L. LIMOGES.

SMOKE CONSUMER.

APPLICATION FILED SEPT. 30, 1909.

964,662. Patented July 19, 1910.

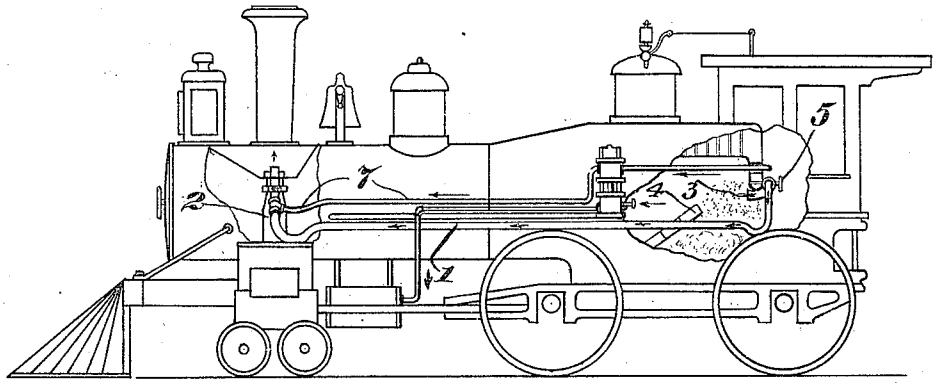

Fig. 1

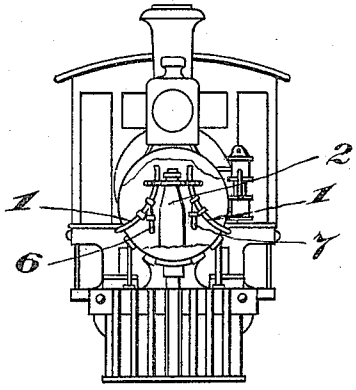

Fig. 2

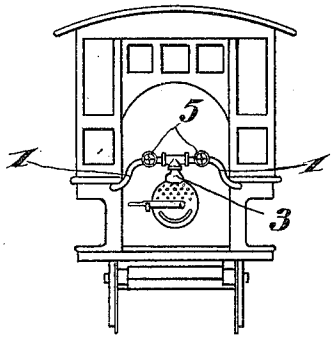

Fig. 3

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UNITED STATES PATENT OFFICE.

LOUIS LIMOGES, OF MONTREAL, QUEBEC, CANADA.

SMOKE-CONSUMER.

964,662. Specification of Letters Patent. Patented July 19, 1910.

Application filed September 30, 1909. Serial No. 520,277.

To all whom it may concern:

Be it known that I, LOUIS LIMOGES, a subject of the King of Great Britain, residing at 203 Chateauguay street, in the city and district of Montreal, in the Province of Quebec, Canada, have invented certain new and useful Improvements in Smoke-Consumers; and I do hereby declare that the following is 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.

The invention to be hereinafter described, relates to smoke consumers and particularly to the general type of smoke consumers used on locomotives and engines.

Broadly speaking, it comprises one or more pipes provided with open ends positioned over the exhaust pipe so that the action of the exhaust creates a suction through the pipes, a suction head adapted to be mounted in the rear of the fire box, and connections between the suction head and the pipes.

In order to more clearly disclose the construction, operation and use of the invention, reference should be had to the accompanying drawings forming part of the present application.

Throughout the several figures of the drawings, like reference characters designate the same parts.

In the drawings:—Figure 1 is a side elevation of the invention complete, as applied; Fig. 2 is a front end view of the same, and, Fig. 3 is a rear end elevation of the same.

The main object of the invention is to provide a slight check on the strong current of hot gases and unconsumed particles as they rush over the upper edge of the fire arch. A very slight check is amply sufficient for complete combustion. In order to be sufficient, this check must be produced without lowering the temperature in the fire box.

Referring to the drawings in detail, 1 indicates a pipe extended along either side of the engine and terminating in an open end slightly above and close to the upper end of the exhaust 2. This pipe extends rearwardly and through the cab of the engine. At a point just above the door, a suction nozzle or head 3 is provided. This nozzle is projected within the rear of the fire box at a point slightly above the rear edge of the fire arch 4. Should the suction be too great at any time, it may be decreased by ordinary shut-offs or hand valves 5 provided in the pipe 1 at each side of the suction head 3. The engine blow pipe 6 and the exhaust pipe 7 of the air compressor may also be connected to the pipe 1 adjacent its opposite ends respectively, as shown in Fig. 2.

By the arrangement above described a suction will be created through pipe 1 and head 3 whenever the engine exhaust, or the engine blow pipe, or the air compressor exhaust is in operation; and such suction may be very readily regulated by the hand valves 5. The suction acts as a momentary check on the currents of hot gas and particles in suspension, as such currents rush toward the stack. This momentary check allows for complete combustion of all combustible particles in suspension.

It is thought that the application and use of the invention will be clear from the preceding detailed description.

Changes may be made in the construction, arrangement and disposition of the several parts of the invention without in any way departing from the field and scope of the same, and it is meant to include all such within this application, wherein only a preferred form has been disclosed.

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

1. A smoke consumer of the character described, comprising a pipe, means for supporting the open ends of said pipe adjacent an exhaust pipe to create a suction through said pipe, and a suction nozzle connected to said pipe and adapted to extend within the rear part of a fire box.

2. A smoke consumer of the character described, comprising a pipe adapted to extend along the opposite sides of an engine, means for supporting the ends of said pipe adjacent the engine exhaust to create a suction through said pipe, a suction nozzle connected to said pipe and adapted to extend within the rear of the fire box of the engine, and means for shutting off communication between said suction nozzle and a section of said pipe.

3. A smoke consumer of the character described, comprising a pipe adapted to extend along the opposite sides of an engine, means for supporting the open ends of said

pipe adjacent the engine exhaust to create a suction through said pipe, a suction nozzle connected to said pipe and adapted to extend within the rear of the fire box of the engine, and means for completely shutting off communication between said pipe and said suction nozzle.

4. A smoke consumer of the character described, comprising a pipe, means for supporting the ends of said pipe adjacent the exhaust of an engine to create a suction through said pipe, an engine blow pipe, connections between said blow pipe and the first mentioned pipe, an air compressor exhaust pipe, connections between said exhaust pipe and the first mentioned pipe, and a suction nozzle connected to the said first mentioned pipe.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

LOUIS LIMOGES.

Witnesses:
T. MYNARD,
E. J. GAUVIN.