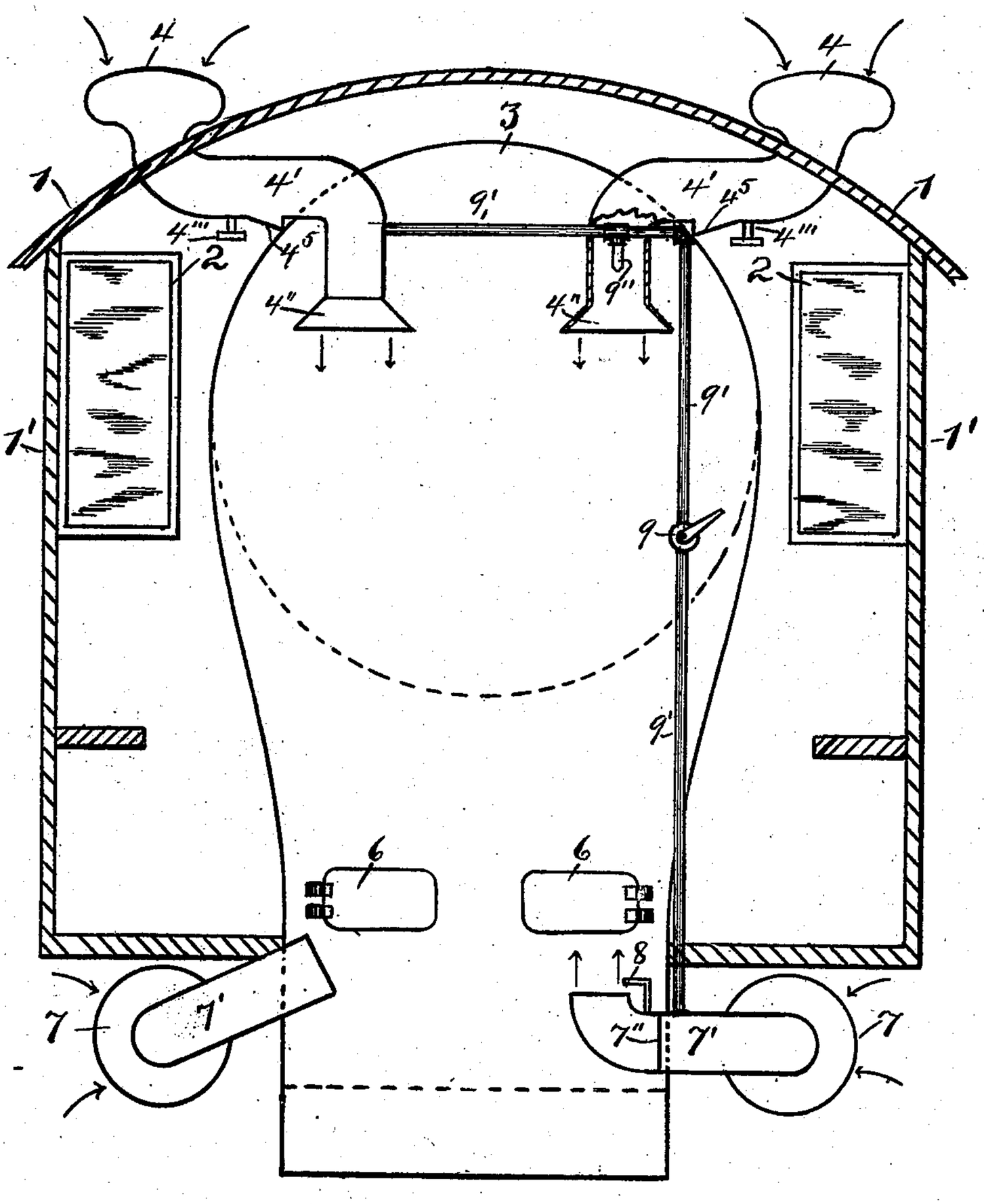
No. 867,701. PATENTED OCT. 8, 1907.

R. BURNS.

VENTILATOR FOR LOCOMOTIVE CABS.

APPLICATION FILED JAN. 10, 1906.



Witnesses.
J. L. MacCullough
A. A. Newton

Inventor:
Robert Burns:
By A. M. Brown
his Atty

UNITED STATES PATENT OFFICE.

ROBERT BURNS, OF RENSSELAER, NEW YORK.

VENTILATOR FOR LOCOMOTIVE-CABS.

No. 867,701. Specification of Letters Patent. Patented Oct. 8, 1907.

Application filed January 10, 1906. Serial No. 295,466.

To all whom it may concern:

Be it known that I, ROBERT BURNS, a citizen of the United States, residing at Rensselaer, in the county of Rensselaer and State of New York, have invented new and useful Ventilators for Locomotive-Cabs, of which the following is a specification, reference being had to the accompanying drawing, forming part thereof.

The object of my invention is to provide a locomotive cab ventilator.

The figure is a cross section of a locomotive cab showing my ventilators in operative position.

The numeral —1— shows the roof of the cab and —1′— the sides thereof while —2— shows the windows in the front end of the cab.

—3— shows the boiler head resting inside the cab and the furnace box with its fire doors shown at —6—. The trimmings for the boiler are omitted.

—4— shows the upper ventilators having bell shaped mouths projecting forward toward the head of the locomotive so as to catch the blast of air caused by the forward motion of the locomotive as it moves forward along the track, the motion of the locomotive compelling the air to flow forcibly through pipe —4′— and out of the bell mouth —4″— downward along the boiler front and through the cab, while ventilators —7′— force the air up from the vicinity below the fire doors through the mouths —7— and pipes —7′— into the cab where it meets the blast from the upper ventilators and forces the great heat from the boiler and the furnaces out at the rear opening of the cab and maintains a reasonably cool and pure atmosphere in the cab in which the fireman can work with comparative comfort, while at the present time such workmen are often overcome by the great heat in the cabs especially in hot weather.

At 4‴— will be seen the handle to a damper in the ventilator —4′— and one at —8— in ventilator —7′— by which the admission of air may be more or less controlled at will.

At —4⁵— will be seen a pocket formed in the ventilator pipe for the purpose of catching more or less of the sparks and cinders from the locomotive and retain them therein thus preventing them from entering the cab.

—7″— shows the elbow on the pipe —7′— and is movably set in place so its mouth may set at any angle desired so as to direct its stream of air in any desired direction and the same movement is had in pipe —7′— set at an angle under the left hand side of the cab.

At —9′— is an air pipe in connection with a supply of air under pressure by means of the valve —9— the said pipe passing into or in connection with the pipes of the ventilators and as seen at —9″— a jet pipe is taken off the main pipe and its use is that when the locomotive is moving slowly or standing still by starting the air jet tips —9″— a current of air will be started and the cab be supplied with more or less fresh air. Heretofore when locomotives were fired with unventilated cabs the firemen were overcome with the intense heat and even their clothing is burned and destroyed.

The object of my invention is to remedy these disadvantages so that the firemen can have an atmosphere to work in in which they exist in reasonable comfort.

Having described my invention so that those skilled in the art may know how to make and use the same, what I claim and desire to secure by Letters Patent is—

1. In combination with the cab of a locomotive, a conduit having its open mouth fixed and set in the direction the locomotive is moving, said conduit passing into said cab, the exit end thereof terminating in said cab and in proximity to the rear end of the boiler and arranged so that the air is forced down said conduit and into the space in front of said boiler in said cab and having other conduits their open mouths being fixed and set in the direction the locomotive is moving, these conduits entering the cab at different angles to the first mentioned conduit and discharging their contents in the space in said cab at the rear end of said boiler and mixing the air from the first set of conduits and second set thereof so as to produce rapid moving and whirling currents in said cab in the rear of said boiler, that the intense heat in said cab may be carried away, substantially as described.

2. In combination with the practically open cab of a locomotive of a plurality of conduits having their open mouths set in the direction of the movement of the locomotive and to catch the air as the locomotive moves forward, said conduits entering the cab and discharging their contents therein at the rear of the end of the boiler and at different angles and so as to commingle said streams of air and produce a whirling motion in said currents, said air being practically unobstructed in making its escape from said cab, substantially as described.

3. In a locomotive cab a plurality of conduits having open mouths set facing the direction the locomotive is moving, the body of the conduits entering the cab and discharging their currents of air in the cab in the vicinity of the rear end of the furnace, some of the conduits discharging their currents of air at different angles and commingling them so as to produce a swirling movement to the atmosphere in the cab said cab being practically open for the unobstructed escape of said currents of air therefrom, substantially as described.

4. In a locomotive cab a plurality of conduits having their open mouths in the direction of the movement of the locomotive said conduits entering the cab and having their discharge ends set at different points in said cab and their discharge ends in the vicinity of the rear end of the boiler, said cab being practically open and presenting no practical obstruction to the escape of the air in said cab and arranged so that the conduits will

commingle their discharged air and produce a strong blast in said cab, all operating to force the heated atmosphere in said cab, and arising from the boiler and furnace, out of said cab, substantially as described.

5. In a locomotive cab a conduit having its mouth set to catch the air as the locomotive advances, said conduit entering the cab and its discharge end terminating in the vicinity of the rear end of the boiler in said cab and arranged to discharge its air in the open space in said cab that the heat may be forced away from the interior of said cab said cab being practically open and offering no practical obstruction to the escape of said heated air, substantially as described.

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

ROBERT BURNS.

Witnesses:
J. C. MACCULLOCH,
A. A. NEWTON.