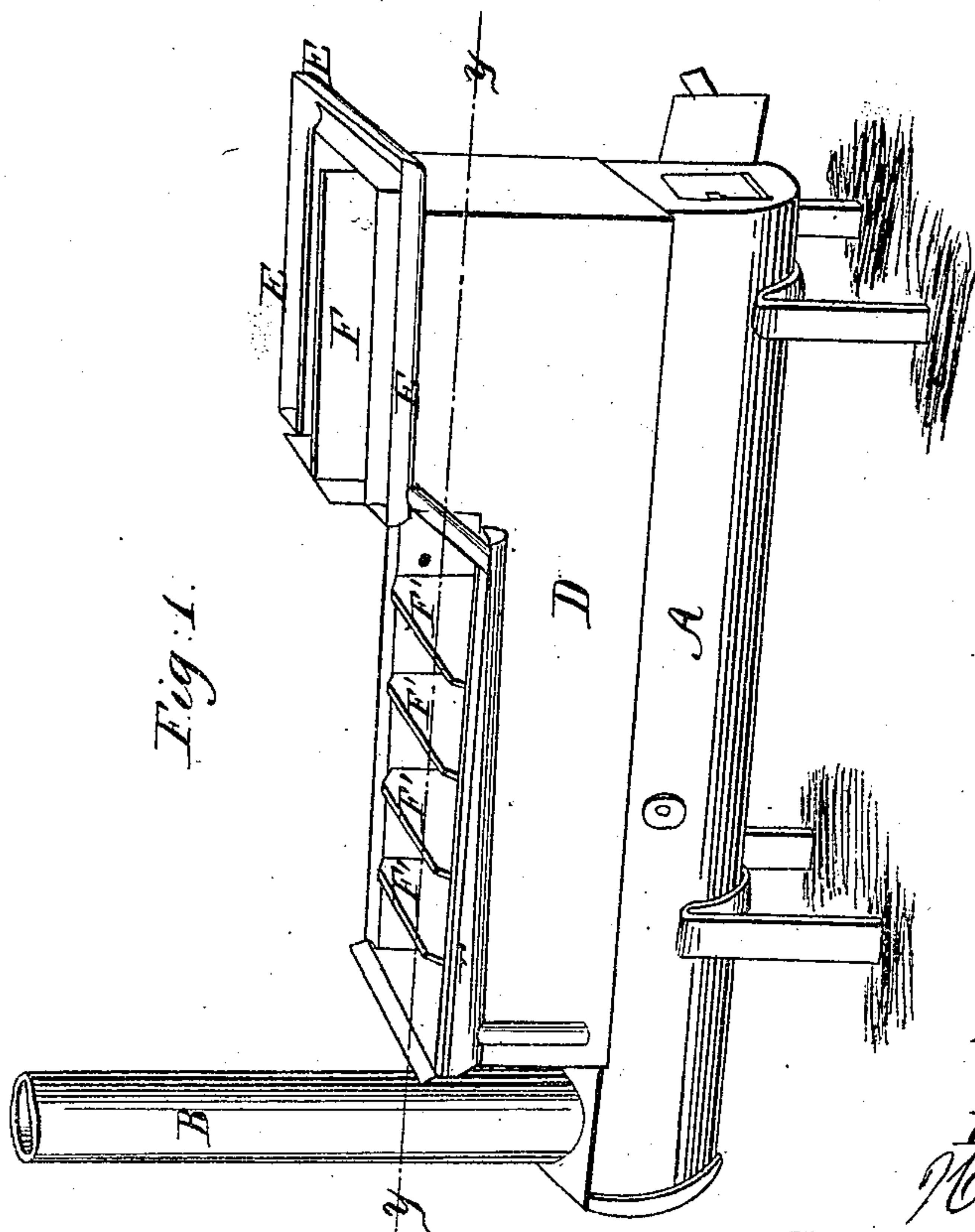
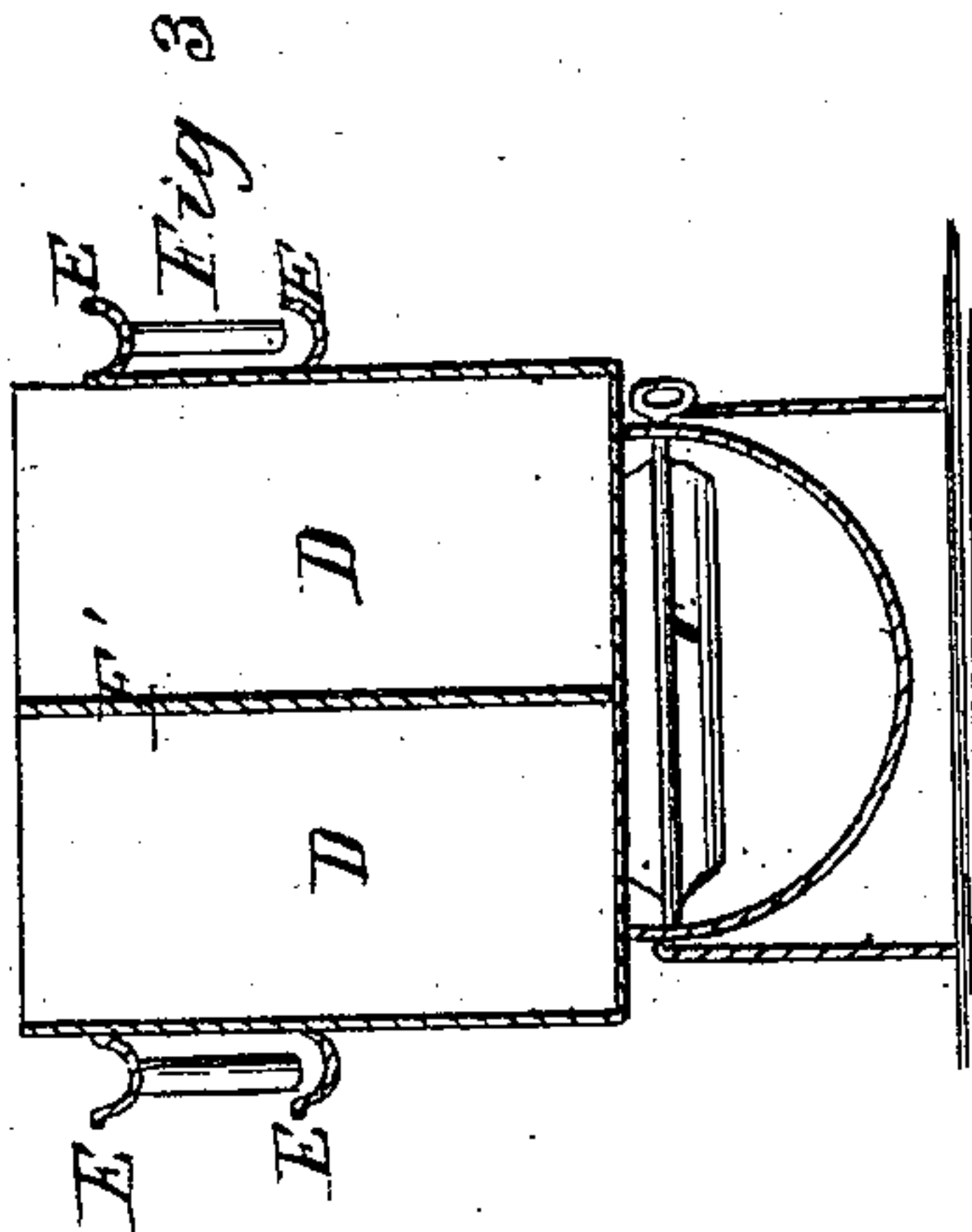
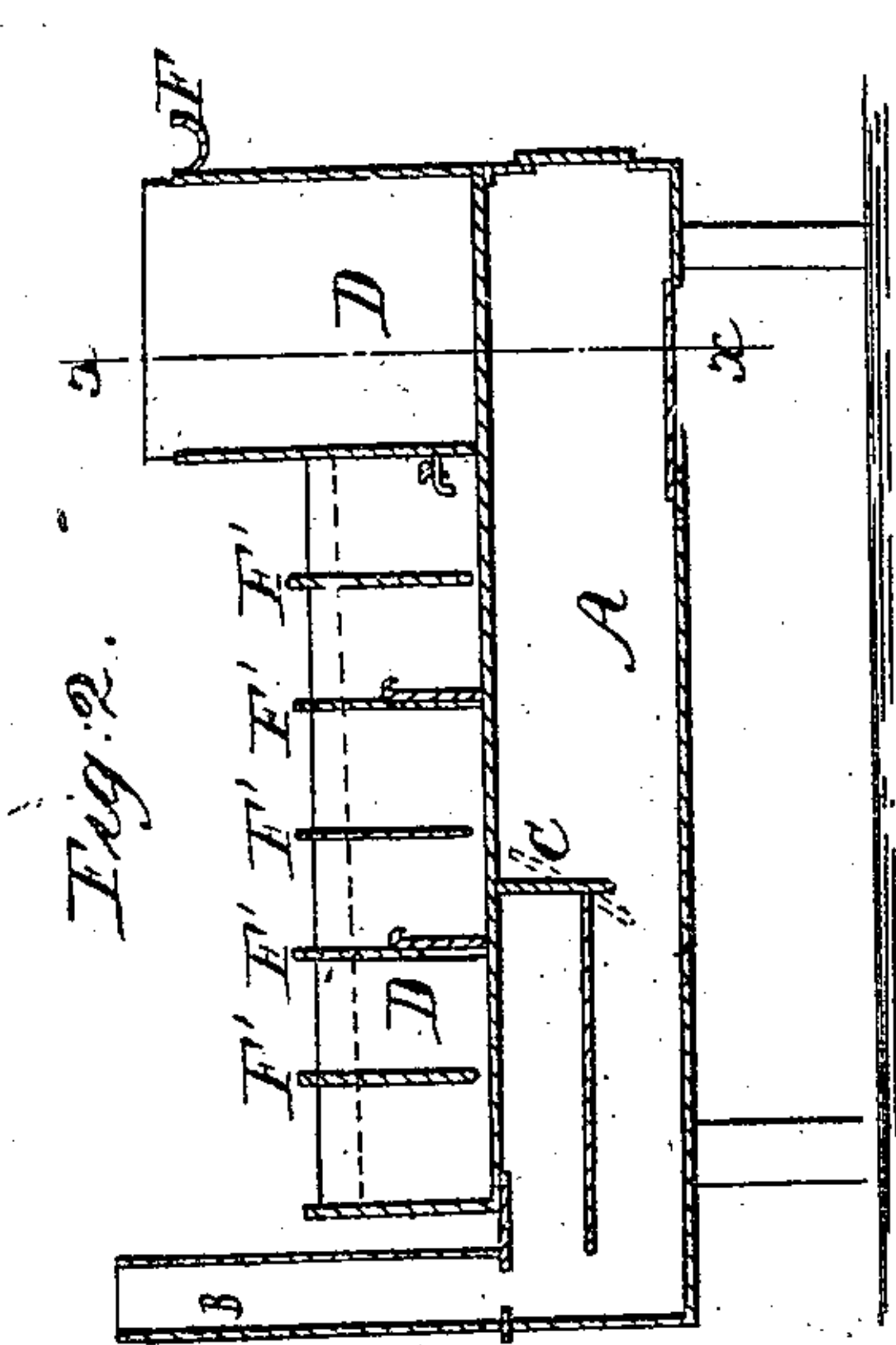


H. Ramey,

Evaporating Pan.

No. 87,288.

Patented Feb. 23. 1869.



*Witnesses,
J. M. Blanchard
& P. Clausen*

*Inventor,
H. Ramey
Per D. D. Holloway, Atty's*



HENRY RAMEY, OF LOUISVILLE, KENTUCKY.

Letters Patent No. 87,288, dated February 23, 1869.

IMPROVED SORGHUM-JUICE EVAPORATOR

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, HENRY RAMEY, of Louisville, in the county of Jefferson, and State of Kentucky, have invented a new and useful Improvement in Self-Skimming Evaporators; 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 part of this specification, in which—

Figure 1 is a perspective view of my improved self-skimming evaporator, and of the furnace in connection with which it is used;

Figure 2 is a central longitudinal elevation, on line *y-y* of fig. 1; and

Figure 3 is a vertical elevation on line *x-x* of fig. 2.

Corresponding letters denote corresponding parts in the several figures.

This invention relates to that class of evaporators in which the juices containing saccharine matter are to be treated; and

It consists in the construction of such evaporator, whereby the scum, which rises upon the surface of the juice while being boiled, shall be allowed to pass off from the pan or pans, and be conveyed to any desired locality.

A, in the drawings, represents the furnace, which may be constructed of sheet-iron, or of any other suitable material, and of any form adapted to the reception of the evaporating-pan D and the damper C.

B is the uptake, through which the products of combustion pass from the furnace to the atmosphere.

C is a damper, which is placed within that portion of the furnace which constitutes the flue, or passage, which leads from the grates to the uptake, and which is so arranged, with reference to a deflecting or dividing-plate, placed horizontally within such flue or passage, that the heated products of combustion, in passing, may be conducted above such plate, and in immediate contact with the pan; or they may be made to pass entirely below such plate, and thus prevent the liability of burning the sirup at that point.

D is an evaporating-pan, which is to be made of copper, or any other suitable material, and which has, at its forward end, or that portion of it which is over the hottest portion of the furnace, two compartments, formed by inserting centrally therein the vertical partition-plate F, shown in fig. 3.

These compartments are each provided with a cock, or valve, *a*, by which the saccharine matter may be drawn from them into the shallow compartments of the pan, after it has been boiled, and to some extent neutralized therein.

This evaporating-pan is also provided with a series of compartments, which are located in the rear of those already alluded to, and into which the juice is drawn from the first-mentioned ones, for the purpose of being converted into sirup therein.

The division-plates F', which, together with the walls of the pan, constitute those apartments, are so arranged that the material, in passing from the front to the rear one, passes alternately under and through such partitions, those through which it passes being controlled by sliding gates, or valves, in such a manner that the progress of the material from one compartment may be controlled, and the same be returned, for a longer or shorter period of time, in contact with the more highly-heated portion of the pan.

E is a trough, or conduit, which is formed upon or attached to the upper and outer edge of the pan, which may be made flaring for a short distance downward from such edge, said trough being for the purpose of receiving any overflow from such pan, and especially for receiving the scum which rises while the juice is being boiled, and for conducting the same to any desired location.

Those portions of the trough, or conduit, which surround the more elevated portions of the pan, may be provided with vertical pipes, for conducting the scum or overflow from such elevated portion into the trough; or conduit, which surrounds the lower portion of the pan.

I have described my evaporating-pan as being made entirely of metal, but it will be apparent that its sides may be made of wood, and secured to a metallic bottom, in such a manner as to prevent any leakage at such joints, if that form of construction should be preferred.

Having thus described my invention,

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

The arrangement of the conduits E E and vertical partitions F F', with reference to the bevelled flange secured to the upper edge of the evaporating-pan, substantially as shown and described.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

HENRY RAMEY.

Witnesses:

J. W. READ,
T. J. CRUME.