(No Model.)

W. H. HANSON.

CHURN DASHER.

No. 352,991. Patented Nov. 23, 1886.

Fig. 1.

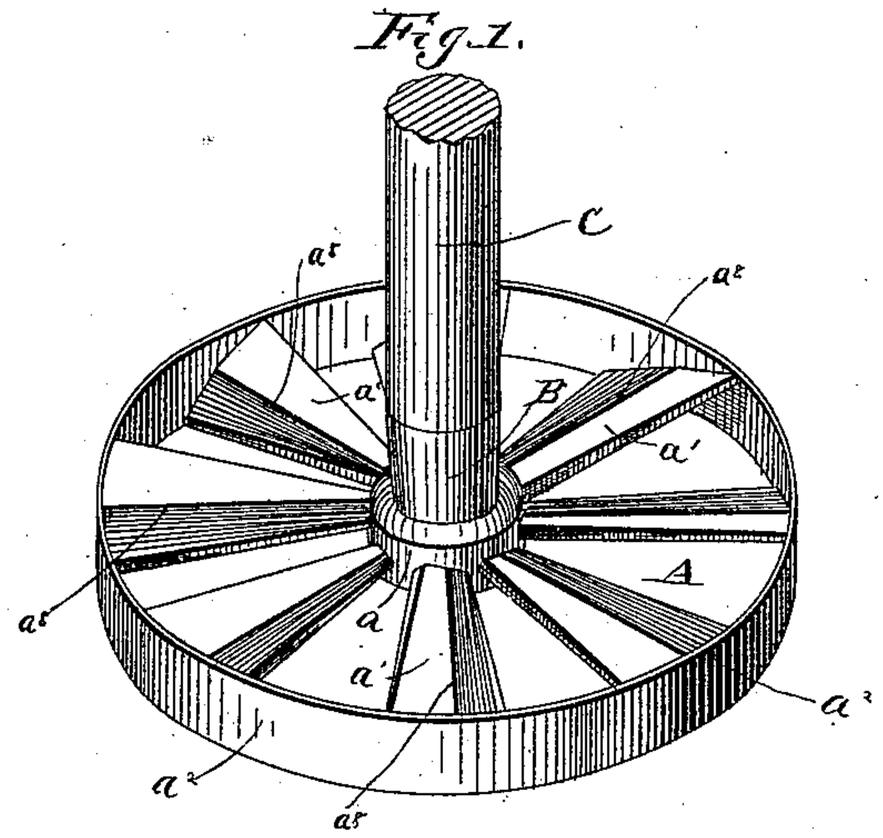


Fig. 2.

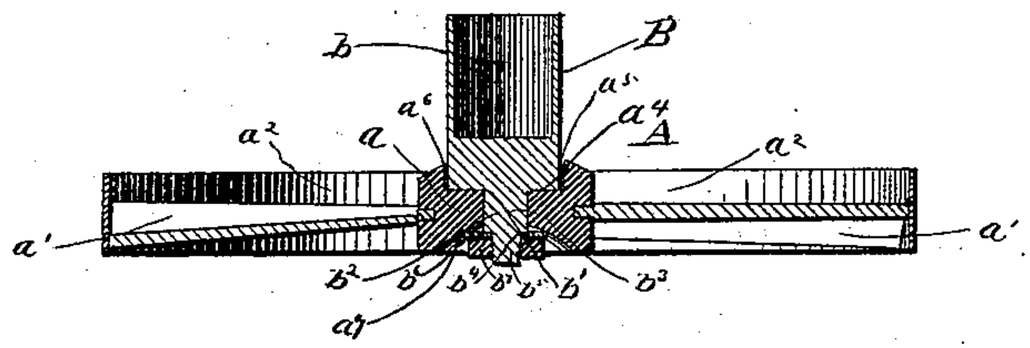
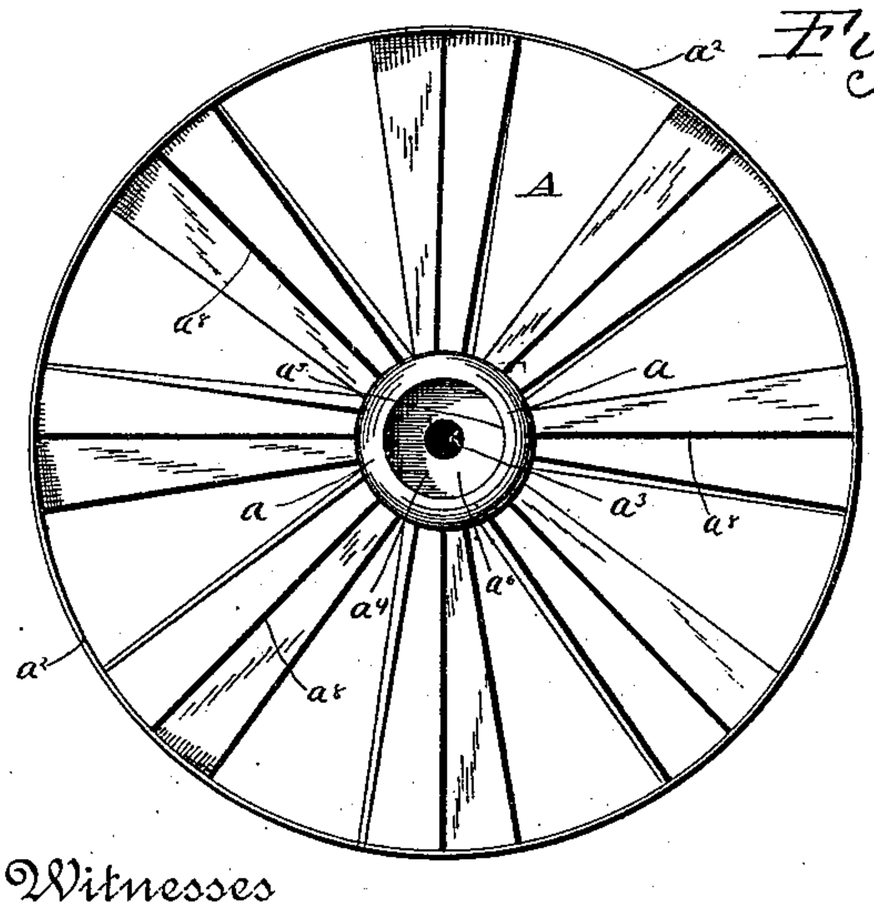
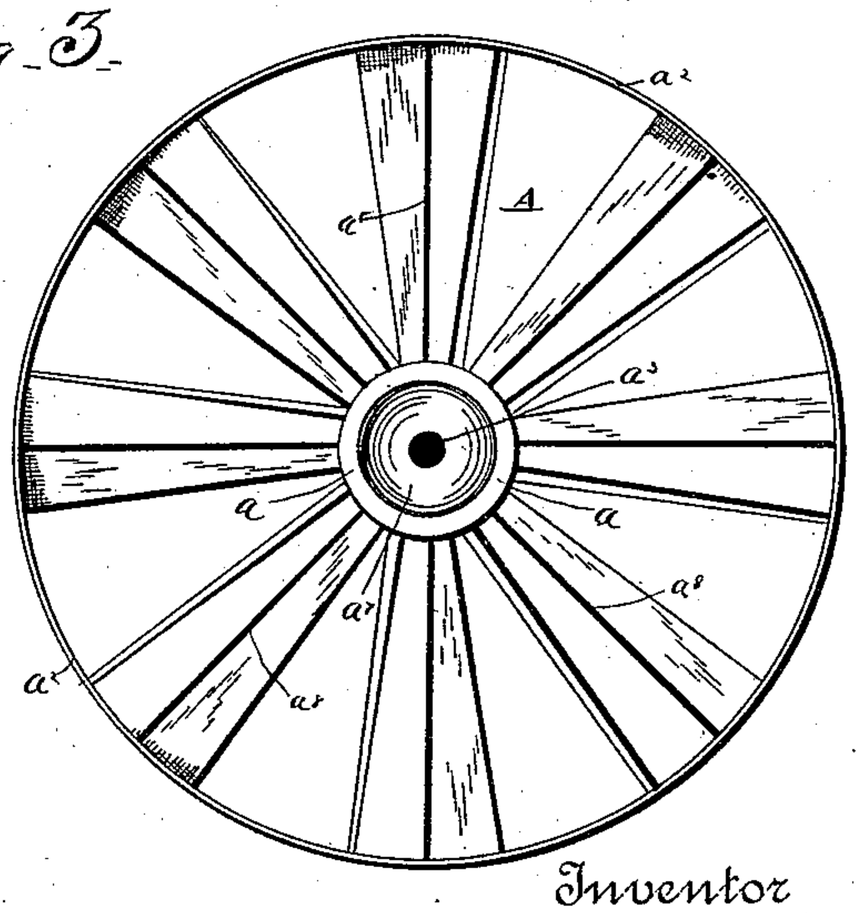


Fig. 3.





Witnesses
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CHURN-DASHER.

SPECIFICATION forming part of Letters Patent No. 352,991, dated November 23, 1886.

Application filed July 13, 1886. Serial No. 207,928. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HENRY HANSON, a citizen of the United States, residing at East Milan, in the county of Monroe and State of Michigan, have invented a new and useful Improvement in Churn-Dashers, of which the following is a specification.

My invention relates to vertically-reciprocating churn-dashers; and the object of my invention is to produce a dasher-head which shall rotate upon the lower end of the dasher-rod in consequence of the said movements of the rod.

My invention consists in certain peculiar and novel features of construction and arrangement, as hereinafter described and claimed.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 is a perspective view of my improved dasher. Fig. 2 is a sectional view of the same on a line running centrally through the dasher-rod. Fig. 3 illustrates the two opposite side views of the dasher-head detached from its socket-piece.

In the said drawings, A designates the dasher-head, which is composed of a hub, *a*, radial blades *a'*, and an annular rim, a^2. The hub *a* is formed with a central bore, a^3, terminating at one end in socket a^4, the margin a^5 of which extends at right angles to its base, a^6. At its opposite end the bore a^3 terminates in a concave socket or countersink, a^7, the diameter of the sockets a^4 a^7 being much greater than that of the bore a^3. Each of the blades *a'* is attached obliquely at its inner end to the hub *a*, and on each side tapers off in opposite directions from a central longitudinal ridge, a^8. The outer ends of these blades are connected, as shown, to the thin annular rim a^2, which offers but slight resistance to the up-and-down movements of the dasher-rod.

B designates the socket-piece for the dasher-rod. The cavity *b* of this socket-piece receives the lower end of the rod C, as shown. At its lower end the socket B is formed with a flat shoulder, *b'*, to fit the cavity a^4 of the hub. From the middle face of shoulder *b'* extends the spindle b^2, the smooth portion b^3 of which is of greater length than the bore a^3 of the hub, and terminates in a flat shoulder, b^4. From this shoulder b^4 extends the reduced threaded portion b^5, which receives the washer b^6 and nut b^7, said washer and nut lying within the concave socket or countersink a^7 of hub *a*.

From the above description it will be seen that when the nut and washer are tightened up they do not bear upon the hub, but against the shoulder b^4, so that the hub is free to turn upon the smooth portion b^3 of the spindle and between the washer b^6 and shoulder *b'*. Consequently as the dasher-rod is reciprocated up and down the resistance offered by the oblique blades *a'* will cause the dasher-head to rotate first one way and then the other, the beveled sides of the blades causing them to rapidly break up the cream and gather the butter.

By this device the operation of the churn is greatly improved, not only in speed, but also in ease of working and in the increased quantity and better quality of the butter produced.

Having thus described my invention, I claim—

1. In combination with the socket-piece B, having the projecting spindle, the dasher-head having its hub *a* provided with a socket, a^4, to receive the socket-piece, and a bore or opening, a^3, to receive the spindle, and fastening means to hold the parts together and yet allow the free rotation of the dasher-head on the spindle of the socket-piece, as set forth.

2. The combination, with the socket-piece B, having the shoulder *b'*, and the spindle with its smooth portion b^3, shoulder b^4, and threaded portion b^5, of the dasher-head having the bore a^3, socket a^4, and concave socket a^6, and the nut b^7 and washer b^6, substantially as described.

3. The combination, with the dasher-rod and the socket-piece having cavity *b*, shoulders *b'* b^3, smooth spindle b^2, and threaded portion b^4, of the dasher-head having hub *a*, with its bore *a'* and cavities a^3 a^4, double-beveled oblique blades *a'*, rim a^2, and nut b^7 and washer b^6, as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

WILLIAM HENRY HANSON.

Witnesses:

MOSES J. HOWE,

HANNAH HIPPY.