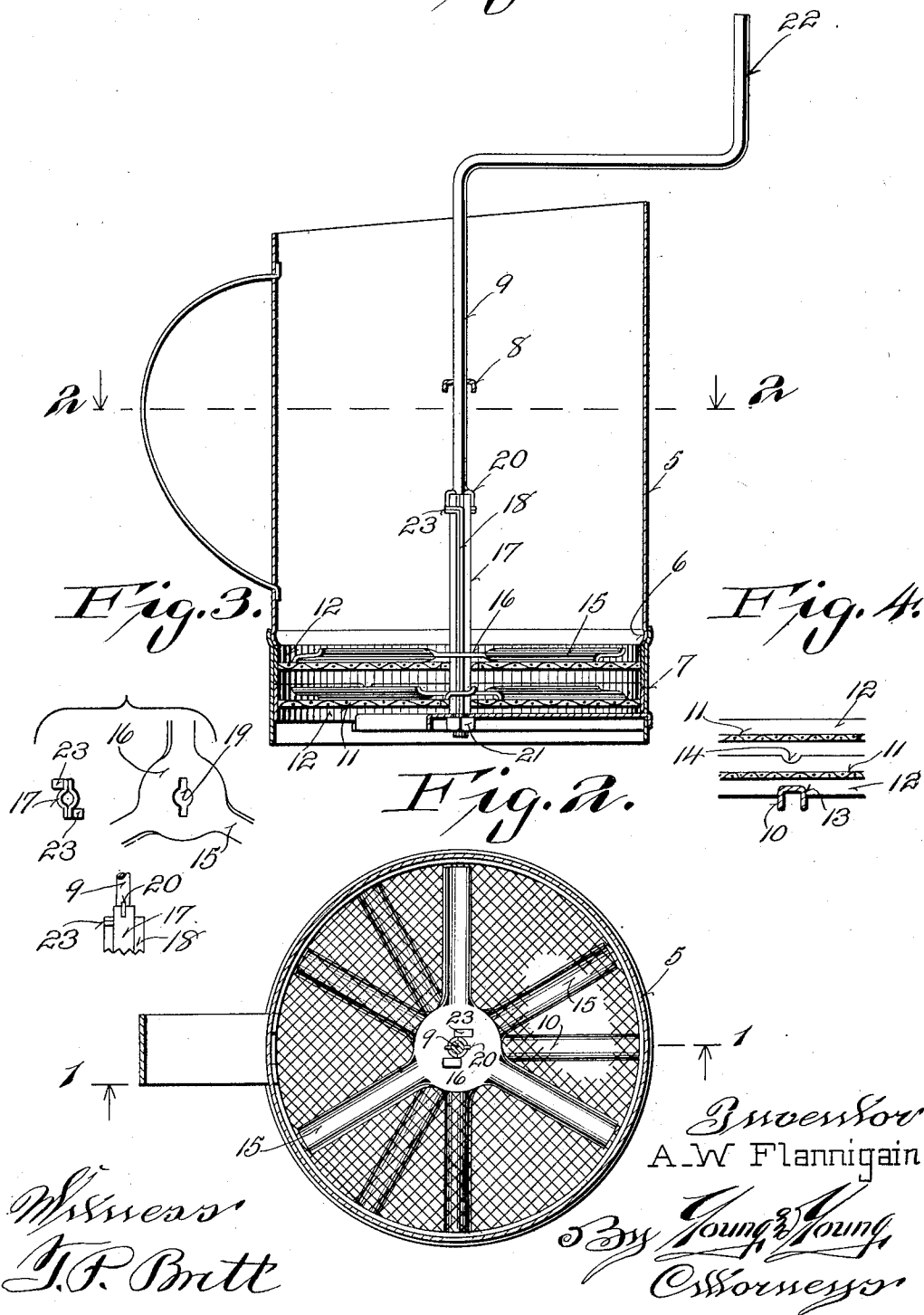


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SIFTER.
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1,384,441.

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Fig. 1.



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SIFTER.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ANDREW W. FLANNIGAIN, a citizen of the United States, and resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Sifters; and I do hereby declare that the following is a full, clear, and exact description thereof.

10 My invention relates to new and useful improvements in sifters, more particularly of that domestic type adapted for use for sifting flour and the like.

It is in general the object of my invention 15 to simplify and otherwise improve the structure and to increase the efficiency of devices of this character, and the ease and convenience of assembly and disassembly thereof, whereby such devices may be readily taken 20 apart and cleaned by the average housewife. It is more particularly my object to provide an arrangement whereby a double sifting action may be procured by the provision of superposed screen members each having an 25 agitator element movable thereover.

A further object resides in the provision of a sifter device embodying the afore-reited advantages which may be most economically constructed of stamped metal 30 sheeting.

With the above and other objects and advantages in view, which will be apparent as the description proceeds, my invention resides in the novel features of construction, 35 combination and arrangement of the parts as hereinafter described and defined by the appended claims.

In the accompanying drawings:

Figure 1 is a central vertical sectional 40 view through a sifter constructed in accordance with my invention, the plane of this section being indicated by line 1—1 of Fig. 2.

Fig. 2 is a transverse sectional view 45 through the sifter on a plane indicated by the line 2—2 of Fig. 1.

Fig. 3 is a view of the disassembled parts showing the interlocking relation of the sifter to the agitator members.

50 Fig. 4 is a detail sectional view of the arrangement for holding the screen members against rotation.

Referring now more particularly to the drawings, the body of my improved sifter 55 comprises a main cylindrical section 5 having its lower edge portion outwardly bulged

to form a slight bead 6 over which is engageable the flared end of a relatively short lower body section 7, whereby said body sections are detachably connected by the 60 frictional engagement of their overlapped meeting portions. A bar 8 extends transversely across the intermediate portion of the main body section 5 and is centrally apertured to provide a bearing for an axially 65 disposed operating shaft 9, the bar 8 being formed of a strip of sheet metal having its side edge portions laterally turned to provide a channel shape affording requisite strength. This shaft 9 has a lower bearing 70 in a spider member 10 secured in the lower portion of the lower body section 7, this spider member being stamped from a plate of sheet metal and having its arms bent in channel shape, with their ends extended 75 through the wall of the section 7 and bent to secure the spider member in place.

I provide in the present instance a pair of screens 11, these screens being centrally 80 apertured to loosely receive the shaft structure.

The peripheral portions of the screens are secured to a pair of bands 12 which are of such diameter as to fit snugly within the 85 lower body section 7, the widths of the bands being such as to extend between the spider 10 and the lower edge of the main body section 5 whereby the bands and screens are held in position when the body sections are assembled. To prevent rotation of the 90 screens, the lower band is recessed at 13 to receive the arms of the spider 10, and is also recessed to receive depending projections 14 of the upper band.

An agitator member is provided for each 95 screen 11 comprising a plurality of arms 15 radiating from a hub plate portion 16 which is in interlocking connection with the shaft 9. This interlocking connection is procured in the present instance by a sleeve 100 17 formed of a pair of longitudinally bowed plate strips having their side edges connected, said connected side edges forming longitudinal ribs 18 on the sleeve. Each of the agitator hub portions is provided with 105 an aperture 19 corresponding to cross section of and receiving the sleeve and ribs, which also extend loosely through the screens 11. The lower end of the sleeve rests on the spider member 10 and the upper end of the 110 sleeve is notched for the reception of lug portions 20 struck from the adjacent por-

tion of the shaft whereby to hold the sleeve against upward sliding movement on the shaft and to impart rotative movement to the sleeve upon rotation of the shaft. The sleeve and shaft are held in assembled relation by a nut 21 threaded on the lower end of the shaft and bearing against the sifter member 10. The sides of each agitator arm 15 are bent in opposite directions to provide scraper edges effective in co-action with the corresponding screen 11 in whatever manner the agitator members are assembled on the shaft sleeve.

The upper end of the shaft 9 is extended above the body of the sifter and bent to form a crank handle 22. Thus, upon turning said crank handle, the agitator members will be rotated each upon its respective screen 11 whereby an efficient double sifting action may be most conveniently effected. The entire device may be disassembled by removing the hub 21 and separating the body sections 5 and 7.

In assembling the device, the screen connecting bands 12 are disposed within the lower body section 7, with the agitator members positioned on the screens. The sleeve 17 is then mounted on the shaft and the screen and shaft are inserted through the apertures of the screens and agitator hubs 16 and the extremity of the shaft is passed through the spider 10. The nut 21 is then threaded on the said extremity of the shaft and the body sections 5 and 7 are engaged.

I have thus provided an exceedingly simple, readily manipulated and efficient device for procuring a multiple sifting action, although it will be appreciated that certain features of my invention may be used independently of the specific relations described. The positioning of the sleeve 17 upon the shaft 9, which would be formed of standard stock material, provides most economically for a maximum desired size of the shaft structure engaging with the hub plates 16 of the agitator members. The upper ends of the ribs 18 of the sleeve are bent laterally at 23 to prevent possible displacement of the upper agitator member.

While I have shown and described a preferred embodiment of my invention, it will be appreciated that various changes and modifications of structure may be employed to meet differing conditions of use and manufacture, without departing in any manner from the spirit of my invention.

What is claimed is:

1. A sifter of the class described comprising a cylindrical body member, a spider in the lower portion of the body member, a screen disposed in the body member above the spider, a shaft extending axially through the body member and through the screen and spider member, means carried by said shaft and engaging the spider member for holding

the shaft against longitudinal movement in either direction and an agitator member on the shaft co-acting with the screen.

2. A sifter of the class described comprising a cylindrical body member, a screen extending across the body member, a spider carried by the body member, a shaft extending axially through the body member and through the screen and spider member, a sleeve on the shaft extending through the screen and engaging the spider member at one end, the other end of the sleeve being recessed, rib projections on the sleeve, a projection on the intermediate portion of the shaft engaged in the recessed end of the sleeve, a nut threaded on the outer end of the shaft and engaging the spider to hold the sleeve and shaft, and an agitator member including a hub portion apertured to correspond to the cross section of the sleeve and its rib projection and mounted thereon.

3. A sifter of the class described comprising a cylindrical body member, a spider in the lower portion of the body member and rigidly attached thereto, a screen mounted in the body member above the spider, a shaft extending axially through the body member and through the screen and spider member, means carried by said shaft and engaging the spider member for holding the shaft against longitudinal movement in either direction, a non-circular sleeve on said shaft and secured so as to rotate therewith, and an agitator member carried on said sleeve and co-acting with said screen.

4. A sifter of the class described comprising a cylindrical body member, a spider member in the lower portion of the body member, a screen member mounted in the lower portion of the body above the spider member, a shaft extending axially through the body member and through the screen and spider, a bearing for the shaft carried by the body member above the screen, a non-circular sleeve keyed on said shaft, and an agitator member on said sleeve immediately above and coacting with said screen.

5. A sifter of the class described comprising a cylindrical body member, a pair of spaced screens extending across the body member, a shaft journaled centrally in said body member, a non-circular sleeve on said shaft and secured so as to rotate therewith, an agitator member on said sleeve between the screens for coaction with the lower screen and a second agitator member on said sleeve for coaction with the upper screen.

6. A sifter of the class described comprising a cylindrical body member formed of a pair of sections adapted for detachable connection, a spider in the outer portion of one of said sections, a band mounted in said section and confined between the spider and the adjacent end of the other section, a screen carried by said band, a shaft extending ax-

ially through said section and journaled in the spider, a non-circular sleeve on said shaft, one end of said sleeve bearing against said spider, the other end of said sleeve having a recess therein, a lug on said shaft extending into said recess thereby causing said sleeve to rotate with said shaft, and an agitator member carried by said sleeve for coaction with the screen.

10 7. A sifter of the class described comprising a cylindrical body member formed of a pair of sections adapted for detachable connection, a spider in the outer portion of one of said sections, a pair of bands mounted in
15 said section having their adjacent edges in abutting contact, with their other edges in contact respectively with the spider member and the adjacent end of the other section, a screen carried by each band, a shaft extending
20 axially through the body sections and through the screens and journaled in the spider, a non-circular sleeve on said shaft, one end of said sleeve bearing against said spider, the other end of said sleeve having a

recess therein, a lug on said shaft extending 25 into said recess thereby causing said sleeve to rotate with said shaft and agitator members on said sleeve coacting with said screens.

8. A sifter of the class described comprising a cylindrical body member formed of a 30 pair of sections adapted for detachable connection, a spider in the outer portion of one of said sections, a band mounted in said section and held in abutting relation with said spider, recesses formed in said band and receiving the arms of the spider to hold said 35 band against rotation, a screen carried by said band, a shaft extending axially through the body members and through the screen and journaled in the spider, and an agitator 40 member on said shaft coacting with said screen.

In testimony that I claim the foregoing I have hereunto set my hand at Milwaukee, in the county of Milwaukee and State of Wis- 45 consin.

ANDREW W. FLANNIGAIN.