March 18, 1930. W. K. STURROCK 1,750,976

SIFTER

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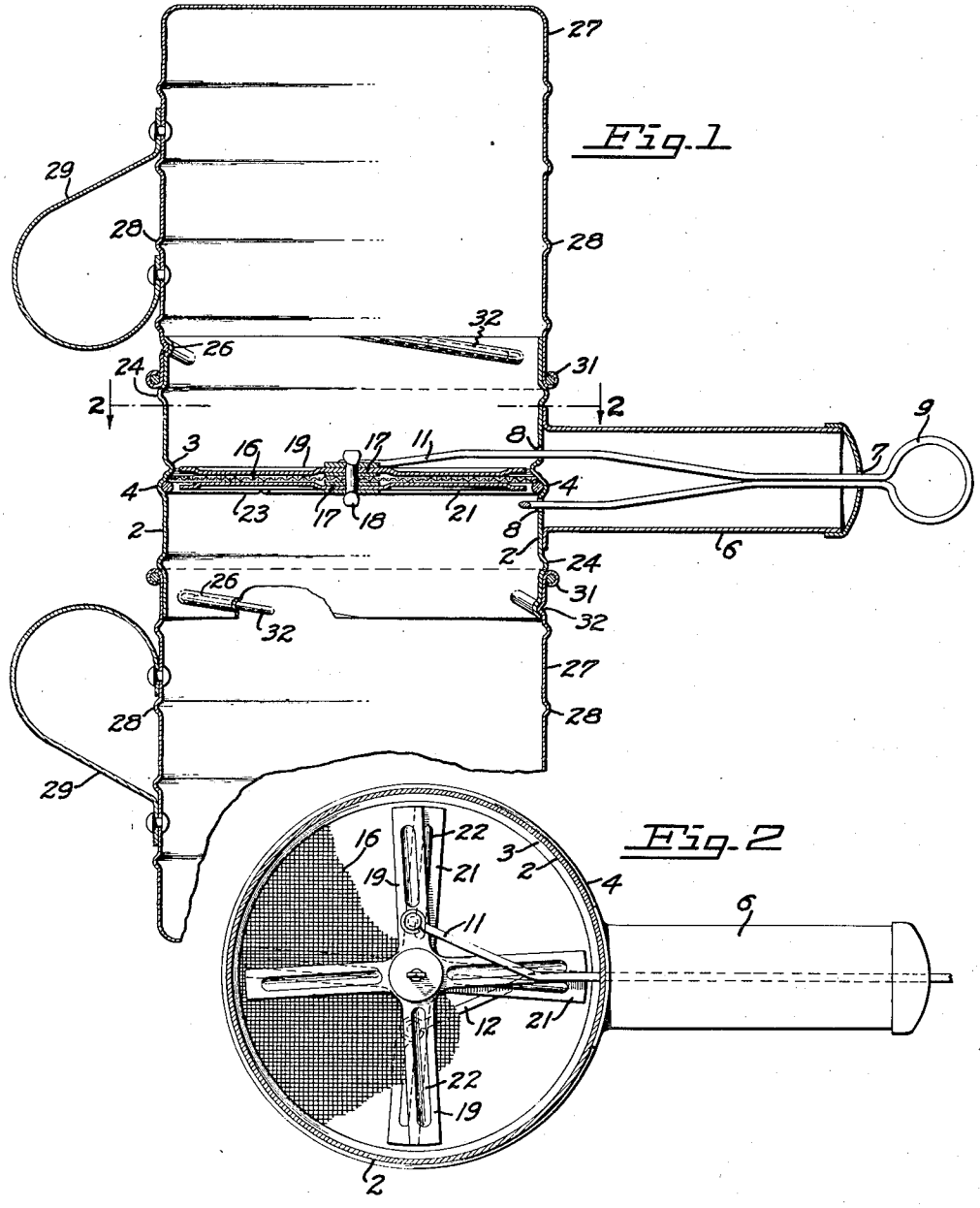


Fig. 1

Fig. 2

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SIFTER

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The invention relates to sifter mechanisms, and particularly to flour sifters for culinary use.

An object of the invention is to provide a reversible sifter mechanism, and further, one mounted within a ring which is adapted for engagement with a container.

Another object of the invention is the provision of a sifter mechanism disposed between two containers for use when repeated sifting is required.

My invention possesses other objects and valuable features, some of which will be set forth in the following description of my invention which is illustrated in the drawings forming part of the specification. It is to be understood that I do not limit myself to the showing made by the said description and drawings, as I may adopt varying forms of my invention within the scope of the claims.

Referring to the drawings:

Figure 1 is a sectional view of the assembled flour sifter.

Figure 2 is a sectional view taken on the line 2—2 of Fig. 1.

Broadly, the sifter of the invention comprises a ring in which the sifter mechanism is arranged. The ring is provided adjacent its center with a handle through which the sifter actuating means is operated. The edges of the ring are formed to releasably engage a cup, two of which are preferably provided so that one may be mounted on each side of the ring. In this way, a reversible sifter is formed which is particularly useful in cases where flour or other ingredients must be sifted several times.

In greater detail, the flour sifter of the invention comprises a relatively narrow ring 2, formed of sheet metal such as tin or aluminum, and having an inwardly extending bead 3 and an outwardly extending bead 4 adjacent the median plane of the ring. A hollow handle 6, preferably of the same material as the ring, and having an opening 7 in its outer end, is radially mounted on the ring over the beads. A small aperture 8, opening thru the ring into the handle, is provided on each side of the beads. Extending into the ring, through the aperture 7, the handle 6, and the apertures 8, is the actuating mechanism which comprises a bent rod or hairpin loop of wire. The loop is preferably formed with a ring 9 to provide a grip at the end of the handle, and the ends 11 and 12 are pivotally connected to the sifting mechanism.

The sifting mechanism comprises a screen 16 of such diameter that it will fit snugly inside of the ring. A washer 17, forming a bearing, is fixedly secured to each side of the center of the screen, and a pin 18 is passed through both washers and the screen. The screen, washers and pin are preferably fixed together by soldering so that a rigid unitary structure is formed. The protruding ends of the pin form studs on which the star wheels 19, 21 are rotatably mounted. The star wheel is preferably stamped from a metal sheet; and a bead 22 is provided in each spoke to strengthen it. After the wheels are mounted, the ends of the pin are flattened to prevent disengagement of either of the wheels. One end 11 of the hairpin loop is pivotally secured to one of the spokes of the star wheel 19; and the other end 12 is similarly secured to the star wheel 21, so that the screen 16 lies between the two sides of the hairpin loop, and the pivotal connections with the star wheels are diametrically opposite. This permits the stresses of operation to balance so that a tendency to rack is largely avoided.

The shifting mechanism is held securely in position between the bead 3 and the spring ring 23, seating in the groove formed by the bead 4. This construction provides a double sifting mechanism, both sides of which are operable by reciprocating the grip 9 which oscillates the star wheels thru an arc of about 45°.

Adjacent each end of the ring 2 is an outwardly extending bead 24, between which and the end of the ring, segmental threads 26 are rolled or pressed.

A pair of like cups 27, preferably having measuring marks 28, are provided; the cups may be made of sheet metal such as tin or aluminum, or a transparent material such as glass may be utilized. For convenience, a handle 29 is formed on one side of each of the cups. The edge or lip 31 of the cup is rolled

to strengthen it and to prevent the bead 24 on the ring from slipping under the edge of the cup when it is placed over the ring. Segmental threads 32, complementary to the threads 26, are formed on the cup adjacent the lip 31. When the device is to be used, the cup is placed in position and engaged by a partial turn, in the manner of the well-known breach block mechanism. Rotary movement between the cup and ring is limited by the lip 31 contacting with the bead 24.

This sifter is designed for use in cooking and particularly where ingredients must be sifted repeatedly. In making some cakes, such as angel food, the flour should be sifted four or five times. This will be found not only a tiresome but a wasteful task if the usual flour sifter is used, as frequently the flour is spilled in the transferring operations. Furthermore, the lightening of the flour, which is the object of repeated sifting, is defeated, as the handling causes it to settle or pack. To use my sifter one of the cups is secured to the ring, and the desired quantity of flour placed in the other, after which it is placed on the table and the ring and attached cup placed thereon. The assembled device is then inverted to position the filled cup above the screen, and the grip 9 reciprocated a few strokes. Merely inverting the whole device again positions the filled cup above the screen so that further strokes of the grip again sifts the flour. The operation may be repeated as many times as necessary to get the desired results, five or six siftings involving little more effort or time than one with the ordinary sifter.

A further convenience found in the use of my device lies in the compact nature of the sifter ring which requires but little storage space when not in use. The cups in addition to their usefulness with the sifter are generally useful about the kitchen for measuring and otherwise.

I claim:

1. In a flour sifter, a ring, a handle on said ring, a sifter mechanism having a pair of star wheels arranged in the ring, a hairpin loop having an end pivotally connected to each star wheel for actuating the sifting mechanism, and a cup demountably engaged with said ring.

2. In a flour sifter, a ring, a handle on said ring; a sifter mechanism arranged in said ring comprising a screen and a star wheel rotatably mounted on each side thereof; and a wire in said handle having an end pivotally connected to each star wheel for actuating the sifter mechanism.

3. In a flour sifter, a ring, a handle on said ring; a sifter mechanism arranged in said ring comprising a screen and a star wheel rotatably mounted on each side thereof; a wire in said handle having an end pivotally connected to each star wheel for actuating the sifter mechanism, a cup adapted for engagement with each side of the ring, and means for locking the cups on said ring.

4. A sifter mechanism comprising a ring, a screen mounted in the ring, a star wheel pivotally mounted on each side of the screen, and means for oscillating the star wheels.

5. A sifter mechanism comprising a ring, a screen mounted in the ring, a stud projecting from each side of the screen, a star wheel journaled on each end of the stud, and a bent wire having an end pivotally connected to each wheel for actuating the wheels.

6. A sifter mechanism comprising a ring, a screen mounted in the ring, a stud projecting from each side of the screen, a star wheel journaled on each end of the stud, a bent wire having an end pivotally connected to each wheel for actuating the wheels, and a handle for the ring housing the bent wire.

In testimony whereof, I have hereunto set my hand.

WILLIAM K. STURROCK.