

(No Model.)

W. ORD.

APPARATUS FOR REMOVING SCALE FROM BOILERS.

No. 262,823.

Patented Aug. 15, 1882.

Fig. 1.

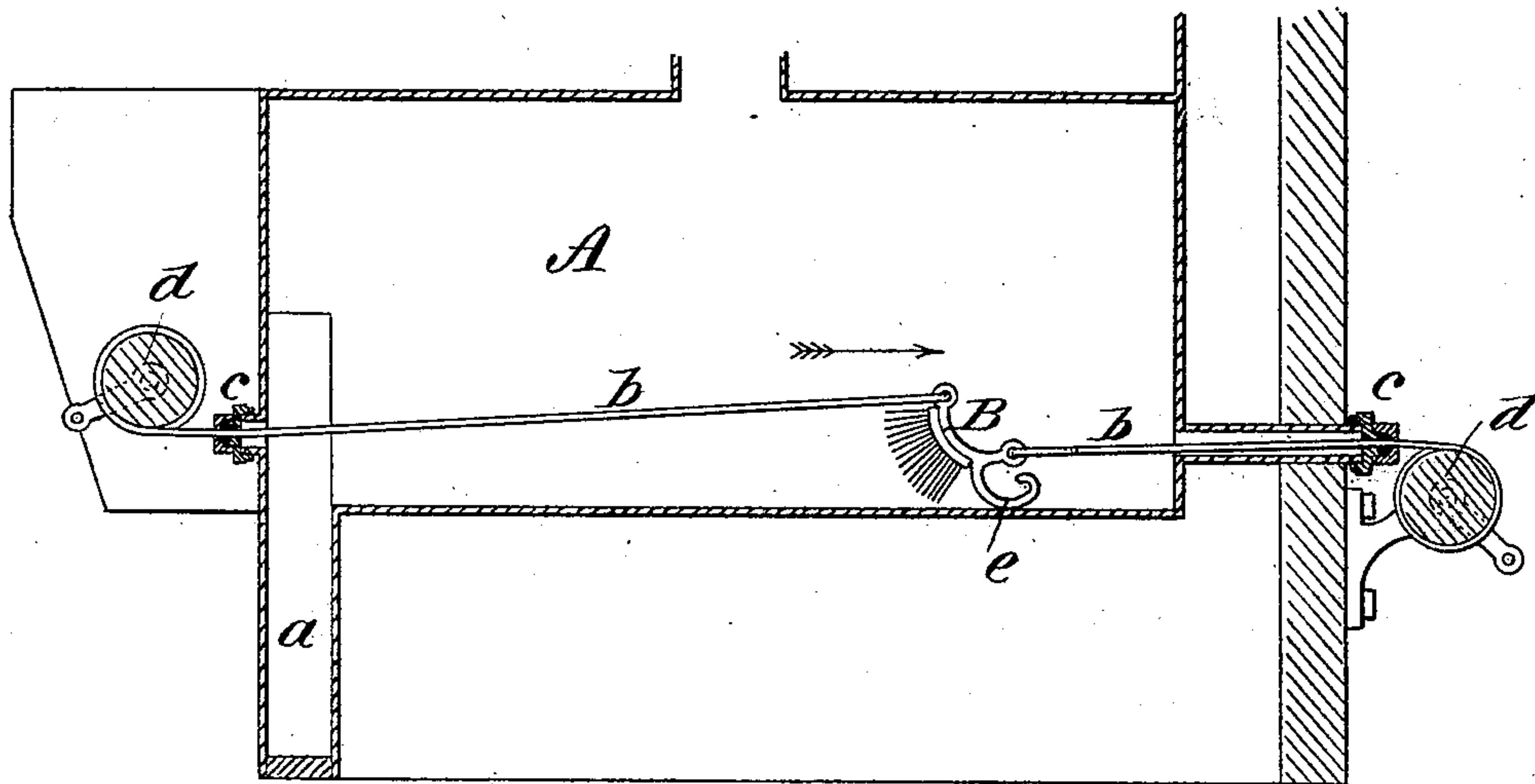
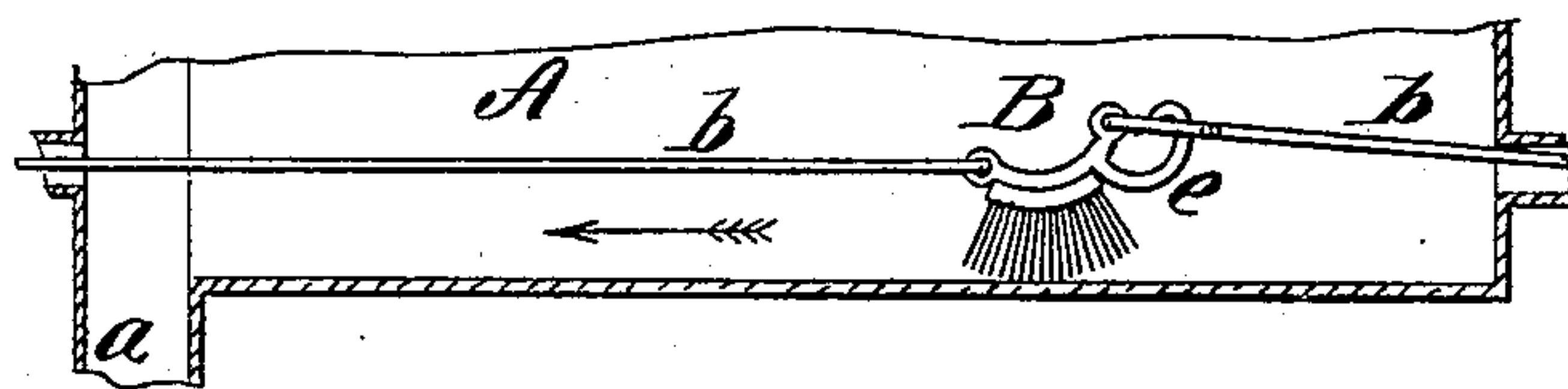


Fig. 2.



WITNESSES:

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APPARATUS FOR REMOVING SCALE FROM BOILERS.

SPECIFICATION forming part of Letters Patent No. 262,823, dated August 15, 1882.

Application filed April 13, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ORD, of Brooklyn, Cuyahoga county, State of Ohio, have invented a new and Improved Apparatus for Removing Scale from Boilers, of which the following is a full, clear, and exact description.

The object of my invention is to prevent the accumulation of sediment or scale in boilers, and to provide for brushing or removing the scale from the lower parts of the boiler.

To that end my invention consists of a brushing apparatus which is fitted permanently in connection with the boiler, and operated from the outside to remove scale and carry it to the mud-chamber, all as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both figures.

Figure 1 is a sectional side view of a boiler fitted with my improved brushing apparatus; and Fig. 2 is a similar view, showing the brush in position of use.

A is a boiler of ordinary type, provided with mud-drum *a*.

B is a brush of steel or other suitable material, shaped to conform to the interior bottom surface of the boiler and hung on the ends of two wires or flexible rods, *b b*, that pass to the outside through the opposite ends of the boiler, suitable packing-glands being provided, as shown at *c*, around the rods.

d d are rollers to which the ends of the wires *b b* connect, these rollers being provided with crank-handles, so that they may be revolved by hand.

The brush B is formed with the heel *e*, projecting at one side, and taking upon the bottom of the boiler when the brush is moved in

one direction, so as to raise the brush from the surface of the boiler.

To operate the brush it is first drawn back, as indicated by the arrow in Fig. 1, by turning the roller *d* at the rear end of the boiler. During this backward movement the brush rides on the heel portion, and is thus raised from the surface of the boiler, so as to have no effect. The front roller, *d*, is then to be turned to draw the brush forward, as indicated by the arrow in Fig. 2, so that it shall sweep the scale and sediment from the bottom of the boiler and carry it forward and discharge it into the mud-drum *a*. This operation may be performed as often as is necessary.

By the use of this apparatus the accumulation of sediment or scale upon the bottom of the boiler will be prevented.

In view of the well-known necessity of keeping boilers free from scale, especially that part of the boiler that is directly over the fire, the utility of this apparatus will be apparent.

My improvement may be applied to any cylindrical or shell boiler.

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

1. The apparatus for cleaning boilers, consisting of the brush B, provided with the heel *e*, wires *b b*, and the rollers *d d*, combined together and with a boiler, substantially as shown and described.

2. The brush B, constructed, substantially as shown, with the heel portion *e*, and fitted for reciprocation upon the bottom surface of a boiler, substantially as shown and described.

WILLIAM ORD.

Witnesses:

C. H. BABCOCK,
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