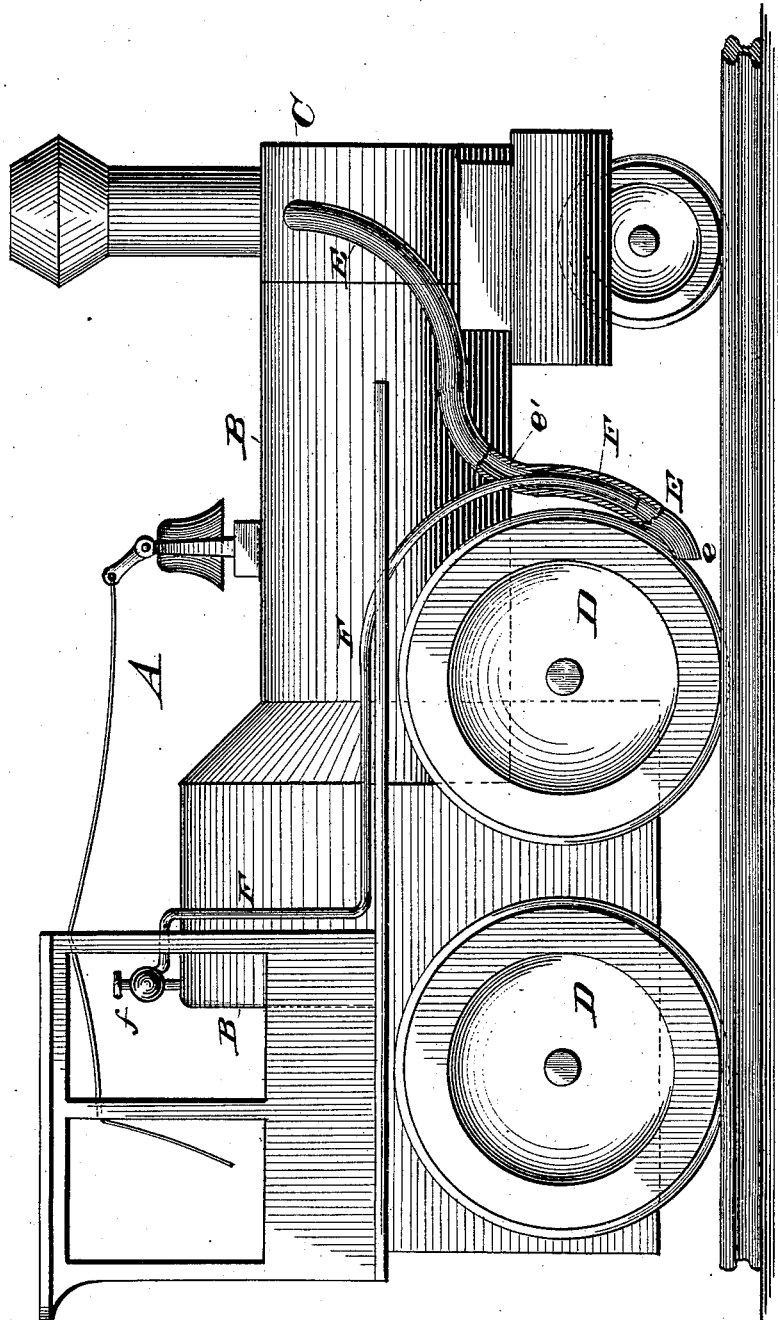


(No Model.)

M. L. JOHNSON.
LOCOMOTIVE ENGINE.

No. 304,651.

Patented Sept. 2, 1884.



WITNESSES

Philip LeMass
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UNITED STATES PATENT OFFICE.

MADISON L. JOHNSON, OF GALENA, ILLINOIS.

LOCOMOTIVE-ENGINE.

SPECIFICATION forming part of Letters Patent No. 304,651, dated September 2, 1884.

Application filed May 10, 1884. (No model.)

To all whom it may concern:

Be it known that I, MADISON L. JOHNSON, a citizen of the United States, residing at Galena, in the county of Jo Daviess and State of Illinois, have invented certain new and useful Improvements in Locomotive - Engines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, and to letters or figures of reference marked thereon, which forms a part of this specification.

The figure of the drawing is a representation of a side view of an engine, showing my improvement attached.

This invention has relation to improvements in devices for preventing locomotive drive-wheels from slipping or spinning; and it consists, in connection with a locomotive-engine, of the construction and novel arrangement of devices, as will be hereinafter more fully set forth, and particularly pointed out in the claim appended.

In the accompanying drawing, A represents a locomotive-engine, of which B is the boiler, C the smoke-box, and D D the driving-wheels.

E is a pipe which is inserted in the upper or other proper part of the smoke-box C, and, running to the rear, curves outward and downward to the vicinity of the lower part of the driving-wheel D. The exit *e* of said pipe is so constructed and placed in regard to the wheel that when the blast is in operation the particles of smoke and other matters from the smoke-box are driven out of the said exit and forced against the surface of the tire, whence they are deflected between the said tire and the rail.

e' is a proper bend in the pipe E, for the insertion of the steam-pipe.

F is the steam-pipe, rising from the dome or other proper part of the boiler B, and controlled by the valve *f*. The pipe F runs forward, and, curving outward and downward, enters the smoke-pipe at the bend *e'*, where, in conjunction with said pipe, it forms a blower, being of much less diameter than the pipe E.

The operation of the apparatus is as follows: When the wheels are found to be slipping, the engineer opens the valve *f*, admitting a jet of steam into the pipe E. Then, of course, the particles of smoke and other matters are drawn from the smoke-box C and forced upon the tires and between the tires and the rails.

This apparatus obviates the use of sand.

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

The combination, with a locomotive-engine, of the pipe E, constructed as shown, leading from the smoke-box downwardly and rearwardly, adjacent to the drive-wheels and track-rails, and the steam-pipe F, leading from the boiler forwardly and rearwardly through the lateral opening *e'* of the pipe F to near its discharge end, whereby the particles of combustion may be driven by a blast of steam against the rails and drive-wheels of an engine, substantially as and for the purposes specified.

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

MADISON L. JOHNSON.

Witnesses:

EDWD. L. BEDFORD,
WM. W. WAGDIN.