(No Model.)

J. A. M. COX.

STEAM BOILER.

No. 279,920. Patented June 26, 1883.

Fig. 3.

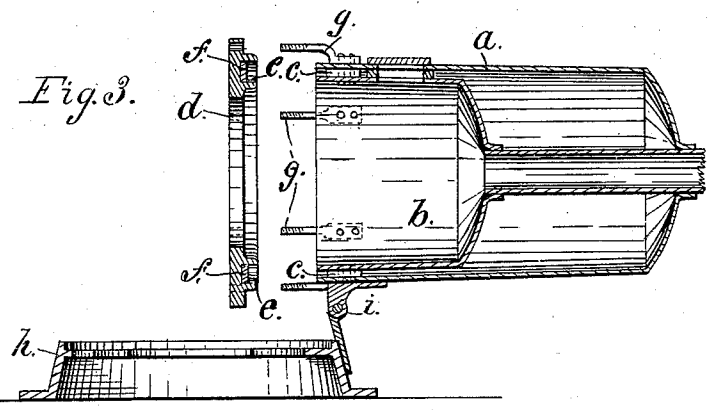


Fig. 1.

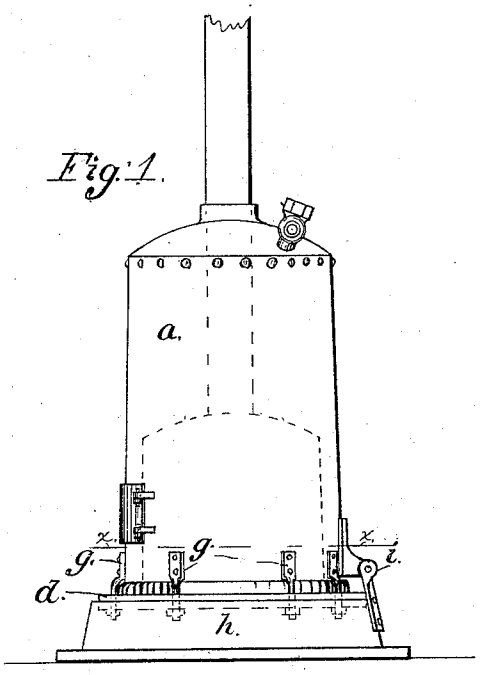
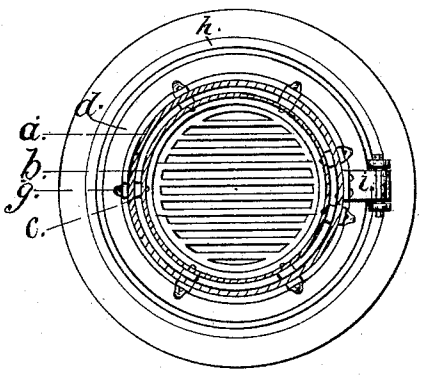


Fig. 2.



WITNESSES:
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UNITED STATES PATENT OFFICE.

JOHN A. M. COX, OF INDIANAPOLIS, INDIANA.

STEAM-BOILER.

SPECIFICATION forming part of Letters Patent No. 279,920, dated June 26, 1883.

Application filed October 9, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. M. COX, of Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Improvement in Steam-Boilers, of which the following is a specification, having reference to the accompanying drawings.

My invention relates to that class of steam-boilers in which the fire-box is contained within the boiler, and a narrow annular space is formed between the exterior of the fire-box and the interior of the boiler.

The object of my invention is to so construct the boiler that access to the said annular space may be easily had for the purpose of removing sediment and scale therefrom.

My invention consists in the combination, with an outside shell and a fire-box having an annular space between them, and an annular plate adapted to receive the ends of the boiler and fire-box to be secured thereto, and to hermetically seal said annular space, of means for convenient access to the same.

The accompanying drawings illustrate my invention.

Figure 1 is an elevation. Fig. 2 is a transverse section through *x x*, Fig. 1. Fig. 3 is a longitudinal section.

Like letters refer to the same parts in the several figures.

a represents the shell or boiler proper; *b*, the fire-box. *b* is maintained centrally in relation to *a* by means of short pieces of metal *c*, which at intervals fill the annular space formed between *a* and *b*. Pieces *c* are distributed at nearly equal distances around said annular space, and a corresponding number of stays or straps, *g*, are placed on the outside of *a*, opposite pieces *c*, and the whole secured in place by rivets passing through stays *g*, boiler *a*, pieces *c*, and the fire-box *b*. Stays *g* terminate in threaded bolts, which project below the lower edges of *a* and *b*. An annular plate, *d*, having in its upper surface a groove, *e*, adapted to receive the lower edges of the shell and fire-box, and provided at the bottom of said groove with a packing-ring, *f*, of cement, rubber, or other suitable material, is fitted over and hermetically closes the annular space between the shell and the fire-box. Stays *g* pass through holes in said plate, and serve to safely secure it in place by means of nuts on their lower ends.

The boiler is mounted upon a cast base, *h*, and is hinged thereto by hinge *i*, for the purpose of sustaining the boiler in the position shown in Fig. 3, when plate *d* is removed.

When the boiler is in position for use, plate *d* rests in a recess in the top of base *h*, and the grate-bars rest on the inner edge of plate *d*. A boiler is thus formed which is of great utility and convenience to stock-raisers and others using steam for cooking feed and for other purposes, where a low pressure of steam is used. When sediment and scale form in the annular space between the fire-box and shell, it is only necessary to tip back the boiler and remove plate *d*, as shown in Fig. 3, to obtain free access to said space.

I claim as my invention—

Base *h* and hinge *i*, combined with shell *a*, fire-box *b*, pieces *c*, stays *g*, plate *d*, and packing *f*, for the purpose set forth.

JOHN A. M. COX.

Witnesses:
H. P. HOOD,
H. C. VONNEGUT.