C. H. DUNBRACK.
Feed-Steamer.

No. 220,360. Patented Oct. 7, 1879.

Fig. 1.

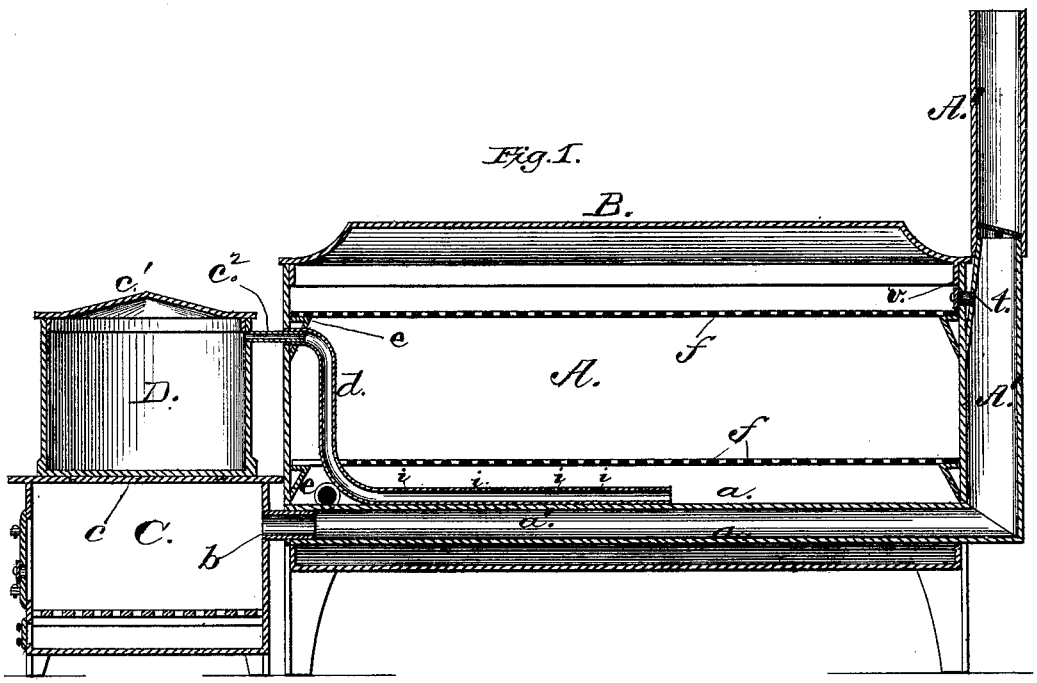
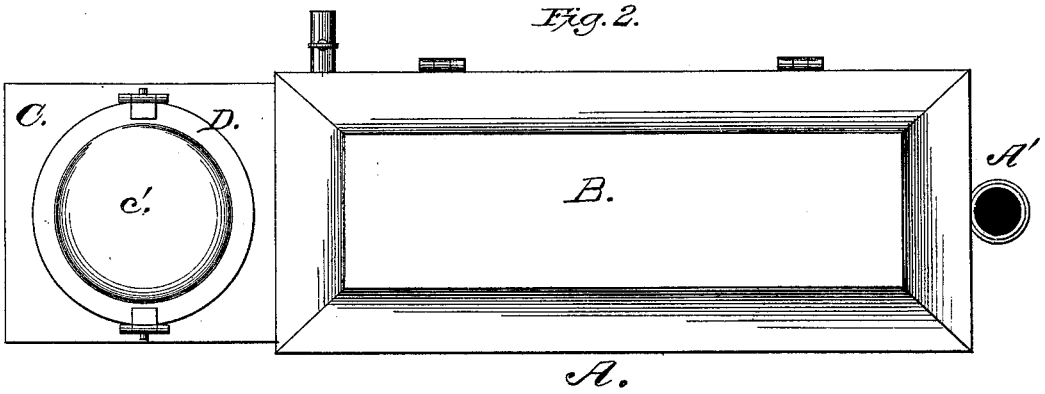


Fig. 2.



WITNESSES
John A. Lewis.
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UNITED STATES PATENT OFFICE.

CHARLES H. DUNBRACK, OF JACKSONVILLE, ILLINOIS.

IMPROVEMENT IN FEED-STEAMERS.

Specification forming part of Letters Patent No. **220,360**, dated October 7, 1879; application filed August 9, 1879.

To all whom it may concern:

Be it known that I, CHARLES H. DUNBRACK, of Jacksonville, in the county of Morgan and State of Illinois, have invented a new and valuable Improvement in Combined Feed-Steamer, &c.; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation 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 representation of a longitudinal central vertical section of the device, and Fig. 2 is a top view of the same.

This invention has relation to improvements in combined feed-steamers, boilers, and fruit-driers.

The nature of the invention consists in a certain novel construction and arrangement of the devices employed, as will be hereinafter more fully set forth.

In the annexed drawings, the letter A designates an oblong metallic vessel, supported upon suitable legs and provided with a double bottom, *a*, forming a smoke-flue, *a'*, opening at its rear into a stack or chimney, A', having the usual damper attachment. The vessel A is water-tight, and has a lid, B, hinged thereto, that, when down, forms a tight joint therewith.

C indicates a furnace or stove of any simple construction, having an educt-pipe, *b*, extending into the flue *a'* aforesaid, and provided with a grate, an ash-pan, and a hinged door for the introduction of fuel. It has also in its top an opening, *c*, to receive the boiler D, having a detachable tight lid, c^1, and an educt-pipe, c^2, fitting tightly into the end of a pipe, *d*, extending down vertically into the vessel A, and carried along the inside thereof horizontally a sufficient distance.

The horizontal part of pipe *d* is provided with numerous small perforations *i*, and, if desired, may extend from end to end of the vessel in either straight or irregular form.

Inside of vessel A, at each end, are provided ledges *e*, designed to support (the one above the other) the trays *f*. These may be of any desired construction and material, provided they be in open-work or reticulated.

The stove, it should be understood, is not permanently attached to the vessel, and may be used for many farm purposes, such as rendering lard, making soap, and the like; nor is the boiler permanently secured to the stove, but may be lifted off and the opening thereby disclosed covered by a suitable metallic plate.

The operation of the device is as follows: The stove being connected to the flue *a'* of vessel A, and the boiler on the stove and its educt c^2 connected to the perforated pipe *d*, a sufficient quantity of water is poured into the vessel and boiler and the fire started in the stove. Necessarily the water in the boiler will boil and generate steam first, but at the same time the water in the vessel will be heating, owing to the passage of the products of combustion through flue *a'*; and this process will be greatly accelerated by the discharge of steam generated in the boiler into vessel A through the perforations *i* of the submerged part of pipe *d*. The water thus brought to the boiling-point may be used to scald hogs, cook feed for cattle, and for other purposes.

By lifting off the boiler and closing the hole in the stove, the vessel A being free of water, and the trays containing fruit to be dried placed within the same, hot dry air is produced in sufficient quantity to speedily absorb the moisture from the food.

When used as a drier, a valve, *v*, closing a short tube, *t*, leading from the vessel into the stack, is opened. An upward draft is thus created (pipe *d* being open) that carries off the moisture extracted from the fruit.

In steaming feed the boiler is set upon the stove and connected to pipe *d*, the feed being upon the trays, and, if desired, the bottom of vessel A covered with water. Steam is rapidly generated.

In practice, valve *v* may be arranged as a safety-valve of the usual description to relieve vessel A of undue or dangerous pressure; or I may use an independent safety-valve for this purpose.

What I claim as new, and desire to secure by Letters Patent, is—

In a combined boiler, steamer, and cooker, the

combination with a vessel, A, having smoke-flue a', leading into the stack, and pipe d, having perforations i, of the detachable stove C, having educt b, leading into flue a', the removable boiler D, having educt c^2, opening into pipe d, a short pipe connecting the vessel and the smoke-stack, and a valve, r, closing said pipe, substantially as specified.

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

CHARLES H. DUNBRACK.

Witnesses:
J. C. WIDENHAM,
J. S. HAMBAUGH.