

J. GEORGES & E. A. DORMOY.
TUBE SCRAPER.
APPLICATION FILED NOV. 7, 1907.

903,854.

Patented Nov. 17, 1908.

Fig. 1.

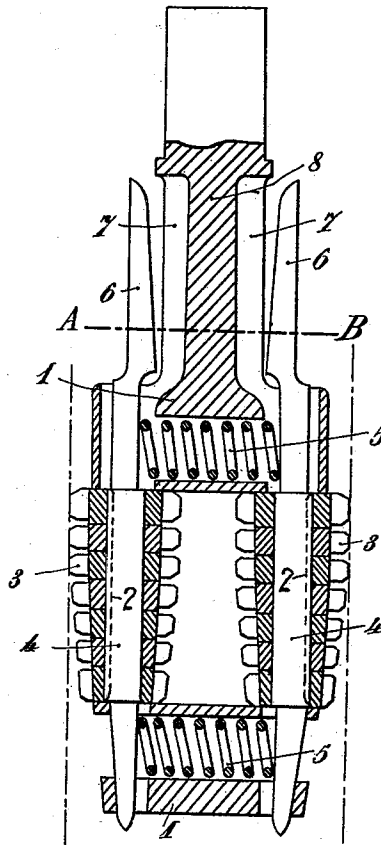
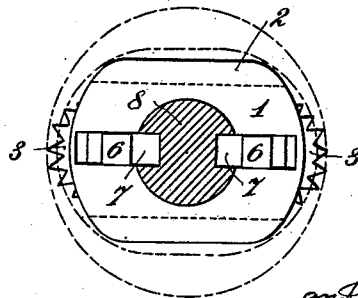


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

JACQUES GEORGES AND EMILE AUGUSTE DORMOY, OF ALGIERS, ALGERIA.

TUBE-SCRAPER.

No. 903,854.

Specification of Letters Patent.

Patented Nov. 17, 1908.

Application filed November 7, 1907. Serial No. 401,190.

To all whom it may concern:

Be it known that we, JACQUES GEORGES, a citizen of the Republic of France, residing at Algiers, in Algeria, and EMILE AUGUSTE DORMOY, a citizen of the Republic of France, residing at Algiers, Algeria, have invented new and useful Improvements in Tube-Scrapers, of which the following is a specification.

This invention has relation to a new and useful construction and arrangement of a device for removing scale from the tubes of steam boiler furnaces and the like, and especially for permitting the application of the implement to the cleaning of the boiler tubes which are arranged opposite cover openings which openings are smaller than the inside diameter of the tubes, as frequently occurs.

In order that our improved construction and arrangement may be clearly understood, this specification is accompanied by a drawing, the same being intended for illustration, in which drawing:

Figure 1 is a view in longitudinal and sectional elevation, showing the complete implement, and Fig. 2 is a horizontal cross section on a plane through line A—B of Fig. 1.

In both these figures like reference characters, wherever they occur, indicate corresponding parts.

The numerals 1, 1, designate plates integral with the shank of the device and substantially elliptical in form having slots 9 therein. These two plates, 1, are joined one with the other by lateral braces or webs, 2, and between them are arranged two groups of scrapers, 3. The two axles, 4, of the groups of scrapers, 3, are located in said slots 9 and are continually subjected to pressure by springs, 5, which tend to force the scrapers against the wall of the tube to be cleaned; but, as these two axles are diametrically opposite, at each of their extremities a single spring, 5, which diametrically crosses the respective plate following its greatest dimension, is utilized to produce the pressure upon the axles, 4. These axles, at their rear extremities are prolonged and conveniently shaped to form handles, 6, upon which power may be applied by the hand in

order to compress the spring 5 located in the rear or upper plate 1 in a convenient manner in order that the rollers will not be prevented from passing by the inner wall of the orifice of the cover.

In order that the axles, 4, may be sufficiently moved one towards the other, suitable recesses, 7, are provided in the shank or frame 8 of the apparatus to accommodate the projections or handles 6 which may enter the recesses. It is plain then that, for the introduction of the implement in a tube, it is seized by the hand at the ends of the projections 6 in a manner to cause these to approach one another to make them enter the recesses 7 until the maximum dimension of the implement is less than that of the greater axis of the elliptical opening in the cover placed opposite the tube. As soon as the implement is located in the tube, the operator lets go of the two handles 6, and the cleaning of the tube is accomplished as is customary with other forms of tube cleaners. The two plates, 1, 1, are slotted as shown so that the projections on the axles may pass through the slots and have room to move therein.

The improved implement is simple and easy of construction and is found to be convenient and efficient in operation.

Having now fully described our invention, what we claim as new herein and desire to secure by Letters Patent, is:

A boiler flue scraper comprising a shank having recesses therein, elliptical plates integral with said shank and provided with slots extending in the direction of the major axis thereof, axles in said slots having handles at their posterior ends, scraper wheels on said axles, and springs in said recesses bearing against the ends of diametrically opposite axles.

In testimony whereof we have affixed our signatures, in presence of two subscribing witnesses.

JACQUES GEORGES.

EMILE AUGUSTE DORMOY.

Witnesses:

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