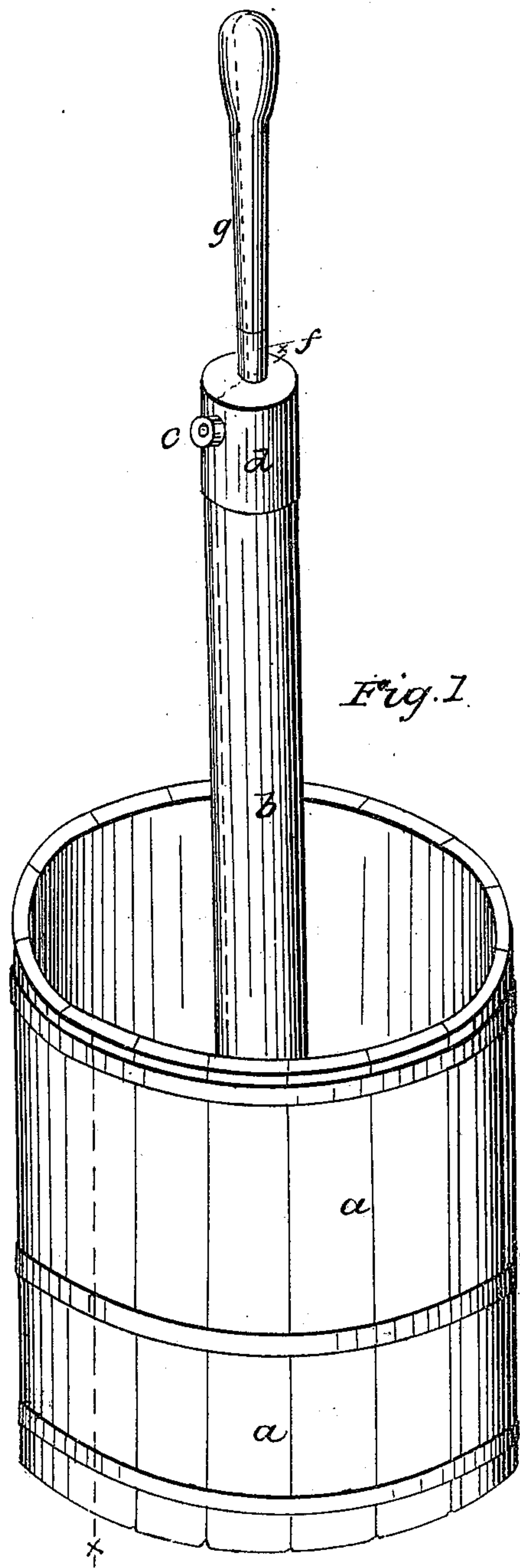
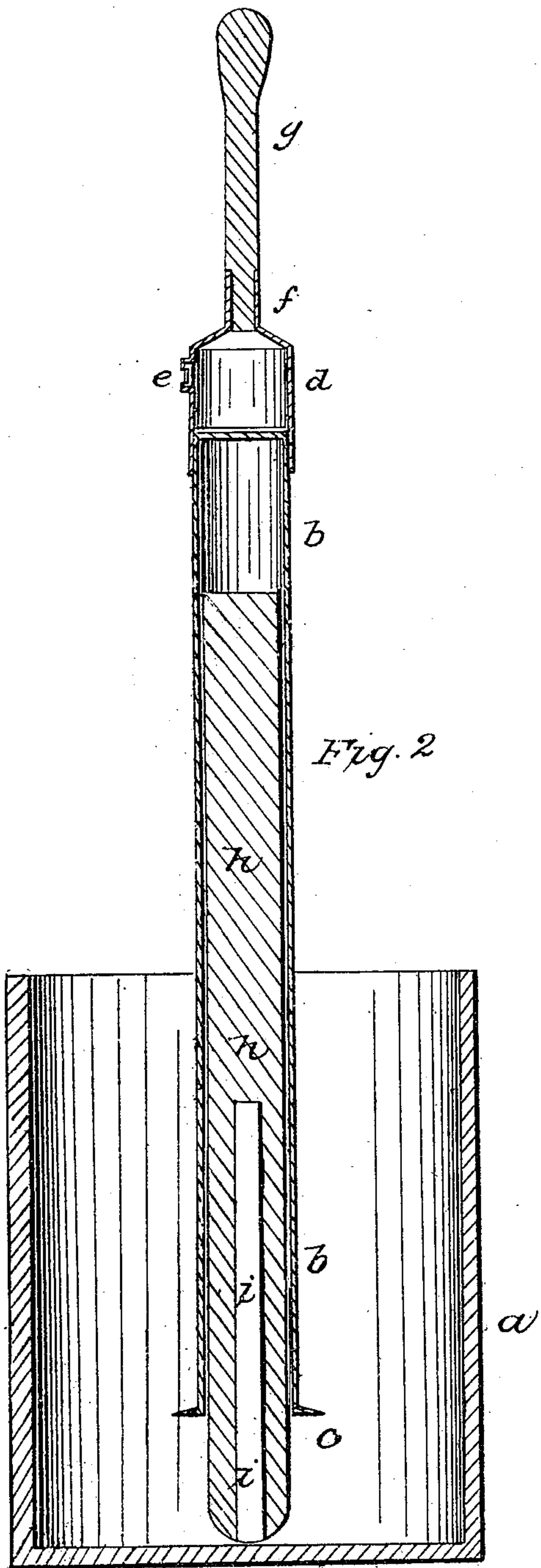


W. M. WRIGHT.

Churn.

No. 6,711.

Patented Sept. 11, 1849.



UNITED STATES PATENT OFFICE.

WILLIAM M. WRIGHT, OF PITTSBURGH, PENNSYLVANIA.

ATMOSPHERIC CHURN-DASHER.

Specification of Letters Patent No. 6,711, dated September 11, 1849.

To all whom it may concern:

Be it known that I, WILLIAM M. WRIGHT, of Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented a new and Improved Atmospheric Churn-Dasher, of which the following is a full and exact description, reference being had to the annexed drawings of the same, making part of this specification, in which—

Figure 1 is a perspective view of the dasher placed in the tub which contains the cream. Fig. 2 is a vertical section taken through the line (*x x*) of Fig. 1.

The same letters indicate the same parts in all the figures. My invention consists in constructing a hand dasher, in such a manner, that it will operate as an air pump to force a stream of air into the cream at the same time that it agitates it while being raised and lowered in the act of pumping.

In the accompanying drawings *a* is the tub or vessel containing the cream, which may be provided with a lid perforated for the stem of the dasher to pass through. This tub may be made of any convenient form, and of any suitable material, or almost any ordinary pail or dairy vessel of the requisite capacity, will answer the purpose, particularly, if it be deep in comparison with its width. The dasher consists of a tube *b* of tinned sheet iron or other suitable material, on the lower end of which a flange *c* may be formed to agitate the cream more effectually; a cover or cap *d* closes the upper end of the tube, on the side of which is a valve *e* which opens inward to admit air into the interior of the tube *b* but closes to prevent it from returning again; from the top of the cap a socket *f* projects to receive the handle *g* which is secured in it for the purpose of being taken hold of to operate the dasher. Within the tube *b* a cylindrical piece of wood *h* Fig. 2, is placed, which is enough smaller in diameter than the interior of the tube to allow air to pass freely down through the space between them. This cylinder should be made of some material specifically heavier than cream, or it may be made of wood and weighted with a plug of metal *i* placed in its lower end large enough to sink it in the

cream. The cylinder *h* acts as a plunger for the tube *b*, which is at once the stem of the dasher, and an air pump.

The operation of churning is performed as follows—The cream being properly prepared and placed in the tub *a*, the plunger or cylinder *h* is inserted in it, with its weighted end resting on the bottom of the tub, the tube *b* is then placed over the plunger in the position seen in Fig. 2, and whenever the flange or dasher *c* on its lower end enters the cream the air in the tube begins to be compressed, and as soon as the pressure of the air within the tube, exceeds that of the atmosphere without it, it is plain that the former will pass under the lower end of the tube, and diffuse itself through the cream, and thus, upon the descent of the dasher, a stream of air proportioned to the capacity of the tube and the size of the plunger will be discharged among the cream; while during its ascent the valve *e* will open, and the tube will be refilled with air to be discharged during the next descent of the dasher.

From the fact of the piston resting loosely upon the bottom of the tub, and being capable of moving about and occupying a vertical or inclined position as may best suit the convenience of the operator, and also from the facility with which it and the dasher may be removed from the churn tub and cleaned, and from the simplicity of all the parts being a guarantee against their getting out of order, this apparatus is applicable to churning cream in either large or small quantities with economy and dispatch, and may be operated by either manual or other power.

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

The combination of the loose plunger *h* with the tubular dasher *b* the same being made arranged and operated as herein set forth or in any other substantially similar manner.

WM. M. WRIGHT,

Witnesses:

JOSHUA HANNA,
WM. K. HART,