A. SCHRÖR.

BOILER SCALE REMOVING APPARATUS.

APPLICATION FILED SEPT. 4, 1908.

909,235. Patented Jan. 12, 1909.

Fig. 1

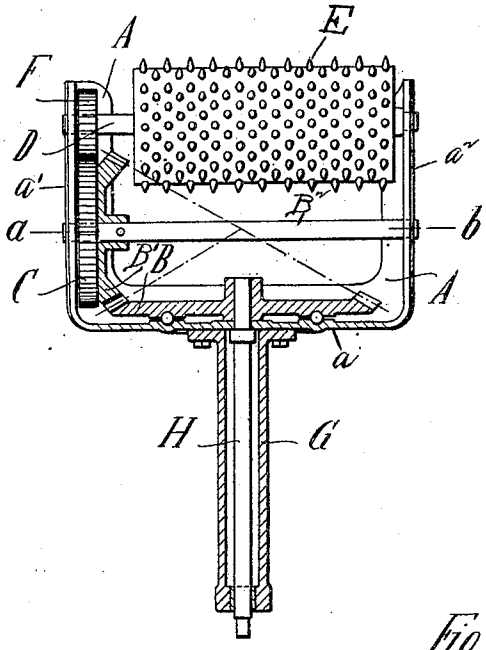


Fig. 2

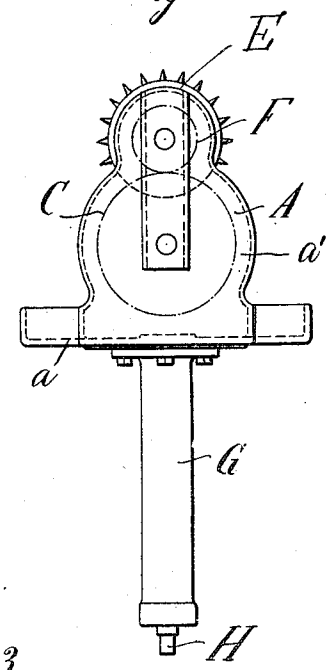
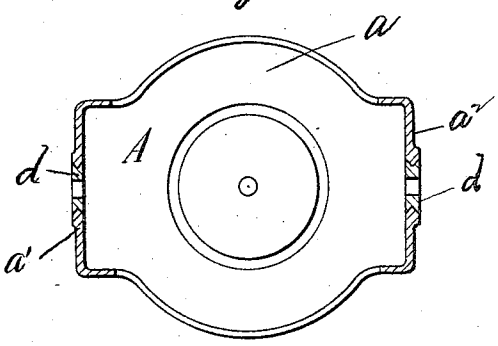


Fig. 3



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BOILER-SCALE-REMOVING APPARATUS.

No. 909,235. Specification of Letters Patent. Patented Jan. 12, 1909.

Application filed September 4, 1908. Serial No. 451,766.

To all whom it may concern:

Be it known that I, ADOLPH SCHRÖR, a subject of the Emperor of Germany, and a resident of Bremen, Germany, have invented certain new and useful Improvements in Boiler-Scale-Removing Apparatus, of which the following is a specification.

This invention relates to apparatus for removing boiler scale and the like of the type wherein one or more cleaning rolls are mounted in a frame and the object of this invention is to provide an apparatus which can be easily handled.

According to this invention the handle of the frame is formed hollow and has a shaft mounted therein, this shaft being rotated by any convenient means and connected to the cleaning rolls by toothed wheels. The toothed wheels are of such size that the rolls rotate at a much greater speed than has hitherto been the case and cleaning can thus be done much more quickly and efficiently.

In the accompanying drawings, Figure 1 shows an apparatus according to this invention in front elevation partly in section. Fig. 2 is an end view of the same and Fig. 3 is a section on the line *a*—*b* of Fig. 1.

In the construction illustrated the frame A consists of a head piece, having a base plate *a* and side plates a', a^2, and a hollow handle G within which is mounted a driving shaft H. Keyed on the end of this shaft within the frame is a bevel wheel B meshing with a bevel pinion B′, rigidly secured to a countershaft B^2 journaled in the frame. This countershaft also has keyed to it a toothed wheel C which meshes with a pinion F on the spindle D of the cleaning roll E. When the driving shaft in the handle is rotated the bevel pinion B mounted thereon meshing with the small bevel pinion B′ rotates the toothed wheel C and thus drives the spindle D and the cleaning roll with a great speed.

The roll may be provided with teeth, wire bristles or the like according to the nature of the surface to be cleaned and the length, shape or number of rolls may be varied to suit requirements. Thus for instance when boiler scale is to be removed from rivet heads the diameter of the roll may be from 28 to 40 mm. As shown in the drawings the toothed periphery of the cleaning roll projects beyond the outer ends of the side plates of the supporting frame. The cleaning rolls may be changed when desired and this is preferably effected by mounting the brasses *d* wherein the spindles of the cleaning rolls and countershaft are journaled in dovetailed slots in the frame, suitable means being provided for holding the brasses in place.

The power for the driving shaft is conveniently derived from some flexible shafting for instance that of an electromotor so that the device can be moved about as desired.

It will be seen that all of the gearing is arranged within the head piece and between the inwardly extending flanges of the members *a*, a', a^2 thereof. As shown the pinion B on the inner end of the shaft H has a bearing against the base plate *a* of the head piece of the frame, in which bearing antifriction balls may be arranged.

What I claim as my invention and desire to secure by Letters Patent is:—

1. The herein described apparatus for removing boiler scale comprising a frame including a forked head and a tubular handle attached to said head, two parallel shafts journaled in the side members of the head of the frame and geared together, a cleaning roll mounted on one of said shafts, a bevel gear connected to the other shaft, a driving shaft extending through the tubular handle and into the head piece of the frame, and a second bevel gear secured to the end of said shaft within the head piece of the frame and meshing with the aforesaid bevel gear.

2. The herein described apparatus for removing boiler scale comprising a frame including a forked head piece, consisting of a base plate and parallel side plates, and a tubular handle attached to the base plate of said head plate, a cleaning roll mounted on a shaft journaled in bearings in the side plates of the head, the periphery of said roll projecting beyond the outer ends of said plates, a pinion on the shaft of the roll, a driving shaft extending through the tubular handle of the frame and the base plate of the head piece, a gear mounted on the inner end of said driving shaft, and gearing connecting the last said gear with the pinion on the roll shaft, all of said gearing being inclosed within the forked head piece of the frame.

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

ADOLPH SCHRÖR.

Witnesses:
E. DERVORDE,
RAY SIGSBEE.