

Sept. 8, 1936.

T. J. LA VALLEY

2,053,401

AGITATOR

Filed Aug. 9, 1935

Fig. 1.

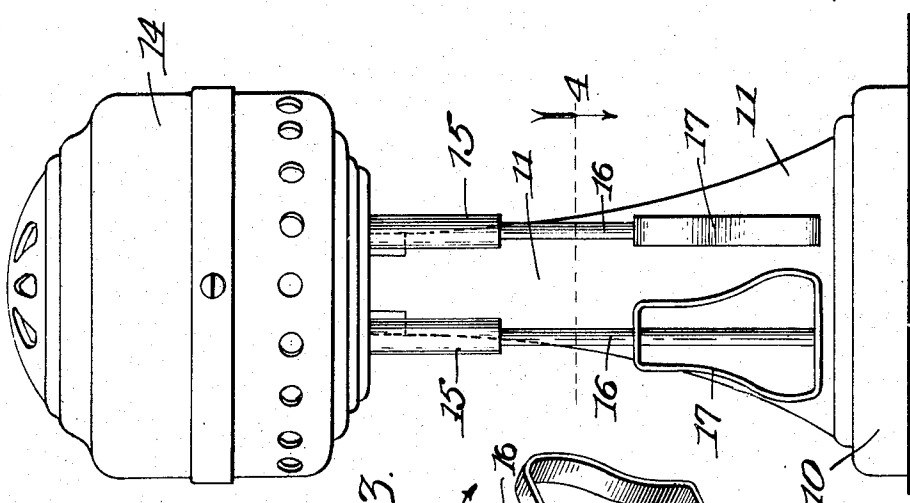


Fig. 2.

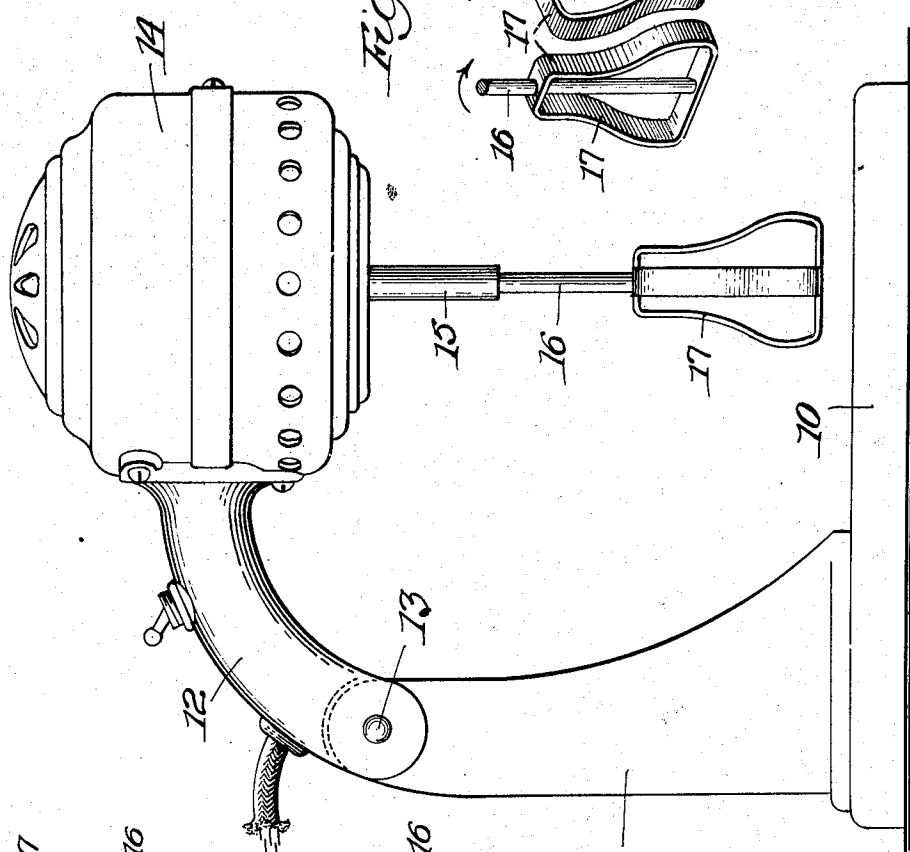


Fig. 3.

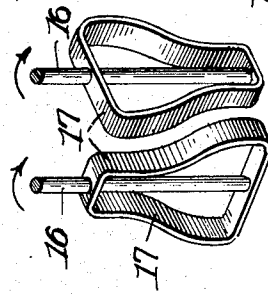


Fig. 4.

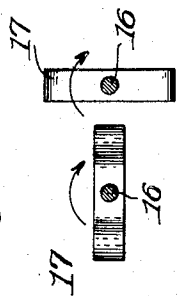
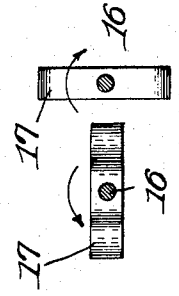


Fig. 5.



Inventor:
Tennis La Valley,
By Dyrenforth, Lee, Christen & Niles,
Attys.

UNITED STATES PATENT OFFICE

2,053,401

AGITATOR

Tennis J. La Valley, Michigan City, Ind., assignor
to Steelcraft, Incorporated, Michigan City, Ind.,
a corporation of Indiana

Application August 9, 1935, Serial No. 35,537

1 Claim. (Cl. 259—131)

This invention relates to improvements in agitators, mixers, beaters, and the like, and, more especially, to such a device more particularly adapted for stirring, mixing, agitating or beating food mixtures, liquids, doughs, pasty and granular substances.

Among the features of my invention is the provision of new and improved agitator or beater elements. In devices of the character referred to, it has been customary to provide two parallel adjacent shafts carrying beater elements at their ends. It has been customary heretofore to employ for such beater elements single or double rings on the ends of the shafts. One of the features of my invention is the provision of beater elements of a different shape. In general, my beater elements may be described as being pear-shaped or elongated loops, each having one end larger than the other. The elements are reversed with respect to each other. That is, one has the large end on top and the other on the bottom. I have found that with beater elements of this type, a greatly improved agitating or beater action is obtained.

I find that the two shafts may be rotated in either the same direction or in opposite directions, although at present I prefer to rotate them in the same direction. The two shafts must be close enough together so that the pear-shaped beater loops at the ends will give adequate mixing action and yet not strike. Ordinarily, I prefer to place them close enough together so that the clearance at the closest points will be about $\frac{1}{8}$ ". When the loops are so placed, it will be seen that the vertical projections of the paths of their peripheries will overlap.

Other features and advantages of my invention will appear more fully as I proceed with my specification.

In that form of device embodying the features of my invention shown in the accompanying drawing—

Figure 1 is a view in front elevation; Fig. 2 is a view in side elevation; Fig. 3 is a view in perspective of the agitator or beater elements; Fig. 4 is a top plan view of the same; and Fig. 5 is a view similar to Fig. 4 showing rotation of the elements in opposite directions.

As shown in the drawing, the device includes a suitable base 10 also serving as a support for a bowl (not shown) adapted to contain the substance to be agitated or mixed. Rising from the base 10 is a post 11 having an arm 12 hinged at 13 and carrying the casing 14 containing a stand-

ard motor and driving mechanism (not shown). The details of the motor and the means for driving the shaft form no part of the present invention and need not be shown in detail. It will suffice to say that the apparatus includes two depending parallel adjacent shafts 15, 15 with means for suitably driving or rotating the same. In one embodiment of the invention, the shafts are rotated in the same direction and in the other, in opposite directions. The driving shafts 15, 15 carry beater shafts 16, 16, each having attached to its lower end an agitator or beater element 17 in the form of a pear-shaped loop. As here shown, the loop is made of a flat strip or ribbon of metal. In other words, each loop is elongated and one end is larger or wider than the other. The loops are similar but reversed with respect to each other. That is, one has its larger end on top and the other, its larger end at the bottom.

As shown in Figs. 3 and 4, the two shafts 16, 16 are rotated in the same direction. Special reference to Fig. 3 will show that with such rotation, the clearance between the two loops at the closest point will be quite close from top to bottom. This gives a very efficient agitating or beating action.

Even though I prefer to rotate the elements in the same direction, I have found that a very efficient beating or agitating action is produced by rotation of the elements in opposite directions, as shown in Fig. 5.

The hinge 13 is provided to facilitate placement and removal of the mixing bowl on the base 10.

While I have shown and described certain embodiments of my invention, it is to be understood that it is capable of many modifications. Changes, therefore, in the construction and arrangement may be made without departing from the spirit and scope of the invention as disclosed in the appended claim, in which it is my intention to claim all novelty inherent in the invention as broadly as permissible, in view of the prior art.

What I claim as new, and desire to secure by Letters Patent, is:

A device of the character described, including: two parallel adjacent shafts in stationary bearings; similar reversed cooperating elongated loops carried by adjacent ends of said shafts, each loop having one end larger than the other, said loops being placed close enough together so that the vertical projections of the paths of their peripheries will overlap; and means for rotating said shafts in said bearings.

TENNIS J. LA VALLEY.