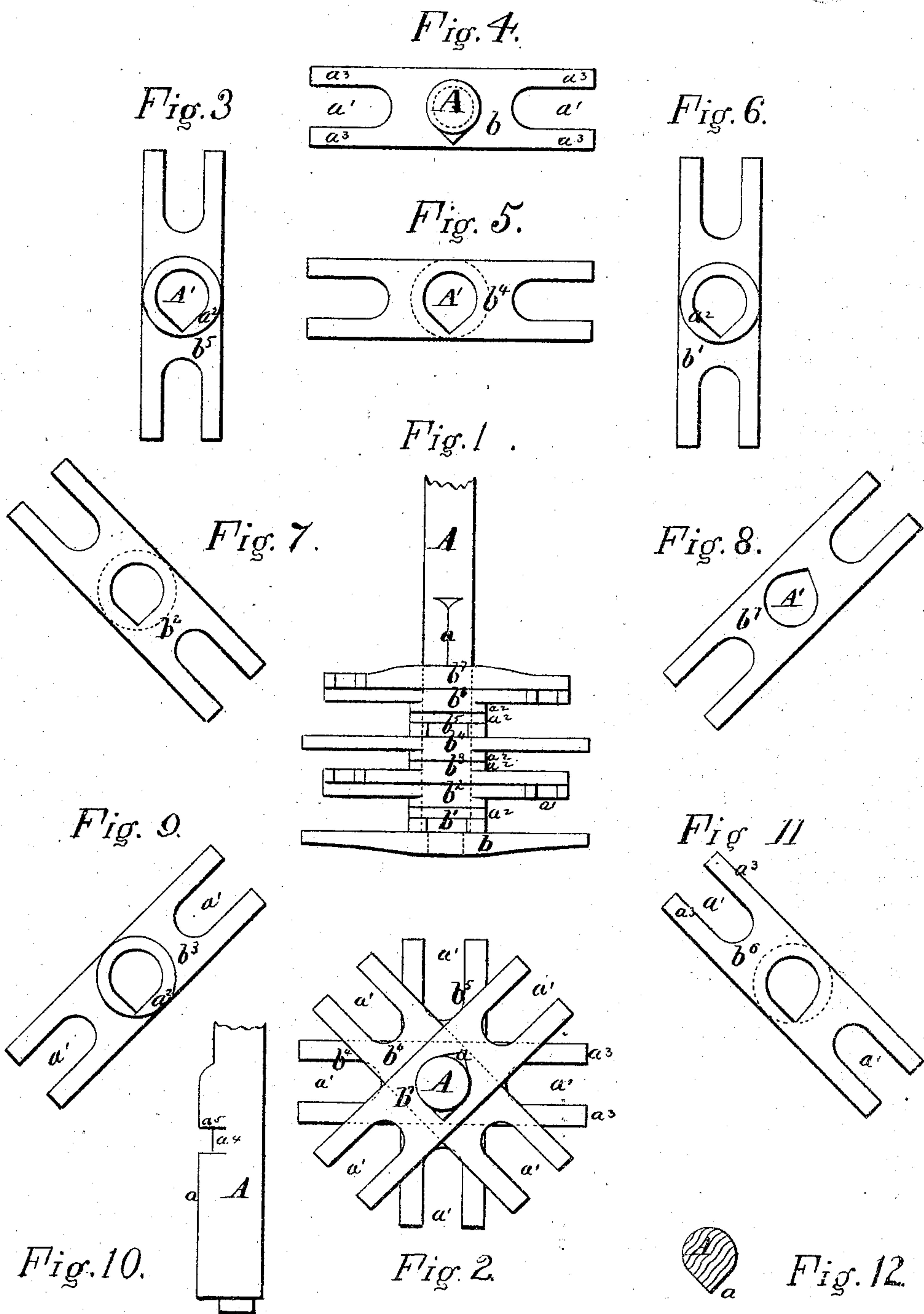


H. S. POTTER.

Improvement in Churn-Dashers.

No. 120,097.

Patented Oct. 17, 1871.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

HENRY S. POTTER, OF HAWLEY, PENNSYLVANIA.

## IMPROVEMENT IN CHURN-DASHERS.

Specification forming part of Letters Patent No. 120,097, dated October 17, 1871.

*To all whom it may concern:*

Be it known that I, HENRY S. POTTER, of Hawley, in the county of Wayne and State of Pennsylvania, have invented a new and valuable Improvement in Churn-Dashers; 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 drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a side view of my invention. Fig. 2 is a top view. Figs. 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 are detail views.

This invention has relation to churn-dashers; and the novelty consists in the peculiar construction and arrangement of the paddles, as hereinafter described; the object being to provide a churn-dasher having a large number of separate paddles, which may be easily constructed, and adapted to their proper positions, as well as removed for the purpose of cleaning them, and which will present the greatest surface possible to the cream without impeding its necessary agitation.

Referring to the accompanying drawing, A represents the dasher-shaft of a plunge-dasher, upon the lower end of which are placed the paddles which agitate the cream. The shaft A is rounded, and from its lower end to a point slightly above the positions of the highest paddle, is beveled to a protruding edge or flange,  $a$ . The lower end is formed with a rounded tenon to hold the lowest paddle, which is marked  $b$ . The paddles, of which any desirable number may be employed, consists of wooden slats, having an elongated slot,  $a^1$ , in each end, and a rounded shoulder,  $a^2$ , on one side or face. They fit on the shaft one over the other, a hole  $A'$  being cut in each, excepting the lowest, marked  $b$ , of a form corresponding to the beveled part of the shaft. These paddles are designed to protrude from the shaft in various directions, as shown in the drawing; hence the holes cut in them, although similar in shape, are arranged variously, as indicated by the angular part, which fits the angle of the shaft.

In the drawing I have shown eight paddles,

which I arrange in the following relative order. The first or lowest,  $b$ , occupies the position already explained, its plane horizontal face being upturned. Upon this I place second paddle  $b^1$  at right angles to it, its plane face down, and shoulder  $a^1$  up. I next arrange the third paddle, marked  $b^2$ , its shoulder  $a^1$  down, at an angle of forty-five degrees to the second, and then place on the third, a fourth paddle,  $b^3$ , at right angles to it. The fifth paddle  $b^4$  comes next in order, and is arranged exactly parallel to the first. It is followed by  $b^5$ ,  $b^6$ , &c., parallel, respectively, to  $b^1$ ,  $b^2$ ,  $b^3$ .

Every pair of contiguous paddles at right angles one to the other, should lie with their plane faces in contact, so that their shoulders  $a^1$  shall separate the oblique paddles, and thus compensate for the difference of space between the points  $a^3$ .

The object of the above-described arrangement of the paddles is to obtain a great amount of surface with which to beat the cream, and to leave the vertical channels created by the spaces  $a$  entirely free from obstructions, so that the cream may rush through and have a side slush between the beating-arms  $a^2$ .

The paddles are constructed with abrupt vertical edges, the arms  $a^2$  being four-sided, and also blunt or square-ended, so as to better adapt them to the performance of their function.

At the locality of the uppermost paddle on the shaft A a recess,  $a^4$ , is cut, which renders the shaft round at that point, with a shoulder,  $a^5$ , above. When the paddle  $b^7$  is placed on the shaft it is turned around slightly at the recess  $a^4$ , and thus serves to lock all the paddles together.

For the purpose of cleaning them all the paddles may be readily removed. At first they fit the shaft somewhat freely, but after a time become swollen by the cream and tightened rigidly in place.

I claim as my invention—

1. The improved churn-dasher, having the shaft A with beveled protuberance  $a$ , and the slatted removable paddles with the beveled holes  $A'$ , shoulder  $a^2$ , elongated slots  $a^1$ , and blunt arms  $a^3$ , said paddles being arranged rel-



atively in the manner and for the purpose described.

2. In a churn-dasher as described, the shaft A having the beveled protuberance  $a$ , recess  $a^4$ , and shoulder  $a^5$ , in combination with the slatted paddles having the beveled holes A', as and for the purpose specified.

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

HENRY S. POTTER.

Witnesses:

D. D. KANE,  
P. C. MASI.

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