(No Model.)

F. A. IDDINGS.

SIFTER.

No. 544,257. Patented Aug. 6, 1895.

Fig. 1.

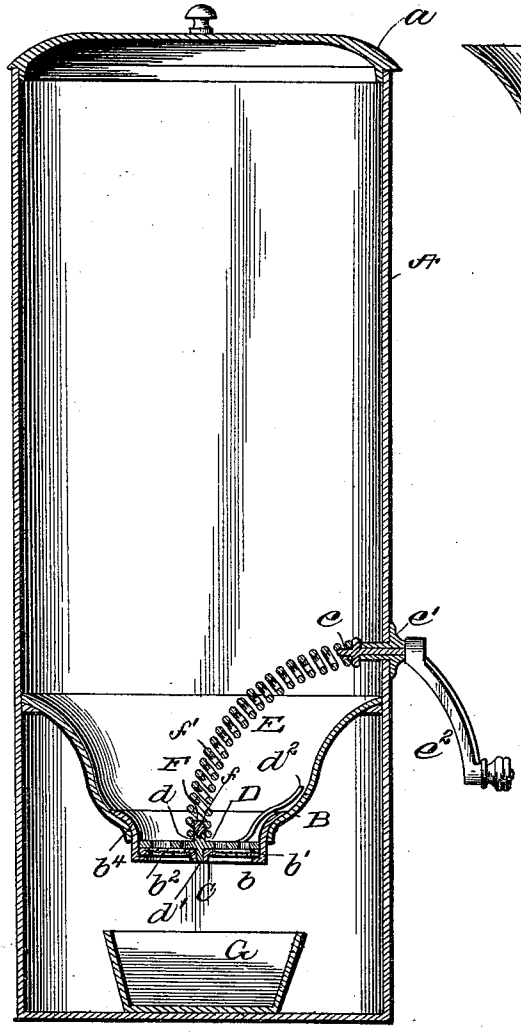


Fig. 2.

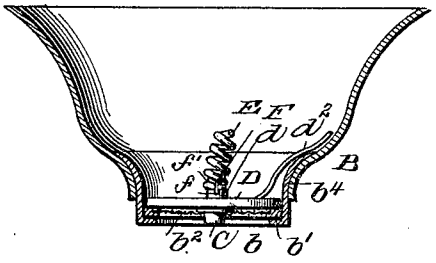


Fig. 3.

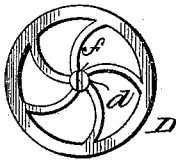


Fig. 4.

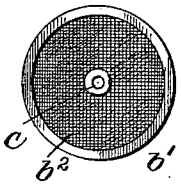
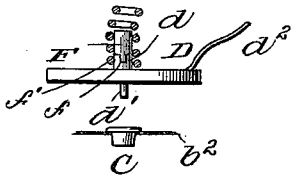


Fig. 5.



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UNITED STATES PATENT OFFICE.

FRANK ALBERT IDDINGS, OF WARREN, OHIO.

SIFTER.

SPECIFICATION forming part of Letters Patent No. 544,257, dated August 6, 1895.

Application filed April 6, 1895. Serial No. 544,767. (No model.)

To all whom it may concern:

Be it known that I, FRANK ALBERT IDDINGS, of Warren, in the county of Trumbull and State of Ohio, have invented certain new and useful Improvements in Sifters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a certain new and useful improvement in sifters, by means of which flour and other substances can be quickly and effectively sifted.

The object of the invention is to provide means by which thorough agitation of the flour or the like is constantly maintained during the sifting operation, to insure the proper retention in position of the sifting-wheel, and to enable the sieve to be easily removed for the purpose of cleansing or repairing.

A further object is to facilitate the construction of the parts, and also to reduce the cost thereof to a minimum and render the sifter free from all complications and insure the durability and thorough working thereof.

To these ends the invention comprises the novel features of construction and the detail combination and arrangement of parts, substantially as hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a vertical sectional view of my improved sifter. Fig. 2 is an enlarged view of the false bottom, showing the sieve and sifting-wheel and a portion of the operating-shaft of the latter. Fig. 3 is a plan view of the wheel. Fig. 4 is a view of the sieve removed. Fig. 5 is a detail.

Referring to the drawings, A designates the can or receptacle, which is preferably cylindrical and can be of any desired capacity. *a* is the cover therefor.

B is the false bottom, which is of bell shape and stamped out of one continuous piece of metal. At the vertex of the concaved portion of this bell-shaped bottom is a circular opening *b*. In this opening is designed to fit a ring b', carrying a sieve or screen b^2, the upper end b^4 of said ring being flanged and resting upon the bottom B surrrounding the opening *b* thereof. Thus the sieve or screen is rendered removable, as the surrounding ring thereof merely rests upon the bottom B around the opening of the latter. In the center of this sieve or screen is a bushing C having a central opening therein.

D is the sifting-wheel, the diameter of which is such as to allow of its fitting within the ring of the sieve or screen. From the hub or center of this wheel extend upper and lower lugs d d', the latter fitting snug within the bushing C of the sieve or screen. This serves to hold the wheel in place and prevents its displacement when being rotated and reduces the friction to a minimum. From the rim or one of the spokes of the wheel D extends an agitating-arm d^2, which in general outline conforms to the contour of the bell-shaped bottom B. This arm is designed to travel directly above and almost in contact with the false bottom, so that as the wheel is rotated said arm agitates the flour or the like and causes the same to fall on the sieve or screen and is forced through the latter by the wheel D.

E is a flexible operating-shaft, the lower end of which is secured to the upper lug d of wheel D, while its upper end is connected to a short shaft *e* fitted in a sleeve or bushing e', which is secured to the side of the can or receptacle A, an operating-handle e^2 being fitted on the outer end of said short shaft *e*. For the purpose of facilitating the construction or formation of this flexible shaft I form the upper lug d of wheel D with a groove or notch *f*, in which is designed to fit the lower reduced end of a mandrel F, a portion of which is shown in Fig. 5. When this mandrel is made to engage the lug d, the wire f' of which the flexible shaft E is composed can be easily wound around said lug and mandrel. After the formation of the shaft is completed the mandrel is removed. This is a point of great advantage in the construction of the sifter.

G is the pan or drawer for receiving the sifted substances, and is located on the bottom of can or receptacle A beneath the false bottom B. It is removable through an opening in the can or receptacle A.

The advantages of my invention will be apparent to those skilled in the art to which it appertains. By making the sieve or screen

removable the same can be easily cleaned and repaired, and by providing said sieve or screen with a central bushing to accommodate the lower lug of the wheel the latter is held to its position during the sifting operation and is prevented from jumping out of place, as otherwise often occurs, and friction is reduced to a minimum. The agitating-arm is preferably formed with the sifting-wheel, or it may be secured thereto, and, as before stated, conforms in general outline to the contour of the false bottom, so as to insure the proper agitation of the substance to be sifted and prevent the lodgment thereof on the concaved portion of said bottom.

A sifter constructed as herein described is extremely simple and inexpensive, and the parts can be readily and easily put together and also quickly removed for the purpose of cleansing or repairing. By removing the crank-operating handle from the short shaft at the upper end of the flexible shaft the latter can be readily removed from its upper bearing and it, together with the sifting-wheel, removable sieve, and bushing can be taken from the can or receptacle.

I claim as my invention—

1. In a sifter having a centrally located removable sieve provided with a central hole or opening, a sifting wheel located over said sieve and having a lower lug fitted in said hole or opening, and also provided with an upper lug, an agitator arm extending from said wheel, and a flexible operating shaft carrying a mandrel adapted to engage the upper lug of said agitator wheel, substantially as set forth.

2. In a sifter having a bell-shaped false bottom provided with a central opening, a sieve or screen removably fitted in said opening and provided with an upper flange resting on said bottom, a sifting wheel above said screen having an arm extending therefrom and designed to move over the lower portion of said bottom, and a flexible operating shaft carrying a mandrel adapted to engage said wheel, substantially as set forth.

3. The herein-described improved sifter, comprising the can or receptacle having a false-bottom of approximately bell-shape and provided with a central hole or opening, a ring having an upper flanged end designed to fit in said hole or opening, and having a sieve or screen, a central bushing supported by said sieve or screen, a sifting wheel above the latter having a lower lug fitted in said bushing, and an upper opposite lug, a flexible shaft composed of a continuous wire, a mandrel carried by said flexible shaft and adapted to engage said upper lug, an agitating arm extending from said wheel over the lower portion of said false bottom, a bushing secured to the side of said can or receptacle, a short shaft supported by said bushing and having the upper end of said flexible shaft connected thereto, and the crank-operating handle attached to the outer end of said short shaft, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

FRANK ALBERT IDDINGS.

Witnesses:
W. T. IDDINGS,
GEO. W. UPTON.