2 Sheets—Sheet 1.

H. STRYCKER.

Hog-Scalder and Feed-Steamer.

No. 204,923. **Patented June 18, 1878.**

Fig 1.

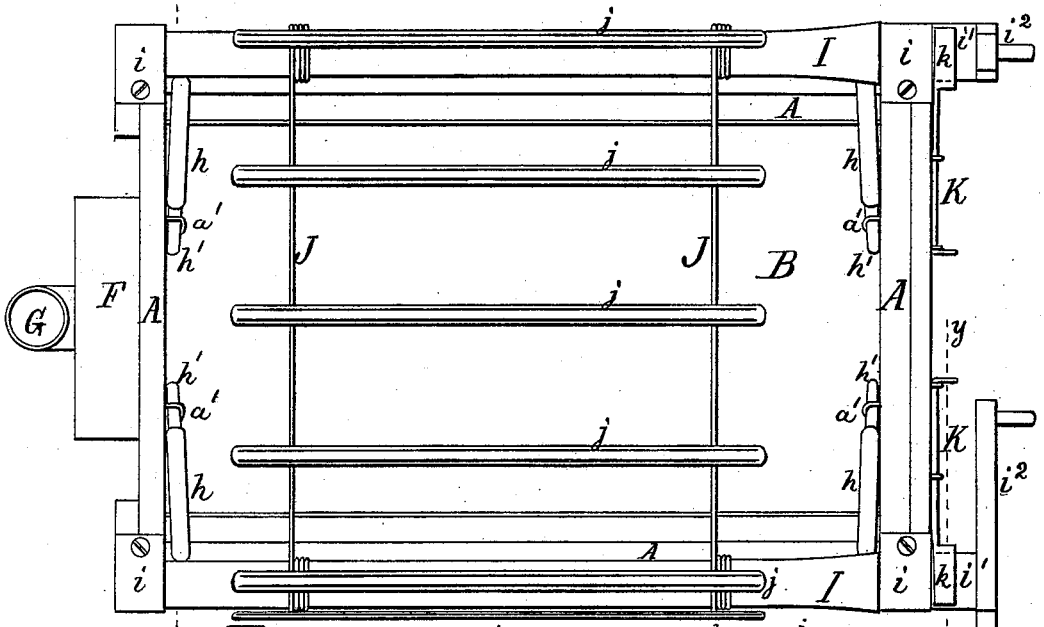


Fig 2.

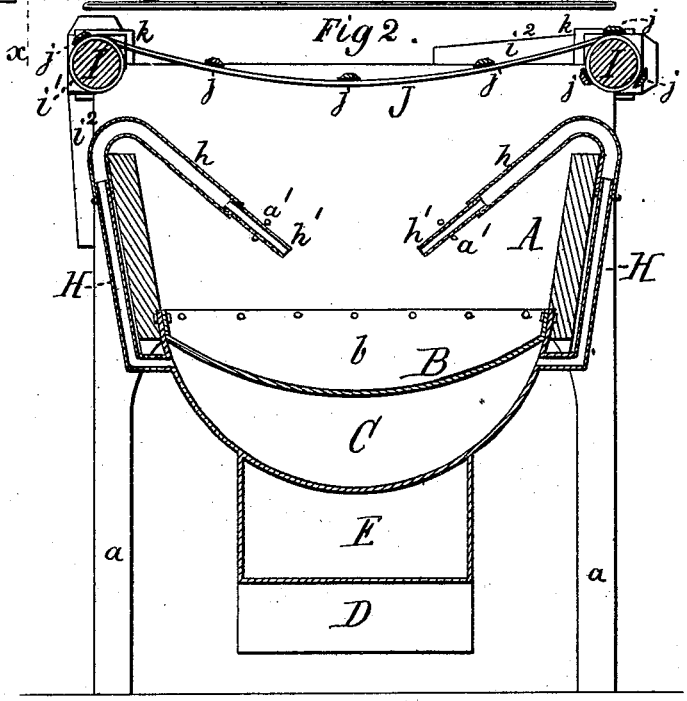
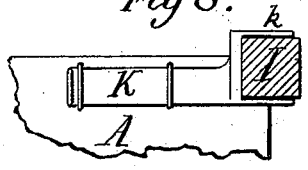


Fig 3.



Witnesses:

J. P. Th. Lang

J. Russell Bartz

Inventor:

Henry Strycker

by

Munn, Pennick & Lawrence

2 Sheets—Sheet 2.

H. STRYCKER.

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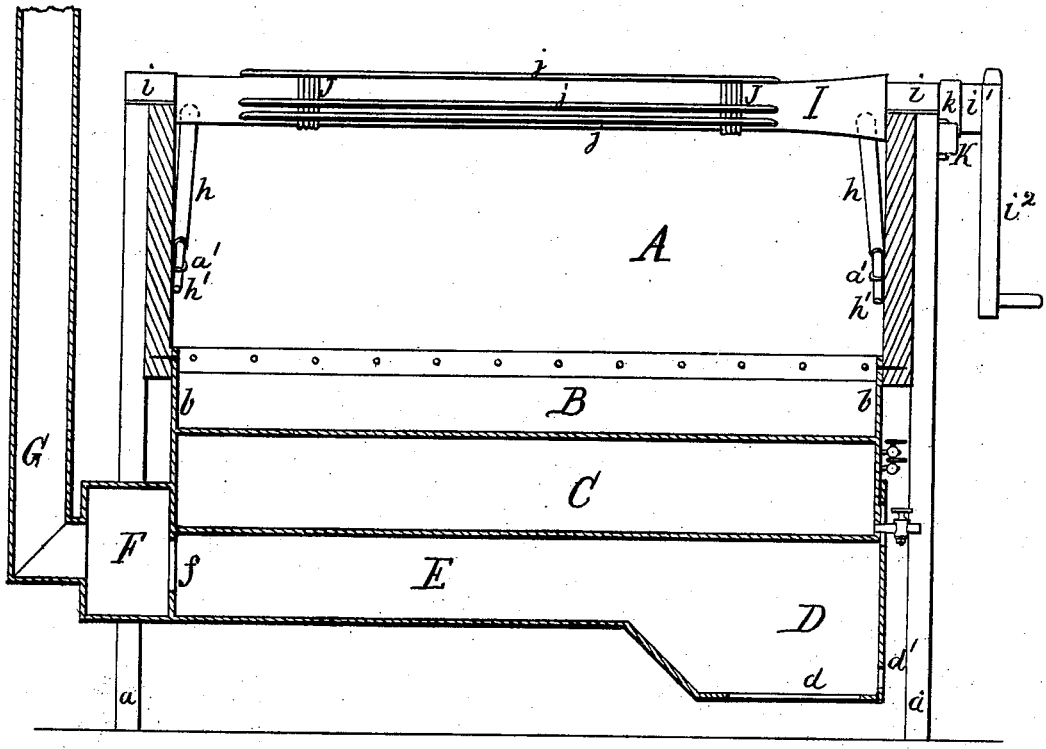
Fig 4.



Witnesses:
J. P. Th. Lang
J. Russell Barry

Inventor:
Henry Stryckter
by
Mason, Fenwick & Lawrence

UNITED STATES PATENT OFFICE.

HENRY STRYCKER, OF GOSHEN, INDIANA.

IMPROVEMENT IN HOG-SCALDER AND FEED-STEAMER.

Specification forming part of Letters Patent No. **204,923**, dated June 18, 1878; application filed May 16, 1878.

To all whom it may concern:

Be it known that I, HENRY STRYCKER, of Goshen, in the county of Elkhart and State of Indiana, have invented a new and useful Improvement in Combined Hog-Scalder and Feed-Steamer, which improvement is fully set forth in the following specification and accompanying drawings, in which latter—

Figure 1 is a plan view of my improved combined scalder and steamer. Fig. 2 is a vertical transverse section in the line *x x* of Fig. 1. Fig. 3 is a sectional detail view in the line *y y* of Fig. 1, representing a locking device of the elevating-windlasses used in my apparatus. Fig. 4 is a vertical central longitudinal section of my said apparatus.

My present invention is an improvement on the apparatus for which Letters Patent were granted to me on the 26th day of May, 1874; and the nature of the same consists in the combined supporting-frame and trough, having a metal bottom, and surmounted with windlasses and chains connected by slats, in combination with a furnace having a broad and long flue, a chamber for generating steam between the trough-bottom and furnace, and pipes for conveying steam or heated vapors into the trough either for aiding in heating the water and in scalding hogs or for steaming food for animals.

In the drawings, A *b* represent a frame constituting the sides and ends of a trough having a concave metallic bottom, B. The bottom B forms the upper part of a steam-chamber, C, of suitable shape, beneath which a furnace, E, is provided. This furnace consists of a chamber, D, provided with grates *d* and a door, *d'*, a longitudinal flue, E, and an ash or soot chamber, F, having a contracted inlet, *f*, and a smoke-pipe, G, which is of smaller diameter than the chamber F. The parts D E F are attached to and arranged longitudinally beneath the steam-chamber C, and the chamber F is broad and deep, so as to cover a portion of the rear end of the steam-chamber C, as shown, thereby enhancing the heating capacity of the furnace. At convenient points the steam-chamber C is provided with outlet-pipes H, having india-rubber hose *h* and nozzles *h'*, to facilitate the direction of their steam-currents into the trough B. The nozzles *h'* may be inserted into staples *a'* at the ends of the trough-frame A when not handled by the operator or moved about in the trough. Above the sides of the frame A two windlasses, I, are attached to the same by means of journal-bearings *i*. Two parallel chains, J, provided with supporting-slats, are wound upon the said windlasses in such a manner that by unwinding both windlasses the chains are let down upon the concave bottom B of the trough, and by winding up the windlasses the chains become taut. The windlasses are provided with square heads i^1 and crank-handles i^2. Two sliding locks, K, having bifurcations *k*, are secured to the outer ends of the frame A, and serve to stop or check the windlasses when their bifurcated ends are pushed over the square heads i^1, thus forming a more reliable stop than ratchet-wheels and pawls.

Operation: The chains J are wound up by equally winding them on both windlasses, and the windlasses are locked or checked by the bolts K, and the dead hog placed upon the slats and supporting-chains. The bolts K are now withdrawn from the heads i^1, and by means of the crank-handles i^2 the windlasses are unwound and the hog let down into the trough B, which is supplied with scalding-water, which water is heated in part by the steam in the chamber C, such steam being introduced into the trough through pipes H *h*. The steam-chamber is supplied with water by removing the rubber pipe *h* from one of the metal pipes H and pouring water into the pipe H. To accelerate the scalding process, the operator may remove the nozzles *h'* from their normal positions in the staples *a'*, and direct the steam issuing therefrom into the hot water or upon the body of the hog. When thoroughly scalded the hog is raised from the trough by winding up the chains J, and discharged therefrom, as described in my aforesaid patent.

The fire is constantly fed by fuel in the fire-chamber D, and the burning gases move along the flue E, which is of greater width than height, in order to expose as much boiler-surface as possible to their heating influence, until they arrive at the contracted orifice *f*, which partly checks their progress by allowing only a part of them to pass through into

the chamber F, thereby giving the burning gases full opportunity to give off their heat to the chamber C. The chamber F having a much larger area than the orifice *f*, the gases become partly checked in their speed, and consequently are thoroughly ignited before they escape into the pipe G.

The upward tendency of the heat causes the hotter portions of the gases to ascend to the top of the chamber F, and there give off their heat to the end of the steam-chamber C and to the end *b* of the trough B before they find their way out into the smoke-pipe G.

The described apparatus is also used for steaming food for hogs and other animals, for which purpose the chains J are unhooked from the windlasses, in order to give the operator room to move the food about in the trough B and manipulate the steam-pipes *h h'*.

The heat obtained from the steam in the chamber C does not at any time become hot enough to scorch or burn the food steamed in the trough, while any amount of heat necessary for cooking the food may be immediately supplied at the very spot where wanted by means of fresh steam from either of the nozzles *h'* of the pipes H.

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

The frame A, with metal bottom B, surmounted with windlasses and chains, with slats connecting them, in combination with a furnace and flue, D E, which have a steam-chamber formed above them below the bottom B, which steam-chamber is provided, as described, with steam-pipes for conveying steam or heated vapors into the trough, whereby an apparatus adapted for conveniently handling and scalding hogs and for steaming food for animals is produced, substantially as described.

HENRY STRYCKER.

Witnesses:
HENRY V. CURTIS,
JO. H. DEFREES, Jr.