

Owel H. Willard & Andrew Pope's
Milk Tempering and Cream saving Apparatus

No. 123,318.

Patented Jan. 30, 1872.

Fig. 1.

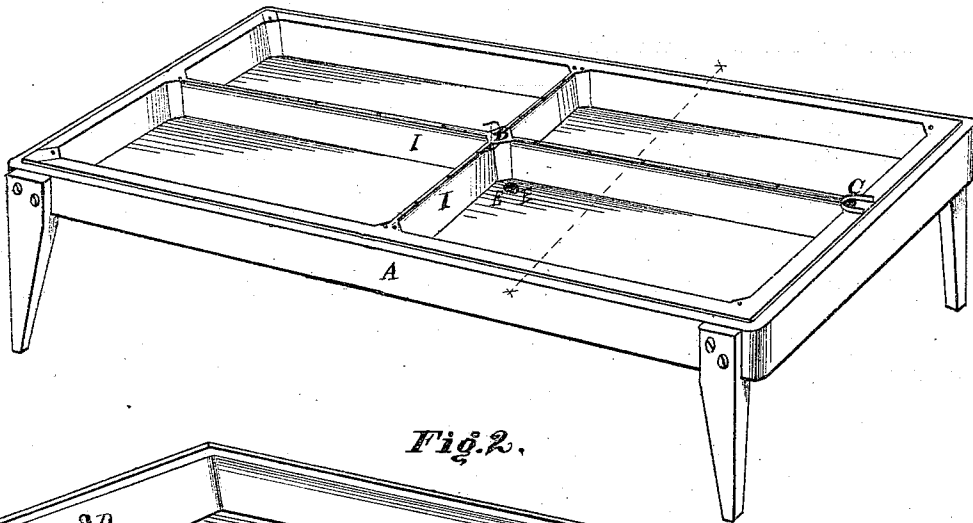


Fig. 2.

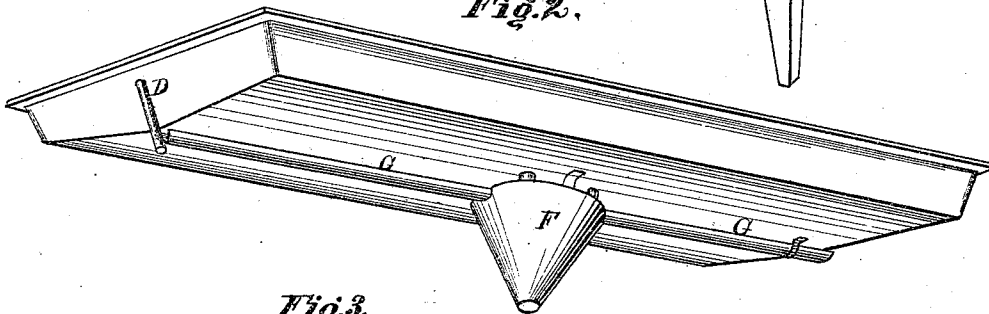


Fig. 3.

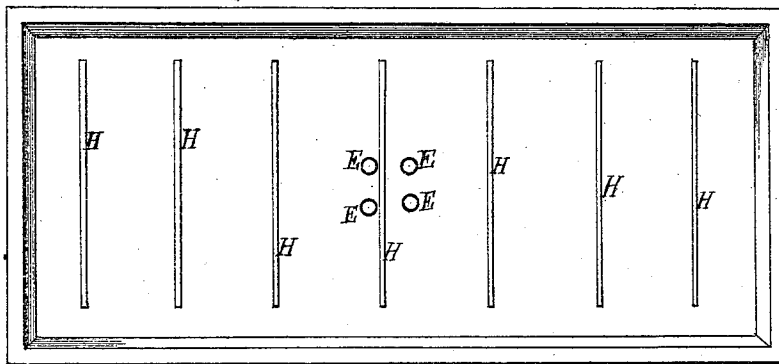
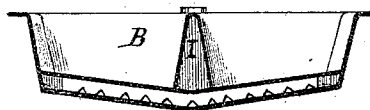


Fig. 4.



Witnesses:

Joseph E. Welden.
Charles L. Matteson.

Inventor.

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UNITED STATES PATENT OFFICE.

OWEL H. WILLARD, OF RANDOLPH, AND ANDREW POPE, OF CONEWANGO,
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IMPROVEMENT IN MILK-VATS.

Specification forming part of Letters Patent No. 123,318, dated January 30, 1872.

To all whom it may concern:

Be it known that we, OWEL H. WILLARD, of Randolph, in the county of Cattaraugus and State of New York, and ANDREW POPE, of Conewango, in the county and State aforesaid, have invented certain new and useful Improvements in Milk-Tempering and Cream-Saving Apparatus; and we 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 drawing making a part of this specification, in which—

Figure 1 is a perspective top view of our combination milk-vat in position for use. Fig. 2 is a perspective bottom view of the same, showing its discharge attachments in position. Fig. 3 is a transverse section of the double bottom to the same, with the upper section removed, showing the water-course and corrugated rests in position between its upper and lower sections. Fig. 4 is a vertical section of the combination milk-vat, showing the space or water-course between the upper and lower sections of the bottom, and, also, between the hollow partition-walls.

Like letters refer to like parts in all the drawings, in which—

A is the portable frame or vat-stand, constructed of any suitable material, and of a height to suit convenience in operating the vat. B is the milk-vat, made of capacity to contain the required amount of milk, and in form a shallow oblong, divided into four equal pans by means of hollow partitions, which intersect each other at the central point in the vat, and are of equal height with the outer rim or wall thereof and aid in preventing the bottom from sagging under the weight of its contents. C is a tubular opening, communicating with the water-course longitudinally through the double bottom and the hollow partitions of the vat to admit the tempering water from the pen-stock or hot-water closet, as the season may require. D is the issue for the discharge of tempering water after it has traveled the circuit of the vat and imparted its tempering influence, when it may be conducted away as waste water or saved for cleansing purposes when needed. E are milk-issues or discharge-pipes, opening from the vats outward and

downward through the double bottom, leaving it water-tight at each intersection therewith, and furnished with close fitting plugs or disks, composed of metal or other suitable material, and to be opened or closed, as desired, to retain or discharge the vats' contents. F is the funnel-shaped director, adjustably attached to the bottom of the vat so as to encompass the four milk-issues or discharge-pipes from the several milk-pans concentrating their discharge into one stream to be conveyed to its destination in one common spout. G are dripping-spouts, placed longitudinally under the vat and terminating within the funnel-formed director and used to conduct away the drippings of condensed vapor which accumulates upon the cool surface of the vat in warm weather. H, Fig. 3, are corrugated rests, affixed to the lower and between the two bottoms of the vat, furnishing support to the upper one, preventing a collapse of the two, and closing up the water-course between them. I are hollow partitions, constituting an extension of the tempering surface, their chambers communicating with and forming a part of the tempering water-course through the combination, their upper edge being punctured to allow the air to escape so as not to prevent the water therein rising to a level with the upper opening of waste-water escape-pipe. We construct of tinplate an oblong hollow vat, then subdivide the same into four equal pans, each to hold the milk from fifteen, twenty, and twenty-five cows; and, when a much larger quantity of milk is to be stored, it will be found more convenient to use more of the vats than to enlarge them over the capacity of the said twenty-five cow vats; but they may be constructed of any desired capacity.

The milk-vat being complete and adjusted for use, its operation is simple and easily understood: At the first milking fill one of the four pans, and another at the next milking, and so on until all the pans are filled; then skim and empty the pan first filled to receive the next milking, and so on alternately in the regular rotation.

Its water department is easily understood and operated, and, where running water is to be had, a constant or an intermittent flow may be had through the vat. When required the vat may

be completely emptied of water by use of a stop-cock in the lower bottom.

Having thus fully and completely described and explained the construction and operation of our invention, we proceed to state what we claim as new and wish to secure by Letters Patent of the United States:

The vat D having milk-issues E and com-

bined with the adjustable director F, inclosing all the milk-issues, and with the dripping-spouts G, all arranged as specified.

OWEL H. WILLARD.
ANDREW POPE.

Witnesses:

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