

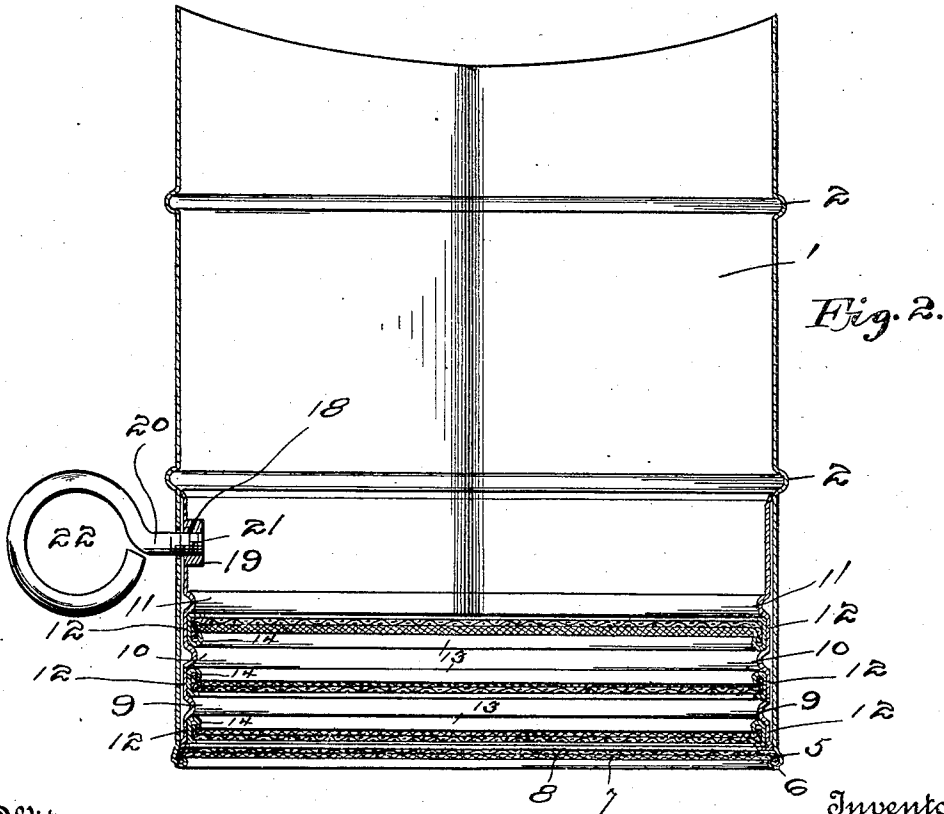
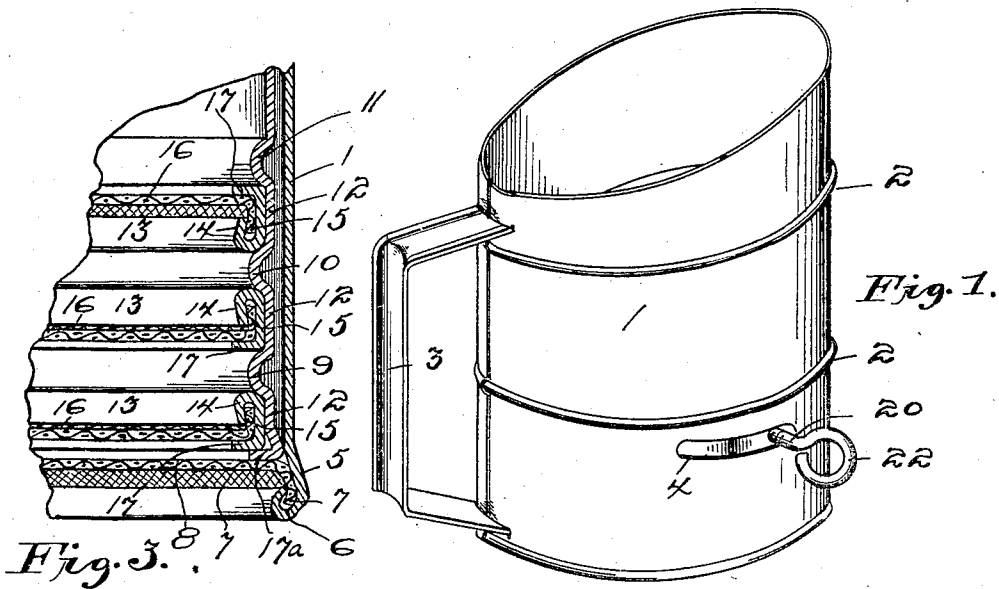
F. E. BOYLE.

SIFTER.

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935,355.

Patented Sept. 28, 1909.



Witnesses
J. W. Arles

H. J. Woodward

Inventor
Fay H. Boyle

By E. E. Vroman,
Attorney.

UNITED STATES PATENT OFFICE.

FAY E. BOYLE, OF CENTERVILLE, IOWA.

SIFTER.

935,355.

Specification of Letters Patent. Patented Sept. 28, 1909.

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To all whom it may concern:

Be it known that I, FAY E. BOYLE, a citizen of the United States, residing at Centerville, in the county of Appanoose and State of Iowa, have invented certain new and useful Improvements in Sifters, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to household sifters of the type wherein a plurality of screens are employed so that the material is subjected to a plurality of sifting or screening operations before being discharged from the sifter, and the principal object of the same is to provide a novel type of sifter body and screening or sifting cylinder in which provision is provided for securely and rigidly holding the screens in superimposed relation properly spaced apart so that a thorough sifting of the material may be obtained.

In carrying out the objects of the invention generally stated above it will, of course, be readily understood that the essential features thereof may be subjected to changes in details and structural arrangements, one preferred and practical example of which is shown in the accompanying drawings, wherein—

Figure 1 is a perspective view of the improved sifter. Fig. 2 is a central vertical sectional view of the same. Fig. 3 is an enlarged fragmentary sectional view showing the relative arrangement of the screens and their mounting.

Referring to the accompanying drawings by numerals, 1 designates the body of the improved sifter, which may be of a cup shape and provided with the usual transversely extending annular strengthening beads 2, and operating handle 3. An elongated horizontally arranged slot 4 is formed through the lower portion of said body, the function of which will presently appear.

The bottom edge portion of the sifter body is preferably slightly bulged outwardly, as indicated at 5 and then inturned and bent upon itself to form a pocket 6 for the downturned outer edge 7 of a screen 8, which screen is preferably of fine mesh. After the edge 7 of the screen 8 is placed in said pocket, the inner wall of the same is clamped onto said edge to securely hold the screen in position, and if desired, the same may be additionally secured by the use of solder.

A sifting cylinder is removably fitted within said body 1, preferably in the lower portion thereof. Said sifting cylinder may be formed with an open top and bottom, and its side is provided with a plurality of regularly spaced apart horizontally arranged beads 9, 10 and 11, and between said beads the cylinder is straight, which arrangement or formation, provides seats 12 for the screen collars 13. Said screen collars 13 have one of their longitudinal edges inturned and bent to form a pocket 14 for the flanged edge 15 of its screen 16. The other edge of said collars is bent at right angles thereto to provide a protecting and rest flange 17 for the screens. The bottom of the sifting cylinder is inturned at right angles to form a rest flange 17^a for the lowermost sifting or screening collar. The upper portion of the sifting cylinder has an opening 18 formed through it which registers with the slotted opening 4 of the body 1. Said opening 18 is surrounded on its inner end by the threaded nut-shaped protuberance 19. A handle 20 has its threaded end portion 21 passed through the aligned openings 4 and 18 and engages with the said nut-shaped protuberance 19. The outer end of said handle projects beyond the body 1 and is provided with an eye 22 forming a handhold.

In assembling the parts of the invention, the sifting cylinder is placed within the body 1 with its bottom flange resting upon the bottom screen of the said body, and with its opening 18 in alinement with the slotted opening 4 formed through said body. The handle 20 is then passed through said aligned openings and engaged with the threaded protuberance 19, so that the said cylinder may be oscillated within said body, as will be obvious. The lowermost screen collar is placed upon the bottom flange of the cylinder between the same and the adjacent bead. the intermediate screen collar is next placed within the cylinder between the two beads, and the next screen collar is placed between the beads just above. The collars are of such a size relative to the seats formed between said beads that ordinarily they will fit rigidly therein, but if desired, they may be soldered or otherwise rigidly fastened therein.

It will be observed that the lowermost screen of the sifting cylinder is retained in close proximity to the screen of the body.

This arrangement is for causing the material falling from the cylinder onto the body screen to be agitated by the movement of the cylinder, to cause said material to be sifted
5 by said body screen.

Preferably the screens within the cylinder are arranged so that the uppermost one is in a reversed position relative to the other screens so that the space between the various
10 screens will be graduated.

I claim as my invention:—

1. A sifter comprising a body provided with a bottom screen, a sifting cylinder mounted therein, means for oscillating said
15 cylinder, a plurality of screen collars held in spaced relation within said cylinder and each provided with an inturned flange forming a pocket, and a screen for each collar provided with an outturned edge adapted to
20 be clamped within said pockets.

2. A sifter comprising a body, a sifter cylinder mounted therein and provided with horizontally arranged spaced apart beads, a plurality of superimposed screen collars
25 within said cylinder and retained in spaced relation by said beads, and a screen carried by each collar.

3. A sifter comprising a body having an inturned bottom, a screen having its outer

edge clamped within said inturned bottom, 30
a sifting cylinder mounted for oscillation in said body and provided with an inturned bottom, and also with spaced apart horizontally arranged beads, a plurality of screen
35 collars within said cylinder and held in spaced relation by said beads, said collars having one of their edges in the form of an inturned rest flange and their other edge in the form of a pocket, and a screen carried by
40 each collar and having its edge bent at substantially right angles thereto and seated on said rest flange and clamped within said pocket.

4. A sifter comprising a body provided with a bottom screen, a cylinder rotatable in
45 said body, a plurality of collars held in spaced relation in said cylinder, said collars being provided with a rest flange and a clamping pocket, and a screen for each collar resting upon said flange and clamped 50
within said pocket.

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

FAY E. BOYLE.

Witnesses:

JOHN P. BOYLE,
W. M. SPEERS.