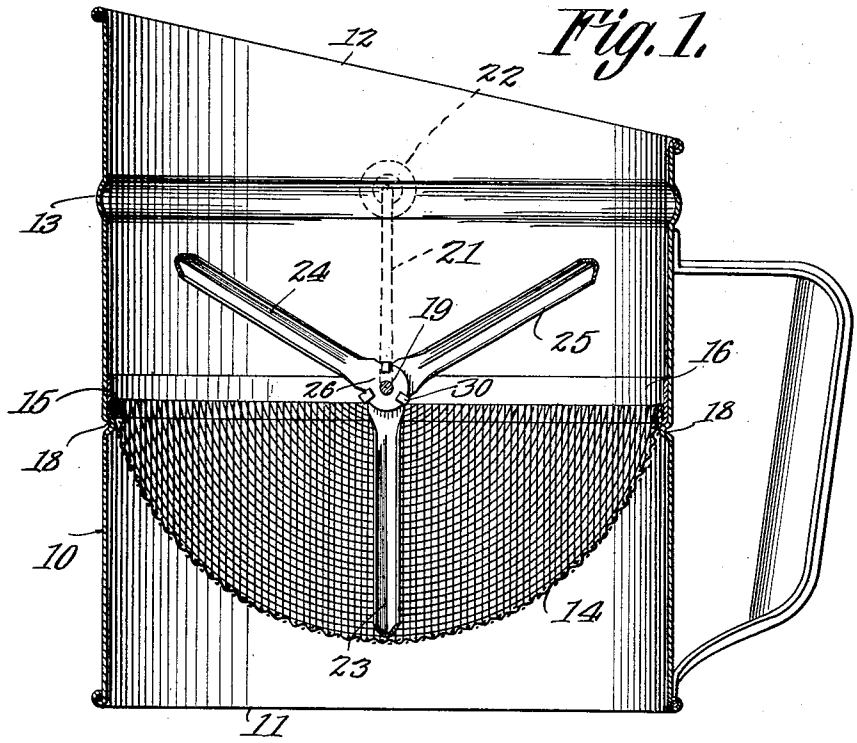
W. B. WILLS.

SIFTER.

APPLICATION FILED NOV. 19, 1912.

1,067,567. Patented July 15, 1913.

Fig. 1.



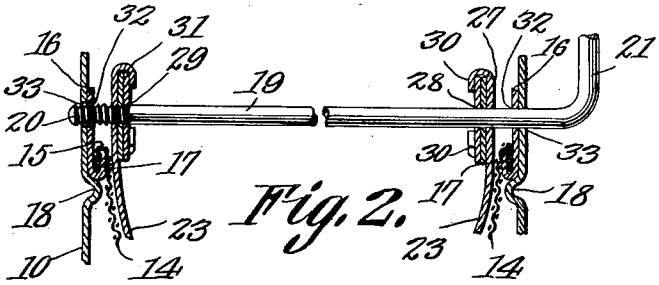


Fig. 2.

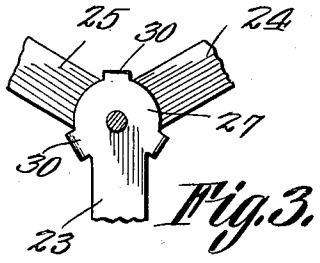


Fig. 3.

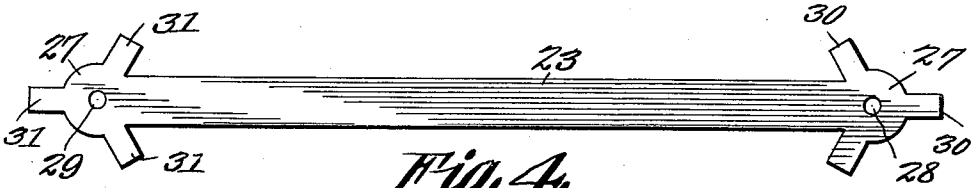


Fig. 4.

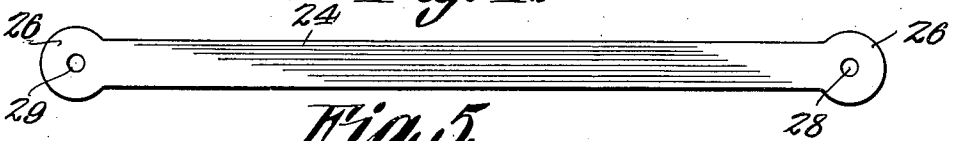


Fig. 5.

WITNESSES

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1,067,567. Specification of Letters Patent. **Patented July 15, 1913.**

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To all whom it may concern:

Be it known that I, WALTER B. WILLS, a citizen of the United States, residing at Baltimore city, State of Maryland, have invented certain new and useful Improvements in Sifters, of which the following is a specification.

This invention relates to sifters for flour and like substances and has for its object to generally improve the construction of such devices with a view to economy of manufacture, simplicity of parts, and increase of utility.

With this object in view, the invention consists in the improved construction, arrangement, and combination of the parts of a sifter which will be hereinafter fully described and afterward specifically claimed.

In order that the construction and operation thereof may be readily comprehended, I will now proceed to fully describe the invention in connection with the accompanying drawings which illustrate an improved embodiment thereof and in which—

Figure 1 represents a vertical sectional view, Fig. 2 represents an enlarged sectional detail view of the shaft and its connections, Fig. 3, an end view of a portion of the agitator, the shaft being shown in section, Fig. 4, a plan view of a blank from which one of the arms of the agitator is formed, and Fig. 5, a plan view of a blank for another arm of the agitator.

Like reference characters mark the same parts wherever they appear in the drawings.

Referring specifically to the drawings, 10 indicates the body of the sifter preferably a cylinder of sheet metal, having any ordinary form of bottom, as at 11, either open or closed, the usual open top 12, and a rib 13 near the top preferably stamped or pressed therein to stiffen the structure.

The sieve proper is indicated at 14 and is in the form of the lower half of a sphere, the upper end being open and the upper edge as at 15, Fig. 2, being bent over and downward between a ring 16 and an upturned flange 17 thereof, said ring resting in the body 10 upon an inwardly pressed rib 18 in said body whereby the ring and sieve are supported at the proper height, the edge of the sieve being clamped tightly between the ring and its flange by closely pressing the flange upon the body. The ring fits snugly in the body and, with the sieve secured thereto in the manner described, said ring may be readily inserted in or removed from the body as may be considered desirable or necessary, there being no inward projection of any kind in the body above the rib 18 to interfere with such insertion or removal.

An agitator is provided which comprises a shaft 19, having its inner end threaded, as at 20, and its outer end bent, crank shape, to form a handle as at 21, at the outer end of which is provided any suitable hand hold as at 22. The agitator is provided with a plurality of radial arms, 23, 24, and 25, which form stirrers and scrapers, which arms are secured upon the shaft 19 in a manner now to be described.

I have shown three arms but it will be obvious that this number may be varied. In any event, all of the arms will be angular in cross section, as best shown in Fig. 1, to stiffen them, and further bent longitudinally to fit in the sieve, as would appear if the broken away ends were continued in Fig. 2. At each end of each arm is a circular head as at 26, 27, in each of which heads is a central opening, as at 28, 29, the openings 28 being smooth or plain and the openings 29 threaded and the heads 27 are provided with radiating arms or clips 30, 31.

The ring 16 on both sides of the body is provided with smooth openings as at 32 and diametrically opposite each other, while the body 10, is provided with similarly situated and registering smooth openings 33.

All of the arms, excepting one, no matter how many may be used, are provided with plain round heads 26, and the excepted one (in this instance being 23) is provided with the radial arms or clips 30, 31.

In assembling the parts as before described, the ring 16 with the sieve 14 secured thereto in the manner described is inserted in the body until the flange 17 rests upon the rib 18, care being taken that the openings 32 in the ring register with the openings 33 in the body. Prior to or after inserting the arms 23 24 and 25 in the sieve, they are arranged with the arms, in this instance 24 and 25 inside and the arm 23 on the outside, all the arms being bent into semicircular form to conform with the interior of the sieve. In this position the radial clips, 30 and 31 of the arm 23 are bent over the edges of the inclosed heads of the arms 24 and 25, firmly holding all the arms

together and radially spacing said arms. The arms are now inserted in the sieve with the openings in the several heads registering with the openings in the body 10 and ring 16, and with each other. The shaft 19 is now placed in position, the threaded end being passed through the smooth openings 33, and 32, in the body 10 and ring 16, shown on the right hand of Fig. 2, and thence through the smooth openings 27 and 28 in the right hand ends of the arms 23, 24, and 25 until the threaded end reaches the openings 29 in the opposite ends of the arms 23, 24 and 25. The shaft is now screwed into these threaded openings and made to project a sufficient distance beyond the head 27 of the arm 23, shown on the left of Fig. 2, and to pass through and project slightly beyond the openings 32 and 33 in the ring 16 and body 10. The shaft 19 being now tightly threaded into the openings in the heads of one end of the arms, the whole agitator may be turned by using the crank handle 21, 22 of the shaft 19, whereby the material in the sifter will be properly stirred, pulverized, and pressed through the meshes of the sieve.

From the foregoing it will be obvious that I have greatly simplified and economized in the construction of my invention, it being unnecessary to use any solder in assembling the parts, thus saving the labor and expense attending the operation of soldering and rendering it possible, without the use of complicated tools or skilled labor, to assemble and disassemble the parts of the device whenever necessary.

While I have specifically described the construction and arrangement of the various parts comprised in the illustrated embodiment of my invention, I desire it to be understood that changes and variations may be made therein, within the scope of the claim, without departing from the spirit and scope of the invention.

Having thus fully described my invention, what I claim as new is:

A sifter, comprising a shaft with a threaded end, and an agitator mounted upon said shaft embodying a plurality of arms each having a circular head provided with apertures at its ends, the apertures at one end of said arms being threaded to removably receive the threaded end of said shaft, the heads at both ends of one of said arms being provided with radial clips to embrace the heads of the other arms to radially space said arms and retain their ends in close relation.

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

WALTER B. WILLS.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."