# H. Holcomb.

## Evaporating Pan.

No. 66,494. Patented Jul. 9, 1867.

Fig. 1

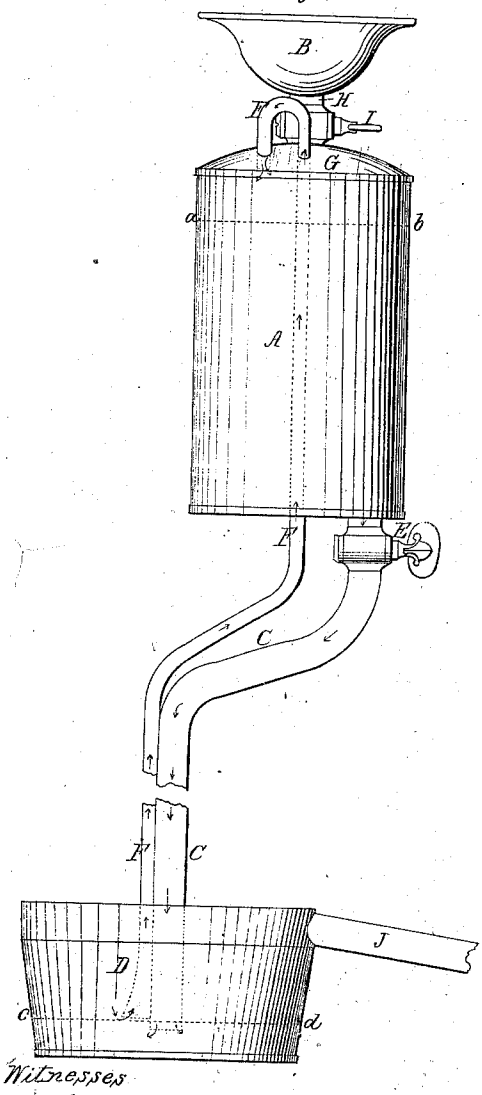
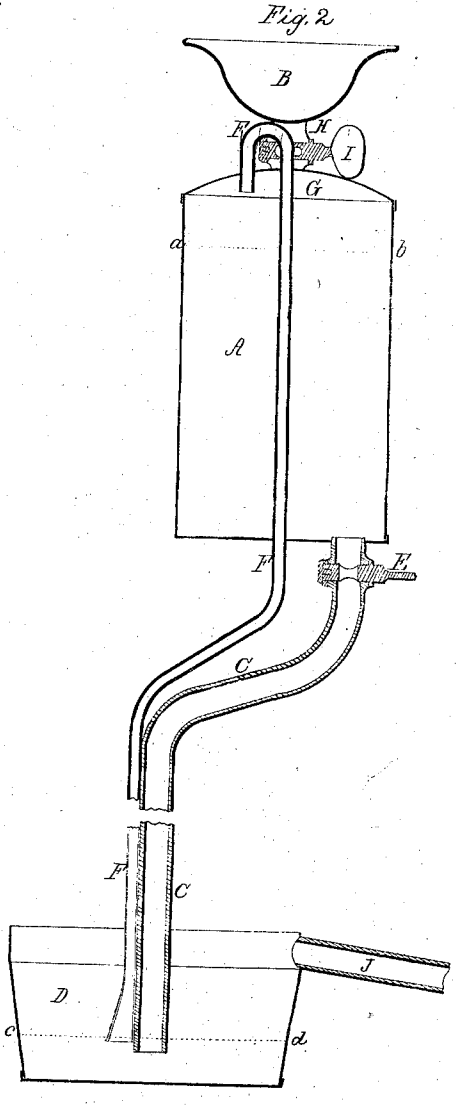



Fig. 2




Witnesses
J. F. Single
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# United States Patent Office.

HENRY HOLCOMB, OF PAINESVILLE, OHIO.

*Letters Patent No. 66,494, dated July 9, 1867.*

## IMPROVED AUTOMATIC FEED FOR STEAM-PANS.

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 HOLCOMB, of Painesville, in the county of Lake, and State of Ohio, have invented an Improved Automatic Feed for Vapor-Pans, &c.; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation representing the exterior appearance of my said automatic feed; and

Figure 2, a vertical central section of the same.

The letters of reference indicating similar parts in both figures.

This invention is designed to be employed in connection with the vapor-pans of hot-air furnaces used for warming buildings. It is also adapted for sorghum-evaporators, and for all other processes that require the water or other fluids to be supplied as evaporation goes on. It is automatic or self-acting, and will keep up the supply, fast or slow, without further attention.

My said improved automatic feed consists of a reservoir, to the bottom of which is attached a feed pipe, communicating with its interior, and an air pipe which passes through it and the top thereof, over which it bends and passes again into the body of the reservoir. Attached to the top of said reservoir is a neck or short pipe, supporting a filler; this neck is provided with a stop-cock, as also is the feed pipe before mentioned. The lower ends of the said air and feed pipes are open, and are placed within the vapor-pan or evaporator, so that, when the level of the water or other fluid falls below the open end of the said air pipe, air will enter and pass up into the vacuum, and cause the water to descend the feed pipe, as will be explained.

A, fig. 1, is a reservoir or body, and B a filler. For common purposes the said reservoir and filler may be of tin-plate, but for particular uses it is designed to have the body of said reservoir constructed of glass, so that the quantity of the fluid can be readily noticed at any time. C is a feed pipe for supplying the water, &c., to the vapor-pan D. It is secured to the bottom of the body of the reservoir, and is provided with a stop-cock E, as shown. The air pipe F, as will be seen, passes through the interior of the body of the reservoir, and comes out at the top G, over which it bends, and returns again into the interior. The filler B is supported above the top G, and communicates with the inside of the reservoir by a short pipe, H, in which is a stop-cock, I. The said pipes C F and H are made of any suitable metal, and may be lined or coated on the inside if required. The vapor-pan D has a waste pipe, J, attached to it, for the purpose of providing against accident from any disarrangement that might happen to the reservoir.

In using my said automatic feed with hot-air furnaces, the apparatus can be placed on a convenient bracket, secured to the wall of the room above the apartment in which the furnace is kept, and connect with it by passing the feed and air pipes through the floor. It will thus be within convenient reach for refilling without the trouble of going below.

By reference to the dotted lines and arrows of the figures, the operation of self-feeding will be readily understood. In fig. 2 the reservoir is represented filled with water to the line *a b*. This is done by closing the lower stop-cock E, and opening the upper one I, after which the upper one is again closed and the lower one opened; the water will now descend the supply-tube C, as seen by the arrows in fig. 1, until its level in the vapor-pan D rises above the open end of the air tube F, as seen by the dotted lines *c d*, fig. 2, closing it and cutting off the ingress of the air to the vacuum in the reservoir, which stops the supply. When the level of the water reaches below the mouth of the said air tube F, air is again admitted, which passes up and over the top into the reservoir, thereby causing the water again to fall down the supply pipe, until again cut off by the closing of the mouth of the air tube as before.

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

1. I claim the within-described automatic feed apparatus, consisting of the reservoir A, filler B, supply pipes C and H, stop-cocks E and I, and air pipe F, arranged, combined, and operating as herein set forth and for the purpose specified.

2. The combination of the said described apparatus with vapor-pans, evaporators, tanks, and other articles used in the processes of the evaporation of fluids.

Witnesses:

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M. S. HARVEY.

HENRY HOLCOMB.