

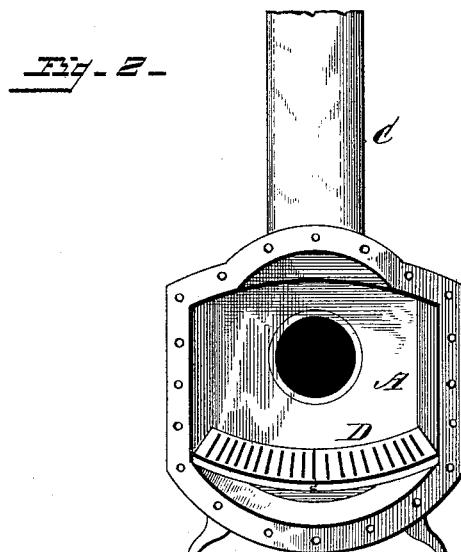
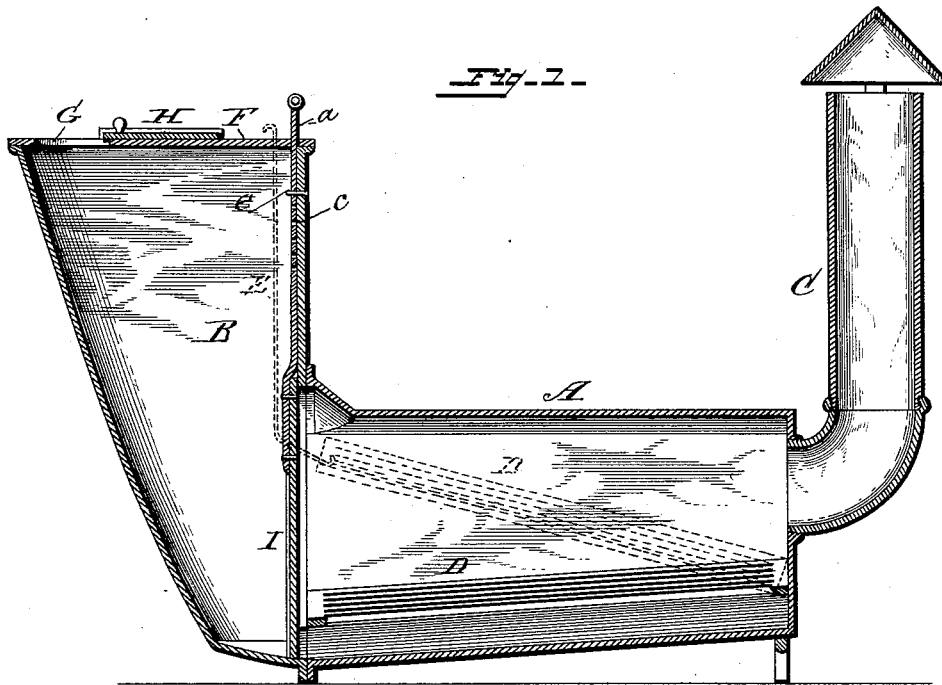
(No Model.)

A. MCGOWEN.

HEATER FOR WATERING TANKS.

No. 386,645.

Patented July 24, 1888.



Witnesses.

Albert Spiden,
Wm. B. Long,

Inventor.

Alexander McGowen,
By *For's* Attorney *Chas. H. Fowler*

UNITED STATES PATENT OFFICE.

ALEXANDER MCGOWEN, OF INDEPENDENCE, IOWA.

HEATER FOR WATERING-TANKS.

SPECIFICATION forming part of Letters Patent No. 386,645, dated July 24, 1888.

Application filed March 13, 1888. Serial No. 267,098. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER MCGOWEN, a citizen of the United States, residing at Independence, in the county of Buchanan and State of Iowa, have invented certain new and useful Improvements in Heaters for Watering-Tanks; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a longitudinal section of my improved heater; Fig. 2, an end view with the shield removed to show the interior of the fire box.

The object of the present invention is to provide means for effectually heating the water in tanks for watering stock, the device being placed in the water, whereby the entire amount of heat generated is utilized under the surface of the water for retaining the water to the required degree of heat for the stock.

The invention consists in the several details of construction, substantially as shown in the drawings, and hereinafter described and claimed.

In the accompanying drawings, A represents the fire box, the bottom thereof being disposed on an incline, so that the ashes will gravitate toward the front of the device to be more conveniently removed through the shield B at one end of the box, the opposite end thereof having the smoke pipe connected thereto. The fire-box, shield, and smoke-pipe are perfectly water-tight, and when the heater is placed in the water the upper ends of the shield and pipe are above the water-level.

The shield C is for the twofold purpose of preventing the water from entering the fire-box when supplying the box with coal or removing the ashes, which is accomplished by withdrawing the ashes out through the shield; also supplying coal to the box in the same manner, said box being provided with a grate, D, preferably formed in two sections to facilitate its removal.

When it is desired to remove the ashes, the grate is elevated, as shown in dotted lines, by means of a hooked rod, E, the hook upon the upper end of the rod hooking over the edge of the shield B after the cover F thereto has been removed, thereby holding the grate in an elevated position, as shown. The cover F has an opening, G, in it, which is closed, or partially closed, by a slide, H, to regulate the draft, said cover simply resting on the upper end of the shield and can be readily removed when desired.

The fire-box A is provided with a sliding door, I, to cut off communication between said box and the shield when found necessary, and when access is desired to the fire-box for supplying it with coal, or removing the ashes or placing wood on the grate for the purpose of starting a fire, or to form a draft to promote combustion, as the case may be, the door is raised the required height by means of the rod *a*, and is held in its raised position by means of a pin, *e*, entering one of a series of holes, *c*, in the rod and a hole in the shield B. When the slide H is opened, it is necessary to raise the door I sufficiently to admit air, which passes down through the opening G to the fire-box under the grate.

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

In a heater for watering-tanks, the fire-box A, provided with shield B, and smoke-pipe C, extending up above the same, and the grate D, in combination with the removable cover F, having hole or opening G and the slide H, and the sliding door I, located between the fire-box and shield to close or open communication between the two, substantially as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ALEXANDER MCGOWEN.

Witnesses:

JED LAKE,
M. W. HARMON.