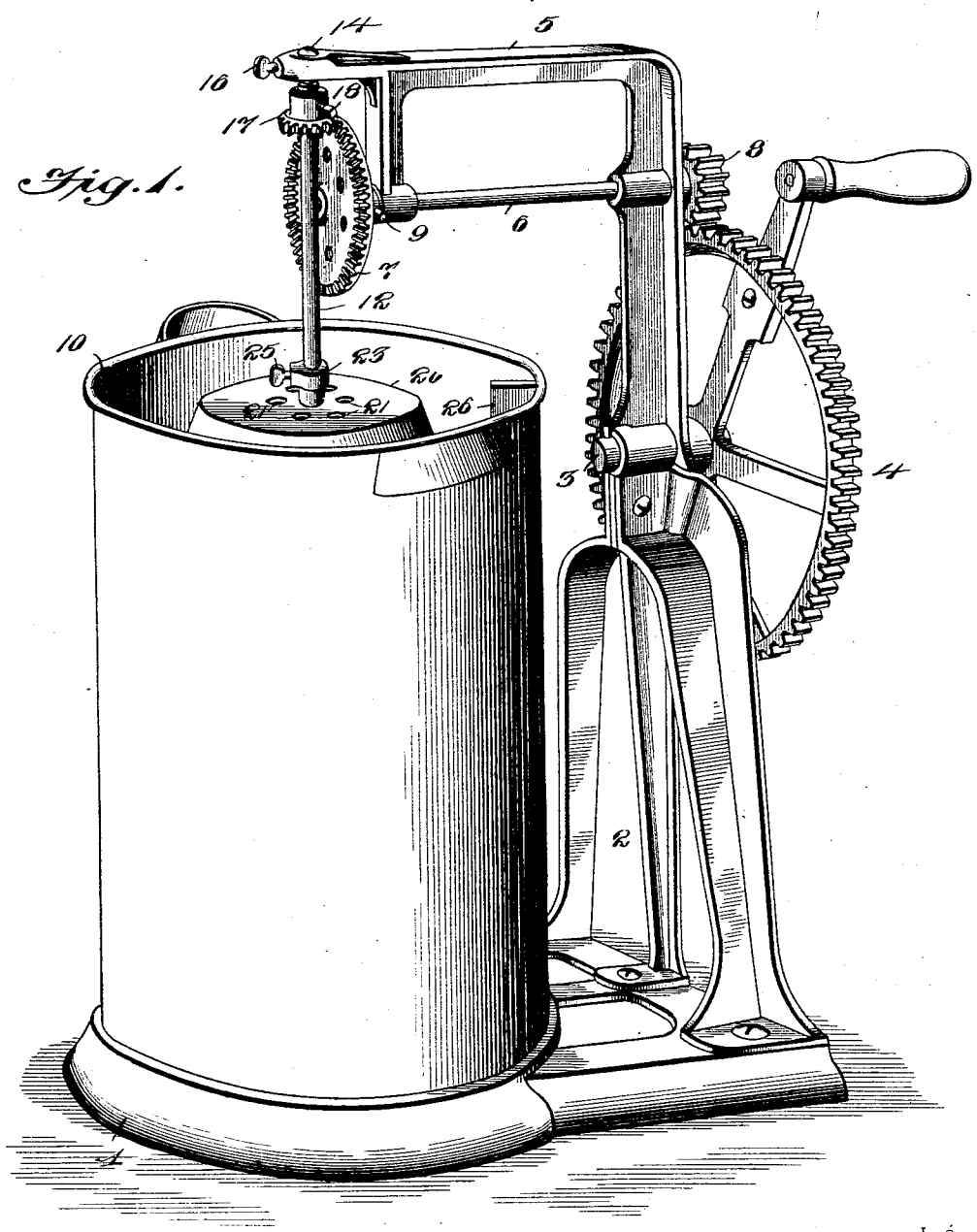
(No Model.) 2 Sheets—Sheet 1.

E. A. FRANKLIN.

CHURN.

No. 580,266. Patented Apr. 6, 1897.

Fig. 1.



Inventor

Edward A. Franklin

Witnesses

By his Attorneys,

C. A. Snow & Co.

(No Model.) 2 Sheets—Sheet 2.

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CHURN.

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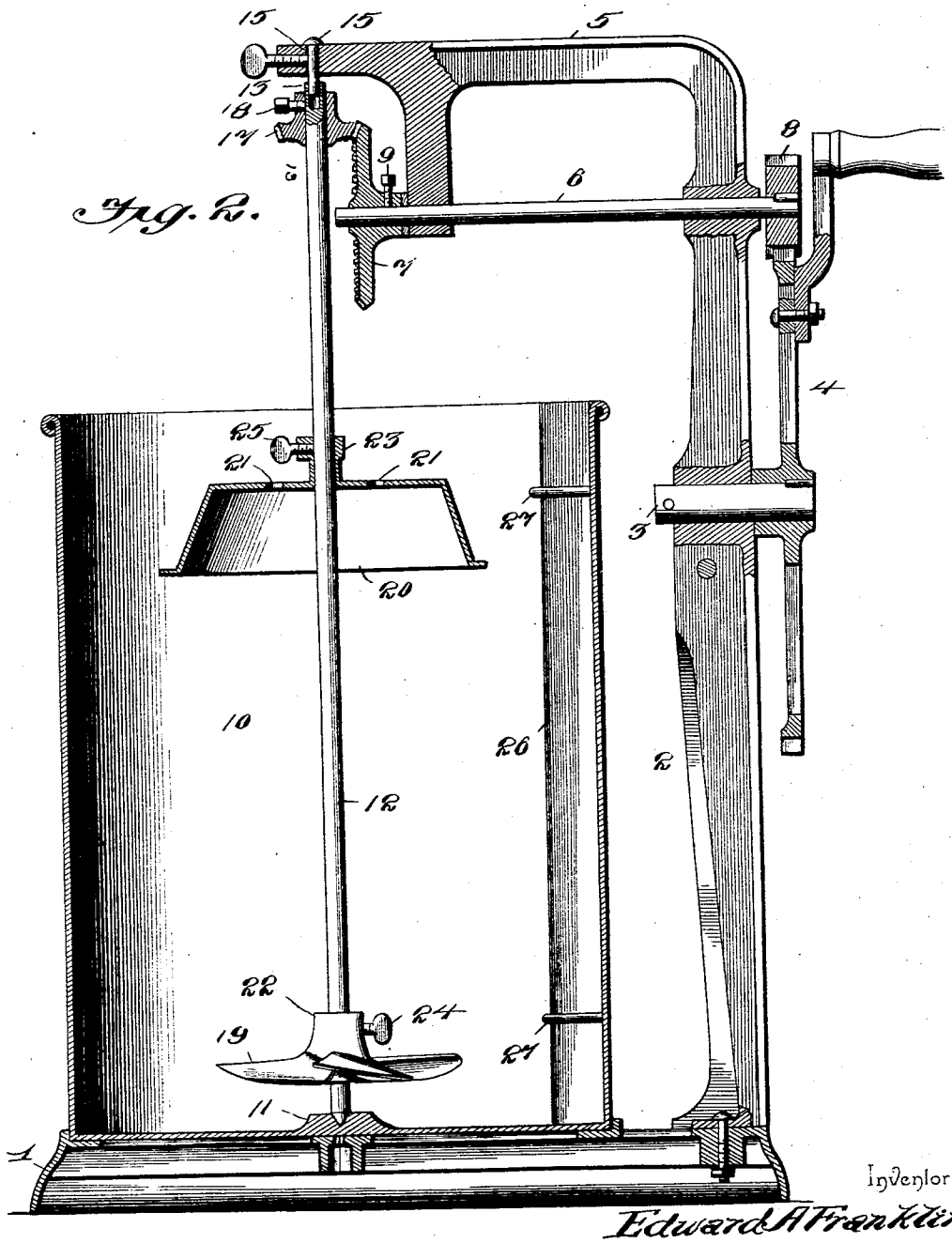
Fig. 2.



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UNITED STATES PATENT OFFICE.

EDWARD A. FRANKLIN, OF AUSTIN, TEXAS, ASSIGNOR TO THE E. A. FRANKLIN CHURN AND IMPLEMENT MANUFACTURING COMPANY, OF SAME PLACE.

CHURN.

SPECIFICATION forming part of Letters Patent No. 580,266, dated April 6, 1897.

Application filed August 13, 1896. Serial No. 602,663. (No model.)

To all whom it may concern:

Be it known that I, EDWARD A. FRANKLIN, a citizen of the United States, residing at Austin, in the county of Travis and State of Texas, have invented a new and useful Churn, of which the following is a specification.

My invention relates to churns, and has for its object to provide a simple and efficient construction and arrangement of parts whereby the separation of the butter is facilitated.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

Figure 1 is a perspective view of a churn constructed in accordance with my invention. Fig. 2 is a vertical central section of the same.

Similar numerals of reference indicate corresponding parts in both figures of the drawings.

1 designates a base from which rises a standard 2, provided with a bearing for the spindle 3 of the driving-gear 4, the upper end of the standard being extended forwardly over the base to form an arm 5, parallel with which is arranged a shaft 6, provided at one end with a bevel-gear 7 and at the other end with a pinion 8, which meshes with the driving-gear. The bevel-gear is adjustably fitted upon the driven shaft and is secured at the desired adjustment to prevent longitudinal play of the shaft by means of a set-screw 9.

The base is provided with a flanged seat for the receptacle 10, the latter having in its bottom a central socket 11 for the lower extremity of the dasher-spindle 12, and the upper end of said spindle is provided with a socket 13 for an adjustable center-pin 14, arranged in a vertical opening 15 at the extremity of the horizontal arm of the standard. Said center-pin is secured against accidental movement by means of a set-screw 16, and a pinion 17 is adjustably fitted upon the spindle to mesh with the bevel-gear on the driving-shaft, said pinion being secured at the desired adjustment by means of a set-screw 18.

Fitted for adjustment upon the spindle are the winged dasher 19 and the guard 20. Said dasher is provided with inclined propeller-blades designed to force the liquid contents of the receptacle downwardly and thus produce a vacuum above the same, and the guard, which is of inverted cup or dish shape, is provided near its center with perforations 21, through which air is adapted to pass to supply the vacuum produced by the dasher. Both the dasher and the guard are vertically adjustable upon the spindle, the same being provided with sleeves 22 and 23, fitted with set-screws 24 and 25, to engage the spindle.

In operation the dasher is arranged near the bottom of the receptacle and the guard is disposed with the lower edge of its depending flange submerged, while the closed upper side of the guard is above the surface of the liquid, whereupon the edge of the guard serves to prevent the liquid from mounting the sides of the receptacle, while the perforations in the top thereof supply the necessary amount of air, which is thoroughly distributed throughout the contents of the receptacle.

In order to still further resist the rotary motion of the contents of the receptacle and prevent the mounting of the sides thereof, I employ a breaker 26, which consists of a flat strip fitted in alined upper and lower keepers 27 on the side of the receptacle, and the breaker thus disposed performs the additional function of directing a current of air downwardly into the contents of the receptacle, for the reason that the tendency of the liquid to rotate in the receptacle causes an eddy in rear thereof.

From the above description it will be understood that the guard may be adjusted vertically upon the spindle to suit the depth of liquid in the receptacle and thus insure the submerging of its periphery.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

1. In a churn, the combination with a receptacle, of an axial spindle provided near its lower end with a dasher adapted to form a superjacent vacuum, and a peripherally-submerged guard of inverted cup or dish shape adjustably fitted upon the spindle above the

dasher and provided in its closed upper side with air-inlet perforations, substantially as specified.

2. In a churn, the combination with a receptacle, of a spindle arranged axially therein and carrying a dasher having inclined or deflected blades to produce a superjacent vacuum, an inverted cup or dish shaped guard adjustably fitted upon the spindle and provided with a set-screw to secure it at the desired adjustment, said guard being provided in its upper side contiguous to its center with a series of air-inlet perforations and at its edge with a depending peripheral imperforate flange adapted to be submerged, the perforated top of the guard being arranged above the level of the contents of the receptacle, and means for communicating rotary motion to the spindle, substantially as specified.

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

EDWARD A. FRANKLIN.

Witnesses:
W. J. SWAIN,
M. S. SWAIN.