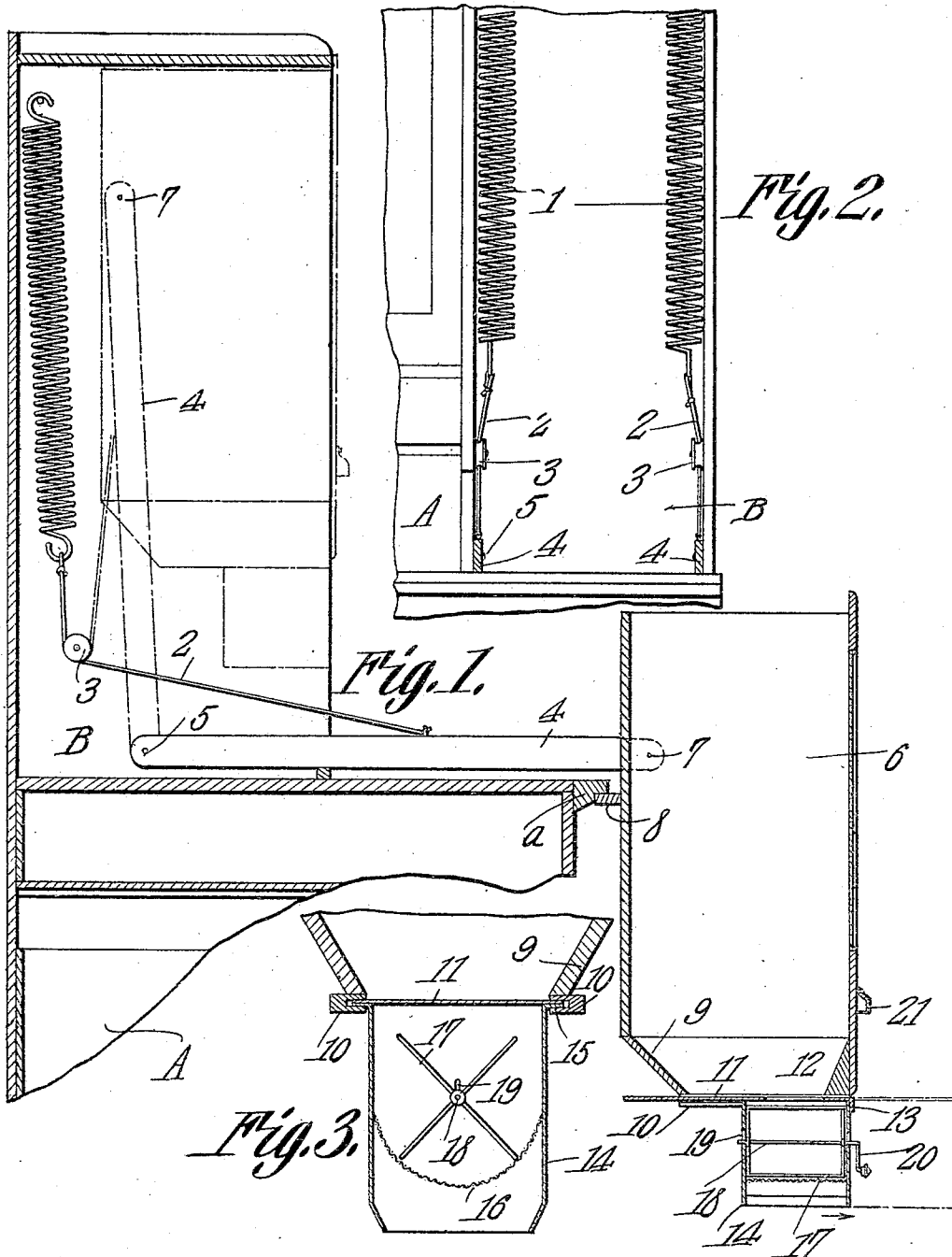


H. E. McCLURE.
 FLOUR BIN.
 APPLICATION FILED MAR. 5, 1909.

943,443.

Patented Dec. 14, 1909.



Witnesses

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UNITED STATES PATENT OFFICE.

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FLOUR-BIN.

943,443.

Specification of Letters Patent.

Patented Dec. 14, 1909.

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To all whom it may concern:

Be it known that I, HENRY EDWARD McCLURE, a citizen of the United States, residing at Marion, in the county of Grant and State of Indiana, have invented a new and useful Flour-Bin, of which the following is a specification.

This invention relates to flour bins and more especially to devices of this type for use in connection with kitchen cabinets.

The object of the invention is to provide a bin which can be conveniently lowered from the upper portion of a cabinet for the purpose of filling it, means being utilized whereby the bin, when filled, can be readily returned to its normal or raised position within the cabinet.

A further object is to provide sifting means for use in connection with the bin, said means being removable from the bin without danger of discharging any of the contents of the bin upon the cabinet or floor.

With these and other objects in view the invention consists of certain novel details and construction and combinations of parts hereinafter more fully described and pointed out in the claims.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:—Figure 1 is a vertical section through a bin embodying the present improvements, said bin being shown lowered for the purpose of filling the same, the normal or raised position of the bin within the cabinet being indicated by dotted line. Fig. 2 is a front elevation of the bin housing, said bin being removed therefrom and the supporting arms thereof being shown in section. Fig. 3 is an enlarged vertical transverse section through the bottom portion of the bin and through the sifter used in connection therewith.

Referring to the figures by characters of reference A designates a kitchen cabinet of any preferred construction, the same being provided in the upper portion thereof with a compartment B to the upper portions of the side walls of which are secured the upper ends of coiled springs 1, 1. The lower ends of these springs are attached to cords 2 extending under guide sheaves 3 which are journaled upon the side walls of the compartment B near the lower ends thereof, said cords being also secured to arms 4 pivotally connected at one end to the lower

portions of the walls of the compartment B, as indicated at 5.

A bin 6 is disposed between the outer ends of the arms 4, said arms being pivotally connected to the side walls of the bin adjacent the upper ends thereof and close to the back wall of the bin as indicated at 7, there being a holding bracket 8 projecting rearwardly from the bin and so located as to swing under and into engagement with the finishing bead *a* upon the front portion of the cabinet A when the bin 6 is swung downward into its lowermost position as indicated by full lines in Fig. 1. This bracket 8 is held in engagement with the bead *a* by the weight of the bin, this being due to the positions of the pivots 7 with relation to the center of gravity of the bin.

The bin is provided with a hopper-like bottom 9 having longitudinally grooved guide cleats 10 along the side walls thereof, and slidably mounted within the grooves of these cleats is a cut-off slide 11 having an opening 12 therein. An ear 13 extends downwardly from the front edge of the cut-off slide and into the path of a sifter casing 14. This casing is provided along its upper side edges with supporting flanges 15 slidably mounted within the grooves in cleats 10 and on which the slide 11 rests. The casing 14 is open at the top and bottom, and arranged within this casing is a substantially semi-cylindrical screen 16 above which is located a reel 17. This reel is mounted on a shaft 18, which is revoluble in the front and rear walls of the casing 14, the end portions of the shaft being slidably mounted within slots 19 formed in said walls and which thus permit a limited vertical movement of the shaft. A crank 20 may be arranged at the front end of the shaft to facilitate the rotation of the reel.

It is of course understood that the normal position of the bin 6 is within the compartment B, and, as shown by dotted lines in Fig. 1, when the bin is thus located the arms 4 extend upwardly, the pivot points 7 being disposed slightly in rear of a vertical plane extending through the pivots 5. The springs 1 thus pull upon the cords 2 so as to hold the bin retracted into the compartment B. While the bin is in this position the contents thereof may be sifted and removed therefrom by grasping the ear 13 and pushing the slide 11 backward so as to bring

the opening 12 into position below the bottom of the bin and above the casing 14. The contents of the bin will thus be free to flow into the casing and on to the screen 16, and, by rotating the reel 17, the contents of the casing 14 will be agitated and forced through the screen into any suitable receptacle provided for the same. After a sufficient amount has been sifted the slide 11 can be drawn forward so as to close the bottom of the bin. Should it be desired to remove the sifter immediately subsequent to the sifting of the contents of the bin it is merely necessary to slide the casing 14 forwardly and it will thus push against the ear 13 and draw the slide 11 forward so as to close the bottom of the bin. The casing 14 can thus be moved so as to disengage its flanges from the cleats 10, whereupon said casing can be lifted out of position and the slide 11, which has been moved forward by this operation, will of course prevent any of the contents of the bin from flowing outwardly through the bottom thereof.

Should it be desired to fill the bin it is merely necessary to grasp a handle 21 secured upon the front thereof and to pull the bin forwardly and downwardly. The arms 4 will thus swing upon their pivots 5 and the cords will pull upon and elongate the springs 1. When the bin 6 reaches its lowermost position the bracket 8 can be caused to swing backward under the finishing bead *a*, and the bin will thus be held in lowered position, where it can be conveniently filled. After the filling operation the bin can be returned to the compartment B simply by swinging the bracket 8 out of engagement with the finishing bead *a* and then pushing the bin upwardly so as to assist the springs 1 in returning it to the compartment.

Obviously various changes may be made in the construction and arrangement of the parts without departing from the spirit or sacrificing the advantages of the invention.

What is claimed is:—

1. The combination with a supporting

structure and a housing, of spring-controlled arms pivotally mounted therein, a bin pivotally supported by the arms and movable therewith into and out of the housing, and cooperating means upon the bin and structure for holding the bin in position outside of and below the housing.

2. The combination with a housing, of supporting members pivotally mounted within the housing, a bin pivotally mounted upon said members and movable therewith into and out of the housing, spring-controlled means for moving the supporting members into the housing, a supporting structure for the housing, cooperating means upon the bin and supporting structure for holding the bin in lowered position and against the stress of the springs.

3. The combination with a supporting structure having a housing, of a pair of arms pivotally mounted within the housing, a bin supported by and mounted to oscillate between said arms, means for automatically drawing the arms and bin into the housing, and gravity operated means upon the bin and cooperating with the supporting structure for holding the bin in position beyond the housing.

4. The combination with a supporting structure and a housing, of spring controlled arms pivotally connected to and normally mounted within the housing, and a bin pivotally supported by and between the arms and movable therewith into and out of the housing, said arms constituting means for holding the bin in position outside of and below the housing, and means connected to the arms for automatically elevating the same to raise the bin into the housing.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

H. EDWARD McCLURE.

Witnesses:

JOHN W. PRAIL,
ELMER JINES.