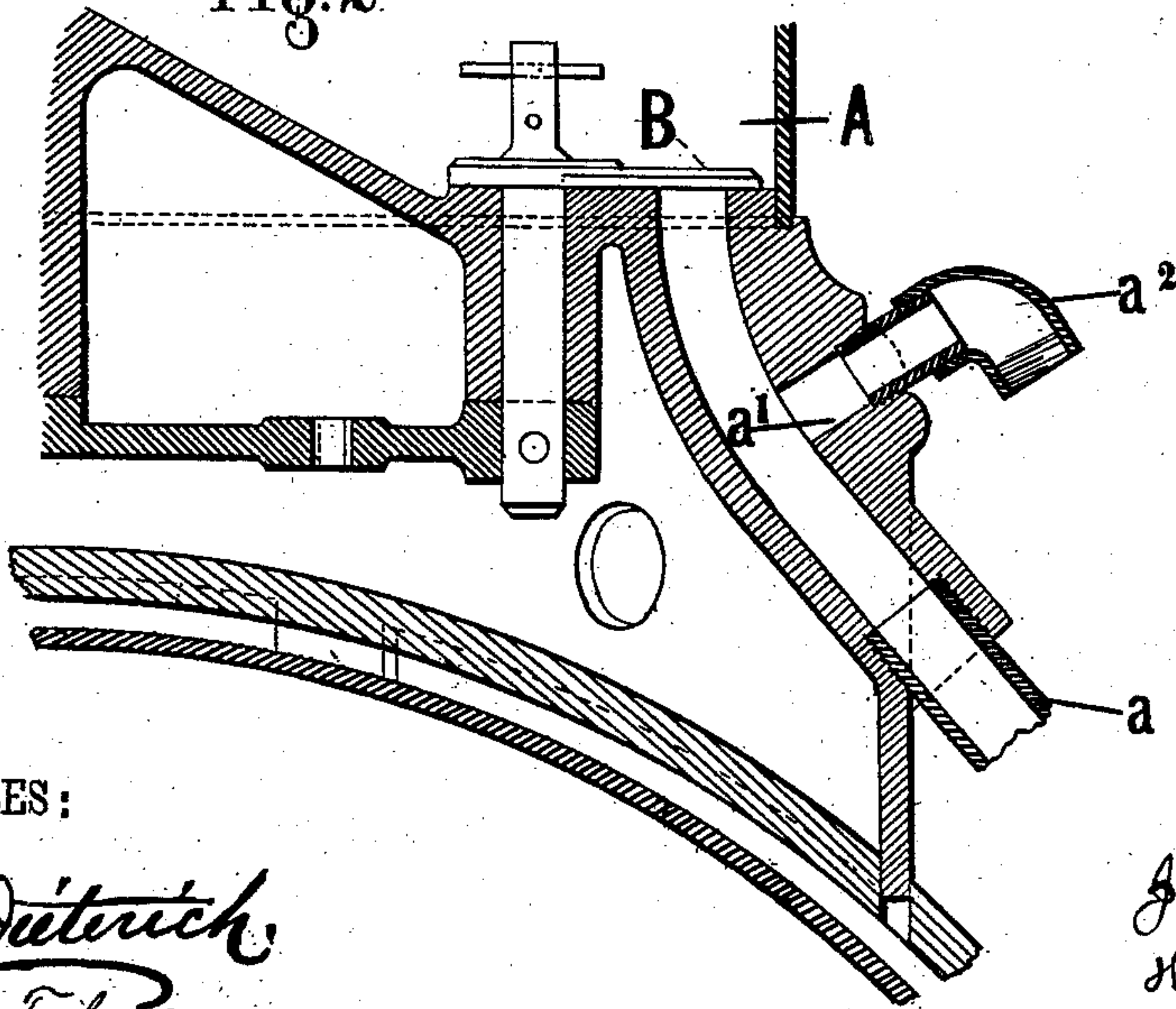


Fig. 2.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOHN B. COLLIN, OF ALTOONA, PENNSYLVANIA.

## SANDING DEVICE FOR LOCOMOTIVES.

SPECIFICATION forming part of Letters Patent No. 272,414, dated February 20, 1883.

Application filed January 4, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN B. COLLIN, of Altoona, county of Blair, and State of Pennsylvania, have invented new and useful Improvements in Sanding Devices for Locomotives; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention is an improved method of keeping the sand-pipes of locomotive-engines in a dry condition, so that clogging from the accumulation of moisture is effectually prevented; and its novelty consists in causing an air-current from the atmosphere to flow constantly through the pipes either in one direction or the other.

It consists, also, in the combination, with the sand-pipe of ordinary construction, of an opening at or near the source of sand-supply, communicating with the atmosphere, as will be fully described hereinafter.

In the drawings, Figure 1 represents a partial side view of a locomotive having my invention applied thereto, and Fig. 2 an enlarged sectional view of the upper end of the sand-pipe and the adjacent parts.

To enable others skilled in the art to understand my method and to carry it practically into effect, I will proceed to describe the same fully, in connection with the proper apparatus for practicing the same.

A general statement of my method may be made as follows: An air-current from the atmosphere is caused to flow constantly through the sand-pipe, either by the motion of the engine or by the action of heat. The following construction is employed to carry this method practically into effect:

A represents the sand-box, of the usual well-known or any other proper construction, which is located in any convenient position on top of the boiler, and provided upon each side with one or more delivery-pipes,  $a$ , leading to points directly in front of the driving-wheels, in the manner well understood.

$a'$  represents an opening into the atmosphere

through the side of the pipe, near its upper end, which is protected against the entrance of rain by a short bent pipe,  $a^2$ , as shown.

B represents a valve, of any suitable construction, in the sand-box, by means of which the delivery of sand to the pipes is controlled, in the manner well understood.

The operation is substantially as follows: By means of the opening through the side of the pipe into the atmosphere an air current is caused to flow constantly through the same, whether the engine is at rest or in motion. When the engine is at rest the heat from the boiler warms the pipes sufficiently to cause a current of air to pass through the pipes, the same entering at the lower opening and passing out of the upper. When the engine is in motion in a forward direction the bent end of the pipe is drawn through the air in such manner as to exhaust the air therefrom, and the current consequently flows in a downward direction. When the engine is in motion in a backward direction the bent end of the pipe is forced through the air in such manner as to take in the air, and the current consequently flows in an upward direction.

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

1. The described method of keeping the sand-pipes of locomotive-engines in a dry condition, consisting essentially in causing an air-current from the atmosphere to flow constantly through them, substantially as described.

2. In combination with a sand-pipe of ordinary construction, an opening into the atmosphere at or near the source of sand-supply, substantially as described.

3. The pipe  $a$ , with opening  $a'$  and protecting-pipe  $a^2$ , as described.

This specification signed and witnessed this 2d day of January, 1883.

JOHN B. COLLIN.

Witnesses:

CHARLES LINDSTROM,  
GEORGE R. HENDERSON.