No. 802,972. PATENTED OCT. 31, 1905.

W. A. CARPENTER.

CHURN.

APPLICATION FILED AUG. 7, 1905.

Fig. 1.

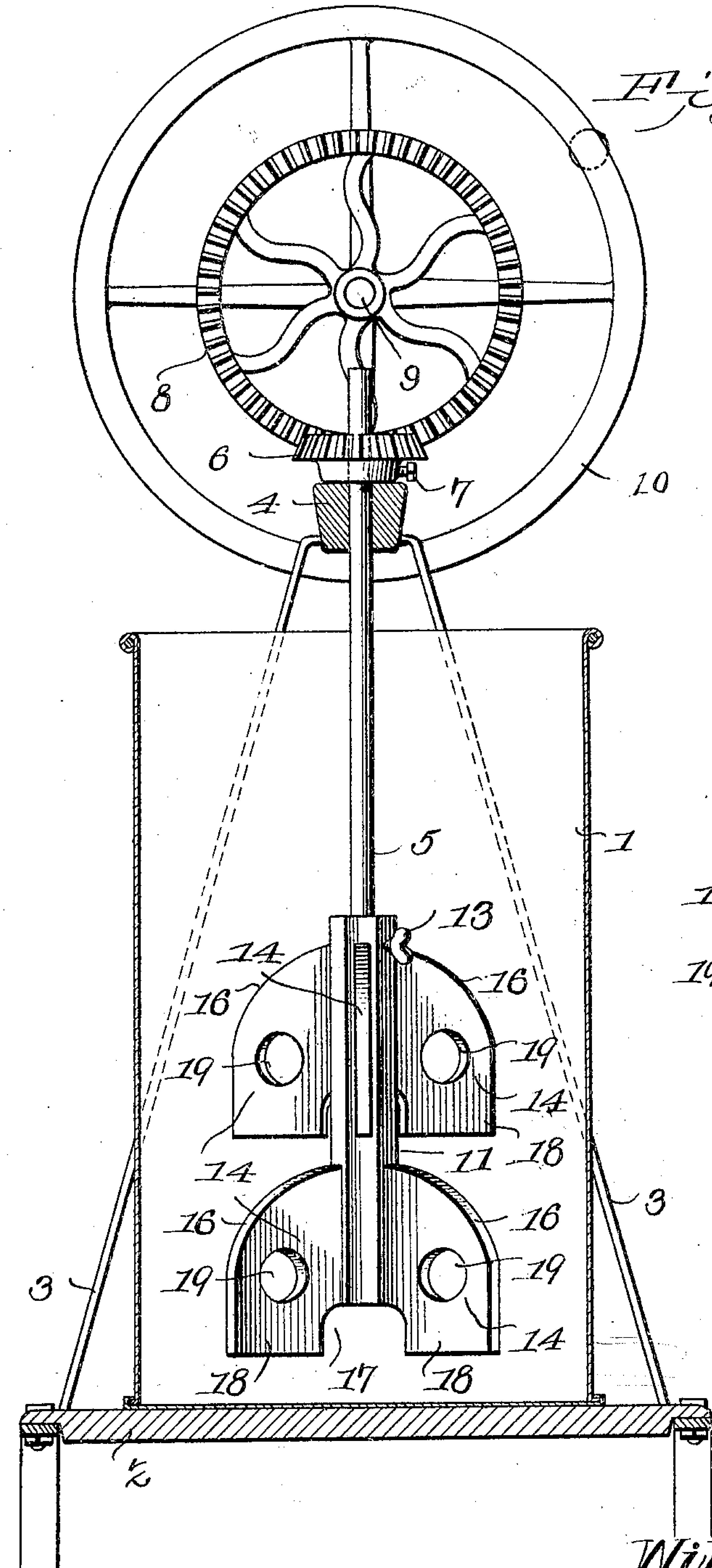


Fig. 2.

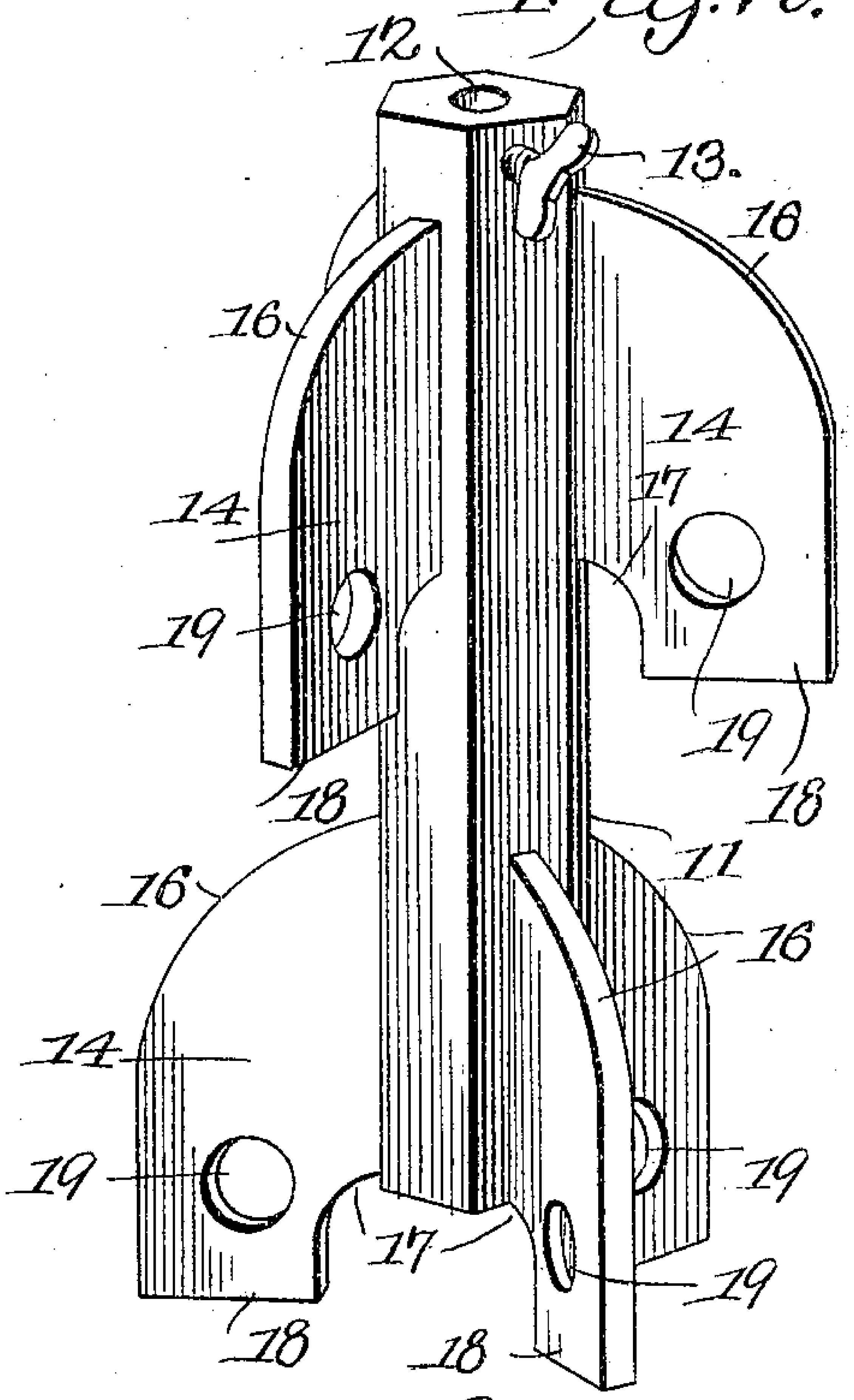
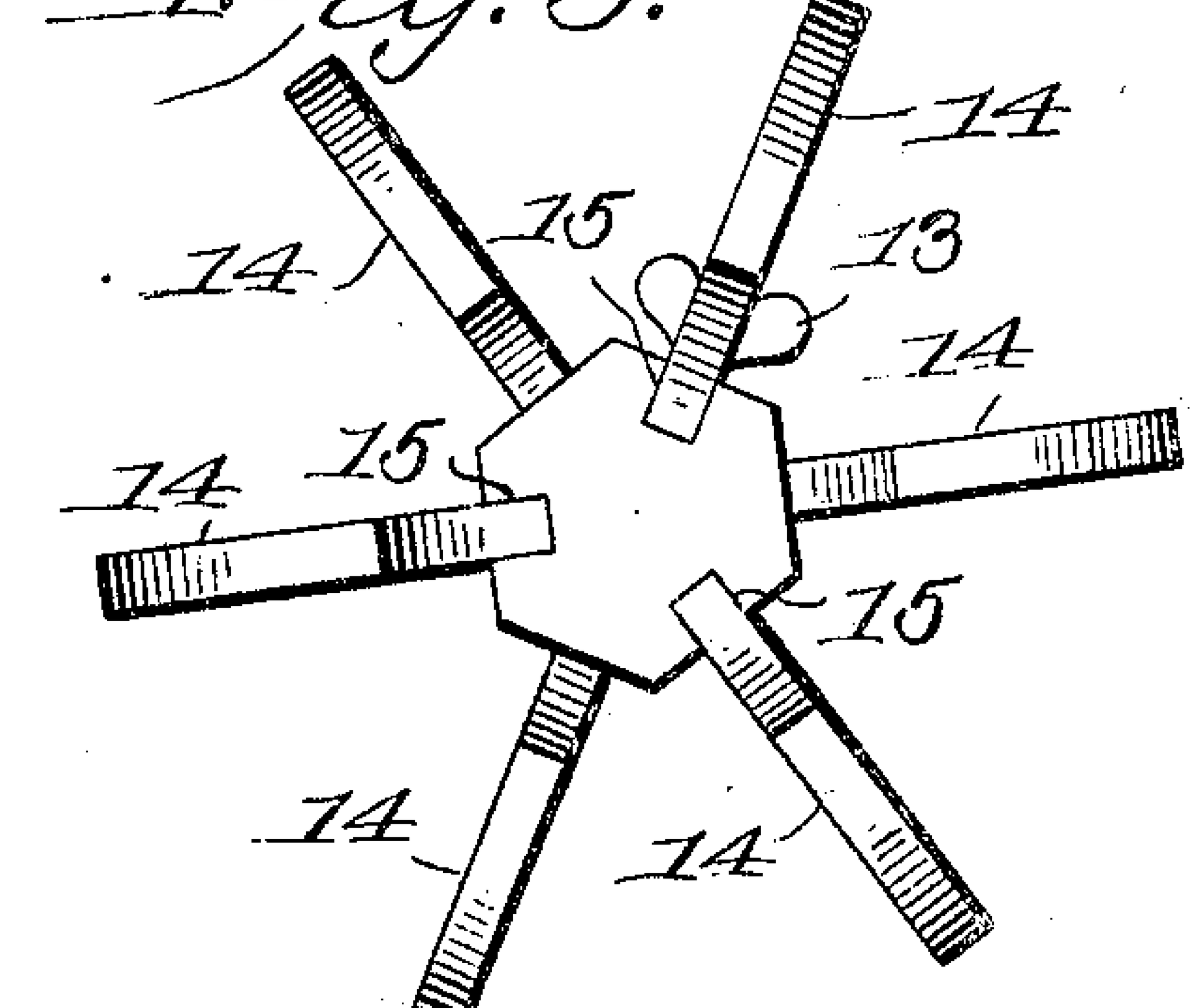


Fig. 3.



Witnesses

E. J. Stewart

H. S. Shepard

William A. Carpenter,
Inventor

by C. A. Snow & Co.
Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM A. CARPENTER, OF ATTICA, OHIO.

CHURN.

No. 802,372. Specification of Letters Patent. Patented Oct. 31, 1905.

Application filed August 7, 1905. Serial No. 273,106.

To all whom it may concern:

Be it known that I, WILLIAM A. CARPENTER, a citizen of the United States, residing at Attica, in the county of Seneca and State of Ohio, have invented a new and useful Churn, of which the following is a specification.

This invention relates to churns, and has for its object to provide an improved and simplified form of dasher therefor.

The invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a sectional view of the churn equipped with the dasher of the present invention. Fig. 2 is a detail perspective view of the dasher. Fig. 3 is an inverted plan view of the dasher.

Like characters of reference designate corresponding parts in each and every figure of the drawings.

While any appropriate form of churn-body may be employed in connection with the present dasher, it is preferred to employ a body or receptacle 1 which is rectangular in cross-section, said body being removably mounted upon a leg-supported stand or base 2, from opposite corners of which rise upwardly-converged standards 3, the two pairs of standards being connected at their upper ends by a cross-head 4. An upright rotatable dasher-shaft 5 pierces the cross-head at the middle thereof and is provided with a gear 6, engaging the top of the cross-head and connected to the shaft by a set-screw 7, whereby the shaft may be adjusted vertically through the gear. The gear 6 is in mesh with a larger gear 8, carried by the inner end of a drive-shaft 9, which is provided upon its outer end with a hand-wheel 10 or suitable operating-crank, as may be desired, whereby rotary movements may be imparted to the shaft.

The dasher of the present invention consists of a head 11, which has a polygonal cross-sectional shape, preferably hexagonal, and provided in its upper end with a socket 12 for the detachable reception of the lower end of the shaft 5, there being a set-screw 13 piercing the socketed portion of the head for engagement with the shaft to detachably connect the dasher thereto. Two series of duplicate blades are provided upon the head, each blade 14 being disposed in a vertical plane radially of the head, with its inner edge let into a seat or recess 15, formed in one of the faces of the head and nailed therein, so as to be rigidly connected thereto. The upper outer corner of the blade is rounded or beveled, as at 16, and the lower inner corner is cut away, as at 17, to produce a downward extension 18, which is offset or spaced laterally from the head, there being a circular perforation 19 formed through the blade in the upper portion of the extension 18.

The blades are divided into an upper series and a lower series, there being three blades for each series when the dasher-head is hexagonal in cross-section, the blades of each series being applied to alternating faces of the head, with the blades of the other series alternating with the blades of the first-mentioned series. The lower edges of the upper series of blades terminate short of the top edges of the lower series, while the lower series project below the bottom of the head for the lengths of their extensions.

When the present form of dasher is in operation, the cream is dashed violently against the sides of the square body, which effectually breaks up the cream and hastens the accumulation of butter. By having the blades divided into upper and lower series said blades operate throughout the entire length of the head; but there is a clearance for the cream across the top edges of the lower blades and beneath the lower edges of the upper blades, whereby the resistance of the cream to the blades is reduced and a better agitation of the cream is accomplished than if each blade extended for the entire length of the head. The openings in the blades permit the cream to pass therethrough, so as to still further decrease the resistance offered to the rotary movement of the dasher and at the same time to impart an increased agitation to the cream, whereby the effectiveness of the present dasher is materially increased.

A further advantage of the dasher of the present invention resides in the fact that it is practically an integral device having all parts accessible, and therefore readily cleansed, whereby the device may always be maintained in a sanitary condition.

Having thus described the invention, what is claimed is—

1. A rotary churn-dasher comprising an

axial head and upper and lower series of radial longitudinally-disposed blades, the blades of one series alternating with those of the other series and provided with pendent extensions spaced from the head.

2. A rotary churn-dasher comprising an axial head provided in its upper end with a longitudinal shaft-receiving socket and also provided with upper and lower annular series of recesses, the recesses of one series alternating with those of another series, and radial dasher-blades disposed longitudinally of the head with their inner edges fitted in the respective recesses and provided with pendent extensions spaced from the head, the extensions of the lower series of blades projecting below the bottom of the head.

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

WILLIAM A. CARPENTER.

Witnesses:

C. A. FORCE,

J. N. STARR.