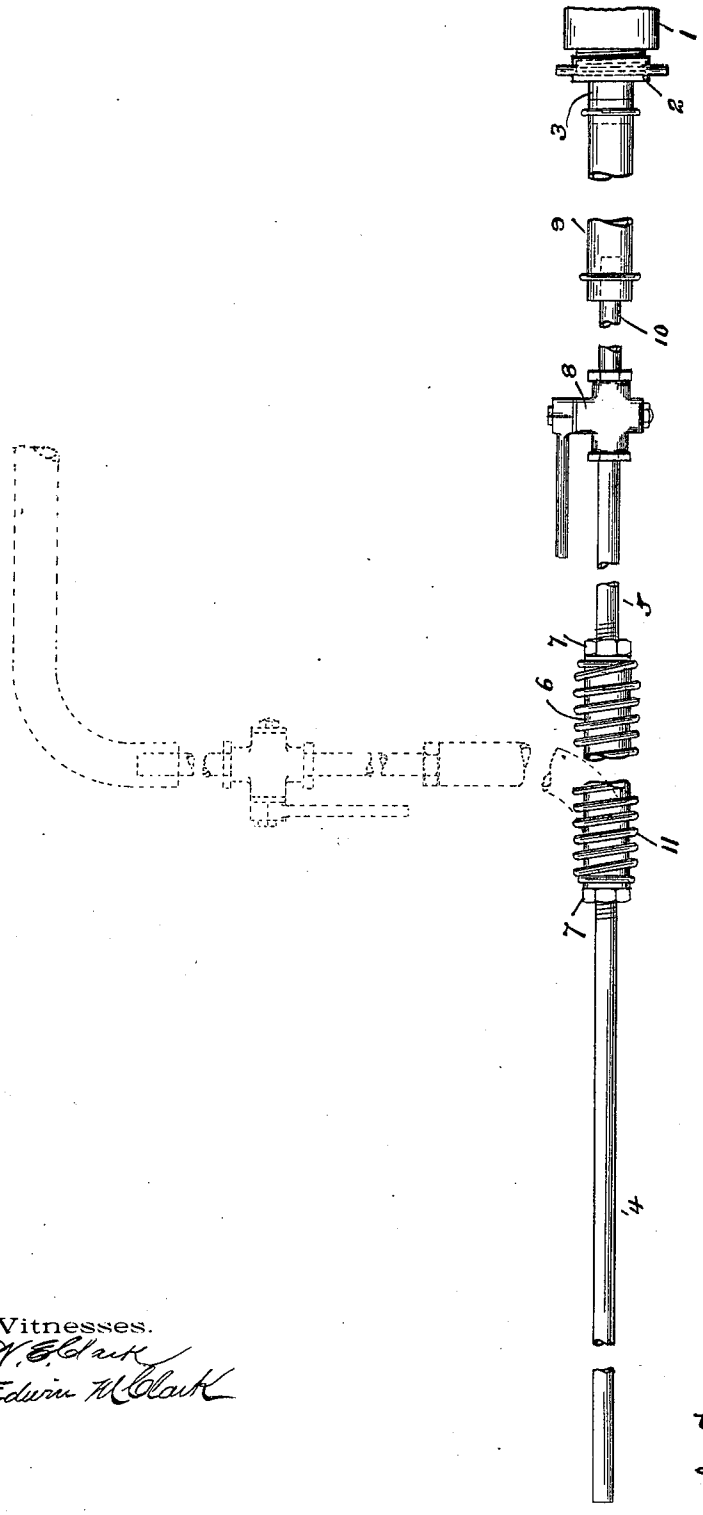
No. 665,550. Patented Jan. 8, 1901.

T. J. ROSSELL.

FLUE CLEANER.

(Application filed Apr. 25, 1900.)

(No Model.)



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UNITED STATES PATENT OFFICE.

THOMAS J. ROSSELL, OF NEW HAVEN, CONNECTICUT.

FLUE-CLEANER.

SPECIFICATION forming part of Letters Patent No. 665,550, dated January 8, 1901.

Application filed April 25, 1900. Serial No. 14,274. (No model.)

To all whom it may concern:

Be it known that I, THOMAS J. ROSSELL, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Flue-Cleaners, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in flue-cleaners, having especial reference to devices for cleaning the tubes or flues of a locomotive-boiler.

It is the object of my invention, among other things, to construct a device for this purpose which can be attached to the air-pump of a locomotive and a current of air be conveyed therefrom through a flexible connection having suitable stop-valves to the interior of the flues.

To these ends my invention consists in a flue-cleaner having certain details of construction and combination of parts, as will be hereinafter fully described, and more particularly pointed out in the claim.

Referring to the drawing, which illustrates the device complete, 1 designates the air-pump of a locomotive which is ordinarily connected with the air-brakes, and 2 an interiorly-threaded coupling which is rotatably attached to the plug 3 and is designed to removably secure the device to the air-pump.

4 is the flue-tube, 5 an intermediate tube, and 6 a flexible tube, preferably of rubber, connecting the ends of the tubes 4 and 5, which are threaded into the plugs 7 7, fixed in the ends of said tube.

An air-cock 8 of any suitable construction, the details of which are not material to my invention, is secured upon the tube 5, and connecting said air-cock with the flexible tube 9 is a tube 10, having the plug 3 fixed in one end thereof in any convenient manner.

To prevent injury of the flexible tube 6, I have surrounded the same with a guard coil-spring 11.

The distance between the flue-sheet and fire-box in a locomotive is so short that it has been found necessary heretofore to use an auger or similar device for boring out and cleaning the flue-tubes, which operation has required the services of two or more men, necessitating much hard labor before the boiler-tubes are thoroughly cleaned. It has been attempted, however, to clean out the flues by means of air-pressure, but they have met the difficulty of lack of space between the flue-sheet and fire-box, and the device therefore has been shortened to such a length as to permit only a small portion thereof to be inserted within the flue. By this device, as the tube does not pass through the flue, but only enters the same a short portion of its length, the air-pressure is lost and diminished to below its working pressure by the time it reaches the end of the flue. In this method the rear end of the flues have been cleaned in a fairly satisfactory manner, but the front ends have been left in substantially their original clogged condition. In my device the tube 4 is first inserted within the boiler-flues, with the tubes 6, 5, and 10 in substantially the position illustrated by the dotted lines, the length of the device then being greatly shortened. After the tube 4 has entered the flue the device is then brought to the position illustrated by full lines in the drawing and pushed through the flue until it reaches the front end thereof. The air-pressure from the locomotive itself, which is derived from the air-pump used for operating the air-brakes, passes through the device and out of the tube 4 into the boiler-flue, driving the refuse matter in the flues out of the front end thereof. The air-cock 8 enables the operator to turn on and off the air-pressure as desired. This operation is repeated until all of the flues have been cleaned.

I am aware that flue-cleaners have been made heretofore with flexible members, and I do not therefore claim such construction broadly, but limit myself to the construction herein shown and described.

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

In a flue-cleaner, the combination with the flue-tube 4 of uniform diameter throughout, and adapted to enter a boiler-flue; of rigid connection-tubes, as 5 and 10, having a valve 8 therebetween; flexible connections, as the tubes 6 and 9 for joining the ends of the tubes 4 and 5 and the tube 10 with the supply-pipe; and a guard-spring, as 11, surrounding the said flexible connection 6 all constructed and operating substantially as described.

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

THOMAS J. ROSSELL.

Witnesses:
GEORGE E. HALL,
EDWARD J. MAHER.