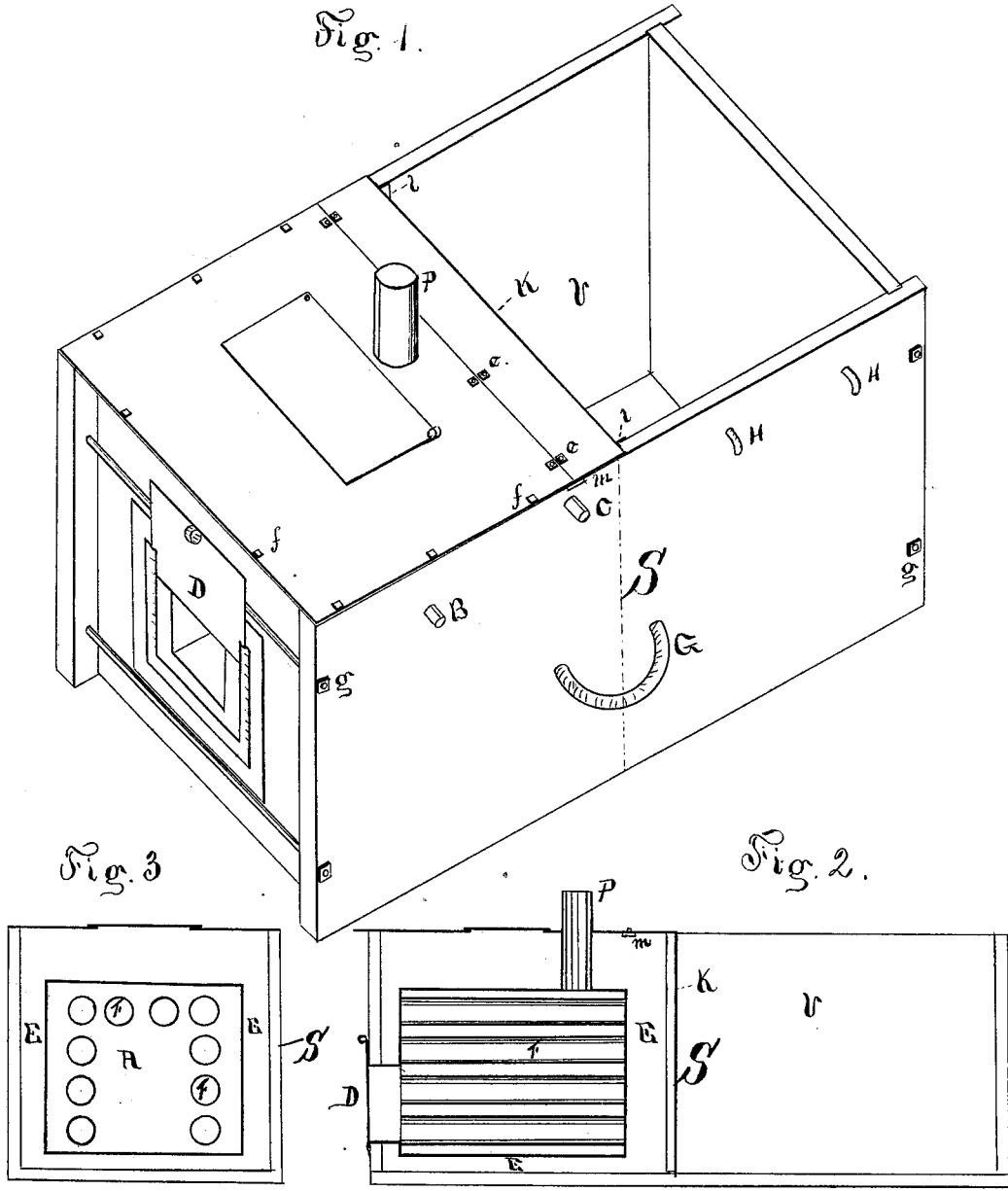


R. FREER.
Water Heating Apparatus.

No. 200,998.

Patented March 5, 1878.



Attest:
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Inventor:
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UNITED STATES PATENT OFFICE.

REASON FREER, OF CASSOPOLIS, MICHIGAN.

IMPROVEMENT IN WATER-HEATING APPARATUS.

Specification forming part of Letters Patent No. 200,998, dated March 5, 1878; application filed November 1, 1877.

To all whom it may concern:

Be it known that I, REASON FREER, of Cassopolis, Cass county, Michigan, have invented a new and useful Improvement in a Water-Heating Apparatus, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a perspective view. Fig. 2 is a longitudinal central section through the vat and fire-box; and Fig. 3, a central cross-section of the fire-box.

The object of my invention is to furnish a speedy and economical means for heating water in a vat for scalding hogs when butchering, without the necessity of conveying the water from the heating apparatus to another vessel; also, for steaming food for stock and timber for bending.

The vat S is secured together by bolts at *g*. It is divided by a movable metal partition, K, lined on one side with wood, to prevent the cool water in apartment V from chilling the hot water in apartment E around furnace *a*.

The water is prevented from passing around partition K by the iron calking strips *ll*. The metal top of partition K is bent over to meet the covered part of the tank, and secured by bolts *e e* to the metal strip *m*, to prevent steam from escaping. The wood-screws *f f* pass through the cover, and secure the latter to the top of the vat.

The furnace or fire-box A is exposed on each of its faces to the water, and also has the flues F F passing through the fire-box along the top and sides, thus presenting great

heating-surface. The furnace is fed at door D, which also furnishes draft.

P is the pipe for escape of smoke. G is a pipe connecting apartments of vats E and V. A pipe may be attached at C to carry steam to another vessel for steaming purposes, if desired.

H H are hooks in the side of the vat, to which a rope can be attached when scalding hogs, to allow one man to lower a hog into the water and raise him out again.

When using the vat for scalding hogs, the partition K should be removed, and the furnace A heats the water in the whole vat.

When used for steaming purposes, the partition K being in place, the pipe G closed, and water only placed in apartment E, the steam may be conveyed to apartment V; or, the pipe G being open, water fills both apartments, and as the water evaporates from E it is partly replaced by connecting-pipe G. In this case the steam would be carried by pipe C to another vessel.

Having thus described my invention, what I claim as my invention, and wish to secure by Letters Patent, is—

The combination of the vat S, furnace A, having flues F, detachable partition K, and connecting-pipe G, all arranged and operating substantially as and for the purpose herein shown and specified.

REASON FREER.

Witnesses:

KARL E. RUDD,
ORSON RUDD.