

UNITED STATES PATENT OFFICE.

EZRA L. GILLIS, OF ORR, KENTUCKY.

CHURN.

SPECIFICATION forming part of Letters Patent No. 552,120, dated December 31, 1895.

Application filed September 7, 1895. Serial No. 561,864. (No model.)

To all whom it may concern:

Be it known that I, EZRA L. GILLIS, a citizen of the United States, residing at Orr, in the county of Anderson and State of Kentucky, have invented certain new and useful Improvements in Churns; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to churns, and has for its object to provide simple and inexpensive means for reciprocating the dasher of the churn.

With this object in view the invention consists of certain features of construction and combination of parts, which will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of the improved mechanism by which the dasher of the churn is reciprocated. Fig. 2 is an end view of the same. Fig. 3 is a detail perspective view of the governor-fan and its shaft, showing the manner of attaching the fan thereto; and Fig. 4 is a longitudinal vertical sectional view through the governor-fan and the shaft.

In the drawings, 1 represents a base provided with uprights 2, to which is secured a frame 3 provided with a train of gearing. This train is of the usual or well-known clock-work form and it is not thought necessary to enter into a detailed description of the same. The train rotates the shaft 4, which is provided with a fly-wheel 5, having a wrist-pin 6.

7 denotes brackets which are secured to the frame and have bearings 8, in which reciprocates the dasher 9 of the churn. A stud 10 projects from the dasher and a link 11 has one end pivoted to this stud and its other end to the wrist-pin. It is evident, therefore, that when the gearing is wound up, which may be done by the key 12, the rotary motion imparted to the shaft 4 will be converted into a vertically-reciprocating motion. In order to regulate the speed of movement of the dasher-rod, I provide a fan-governor 13, which is attached

to one of the shafts of the train of gearing—for instance, to the shaft 14—one end of which projects through the frame and is split. The fan consists of two plates, which are placed within the split end of the shaft, and a nut 15 is screwed upon the end of the split shaft and serves to hold the ends to the shaft.

In operation it is evident that when the churning first begins there will be less power required than when the cream begins to form into butter, and in order to prevent the too-rapid rotation of the gearing I spread the plates of the fan apart, so as to offer greater resistance to the air. Now when the butter begins to form, the plates may be moved toward and over each other, so as to reduce the resistance to the air and allow all the power of the machine to be utilized in the churning.

From the foregoing description, taken in connection with the accompanying drawings, the operation of the invention will be readily understood without requiring further explanation.

It will be observed that the device is exceedingly simple and that by its movement much time and labor is saved.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

The combination with a churn, its dasher and dasher rod, of a train of gearing, a link connecting the shaft of one of the gears with the dasher rod, and one of the shafts of the gears being extended and split from its outer end inward and provided with a screw thread at its split portion, plates fitting within the split, of the shaft, and movable longitudinally of the latter within the split and adapted to overlap each other, and a nut screwing upon the threaded portion of the shaft, for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

EZRA L. GILLIS.

Witnesses:

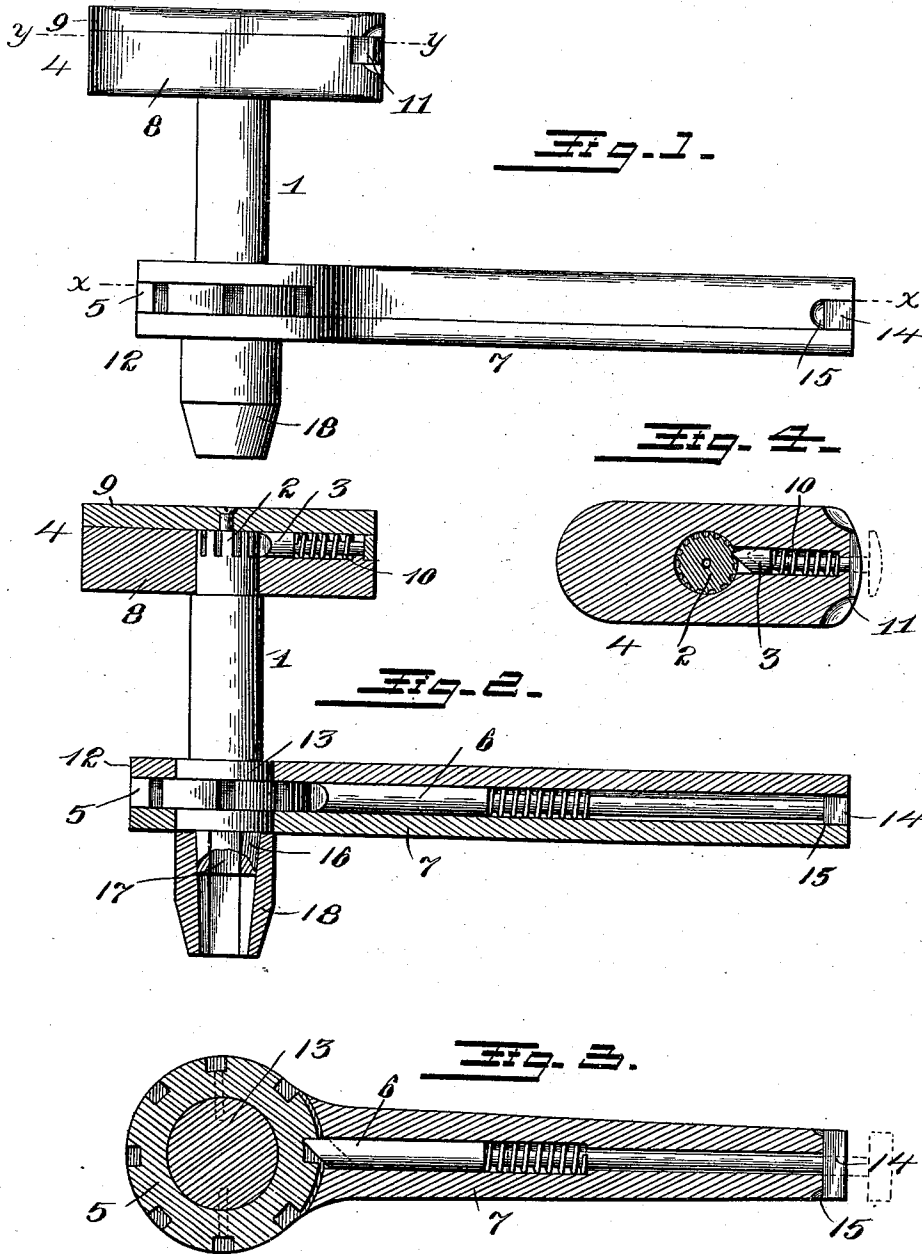
O. L. TOWNSEND,
BEN. FRANKLIN.

(No Model.)

E. A. GILBERT & J. S. OLIVER.
RATCHET WRENCH.

No. 552,121.

Patented Dec. 31, 1895.



Witnesses

H. J. North
J. F. Riley

Fig. 5.
16 17 18
By their Attorneys,

Inventors
Edward A. Gilbert
Joseph S. Oliver

C. A. Snow & Co.