E. J. WALKER.

BIN.

APPLICATION FILED JULY 28, 1914.

1,318,306.

Patented Oct. 7, 1919.

4 SHEETS—SHEET 1.

FIG. II.

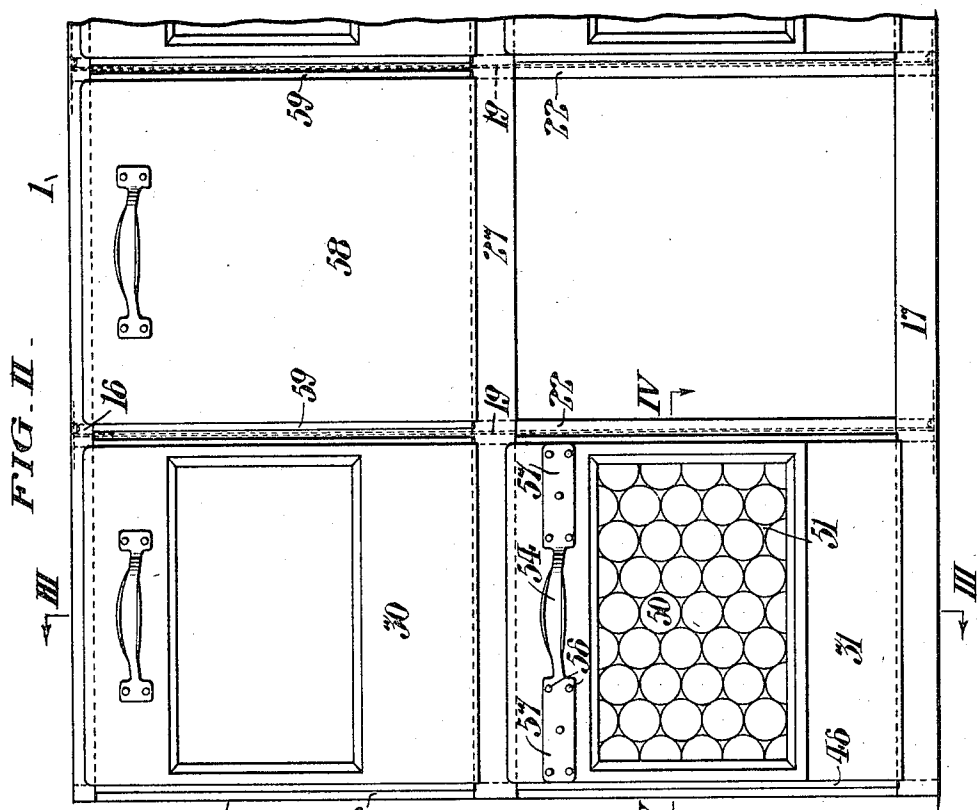
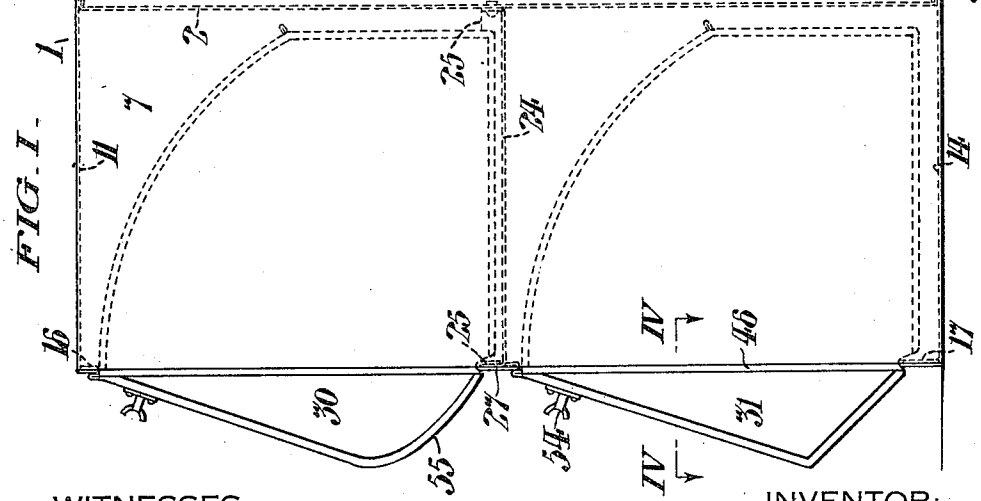


FIG. I.



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4 SHEETS—SHEET 2.

FIG. III.

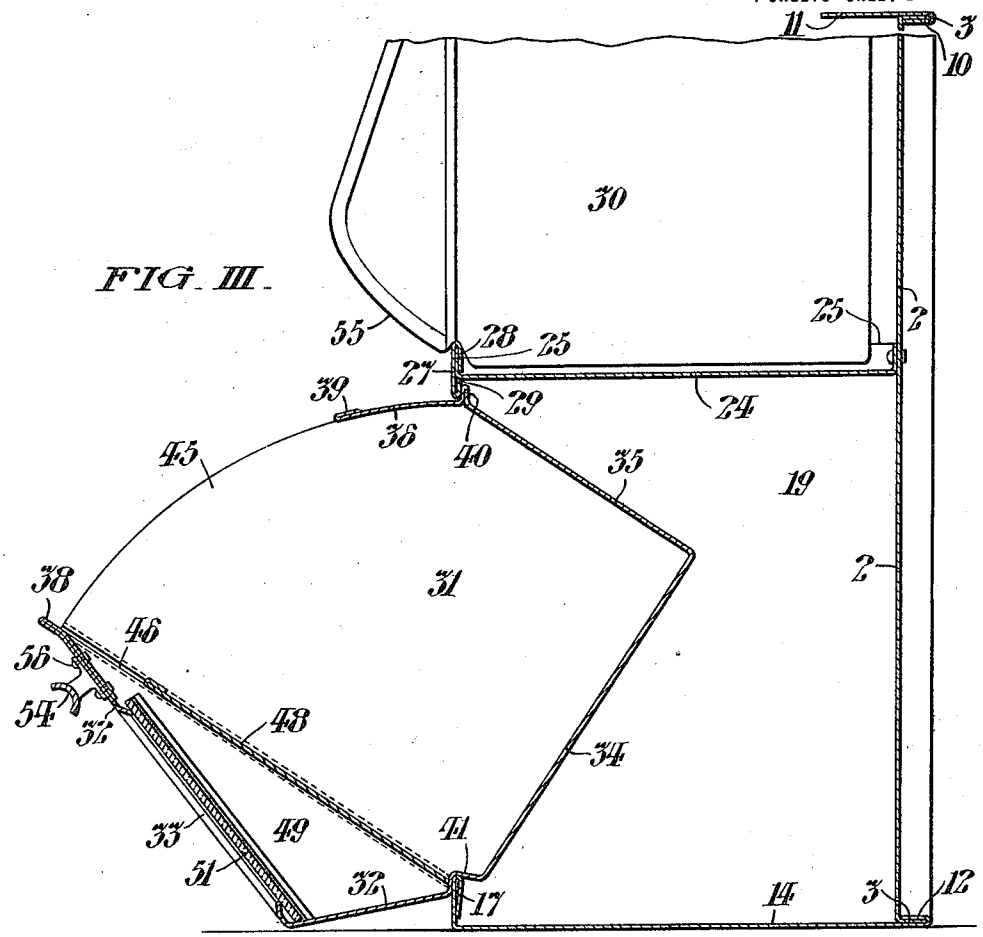
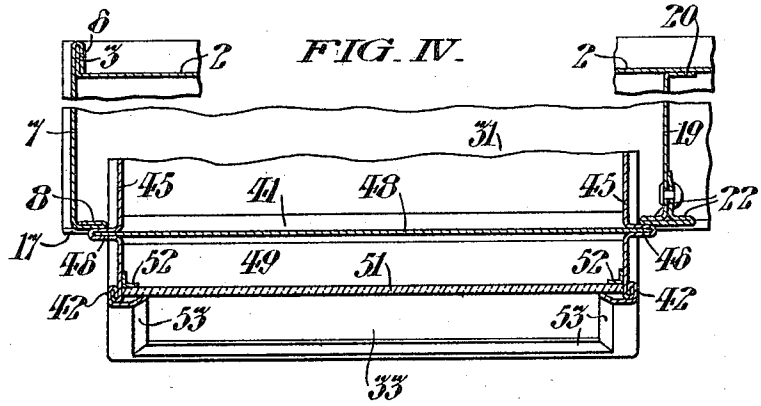


FIG. IV.



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4 SHEETS—SHEET 3.

FIG. VI.

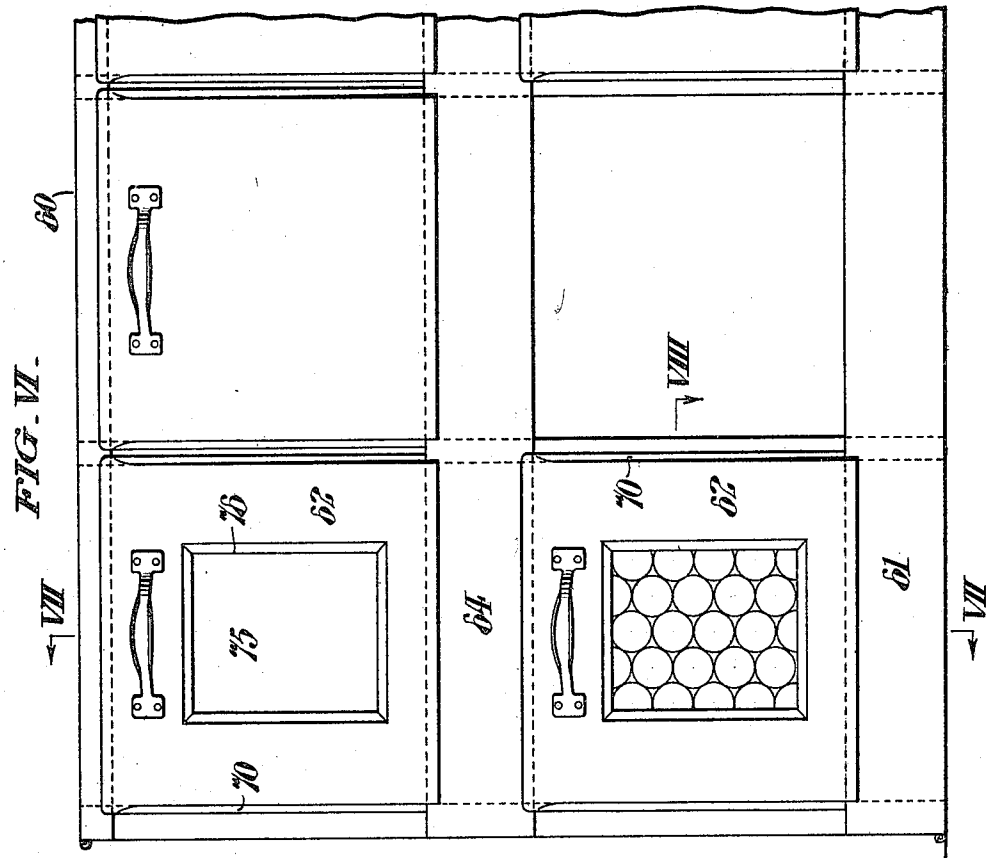
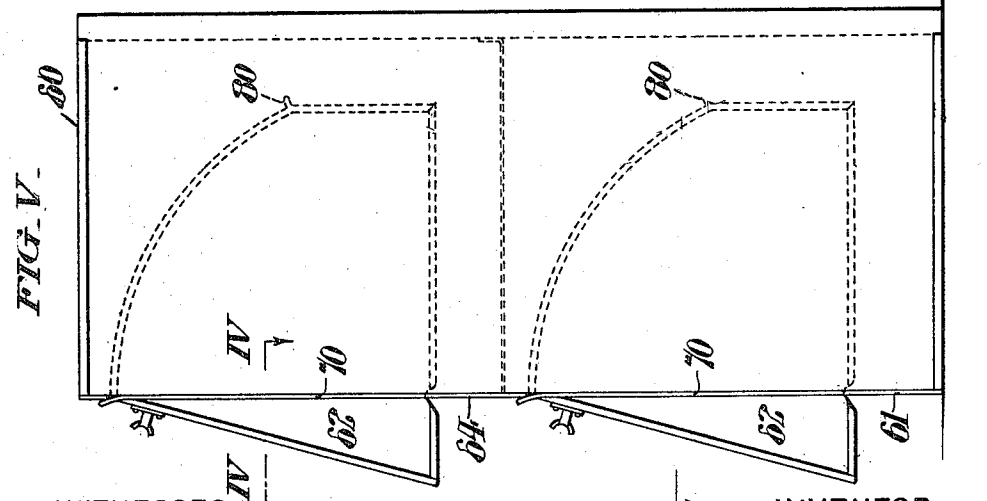


FIG. V.



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4 SHEETS—SHEET 4.

FIG. VII.

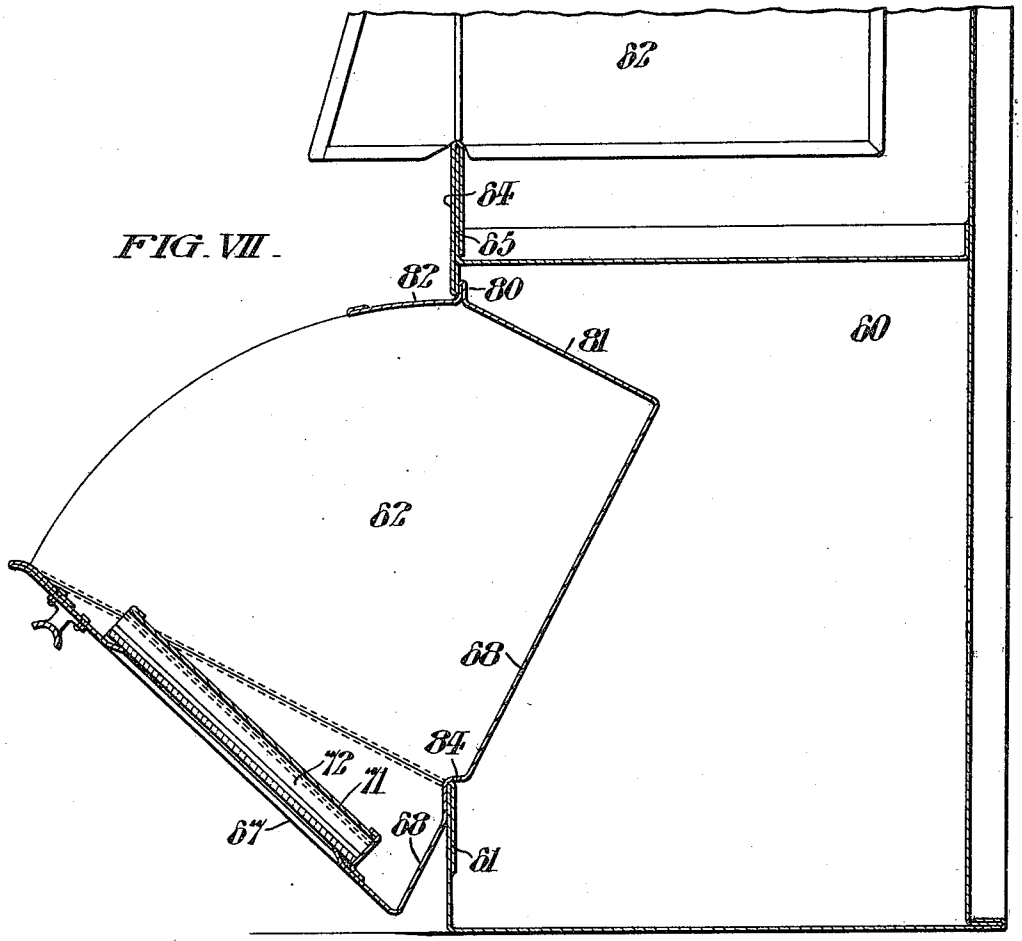
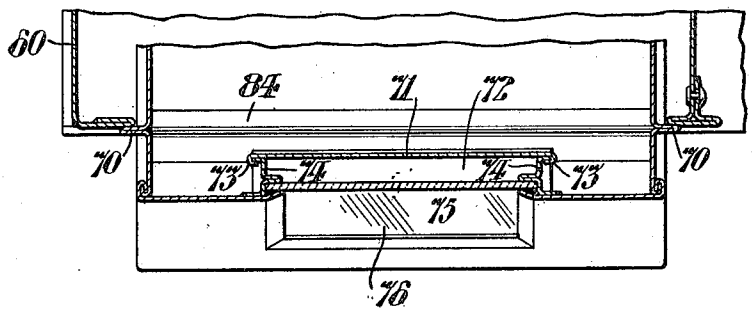


FIG. VIII.



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UNITED STATES PATENT OFFICE.

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1,318,306. Specification of Letters Patent. Patented Oct. 7, 1919.

Application filed July 28, 1914. Serial No. 853,616.

To all whom it may concern:

Be it known that I, EDWIN J. WALKER, a citizen of the United States, residing at Philadelphia, in the State of Pennsylvania, have invented a certain new and useful Improvement in Bins, whereof the following is a specification, reference being had to the accompanying drawings.

My invention relates to a bin of the general type shown in my Letters Patent of the United States 614,279 dated November 15, 1898; 728,054 dated May 12, 1903; 792,062 dated July 4, 1905; and 1,027,945 dated May 28, 1912. The improved bin is mounted in a casing so as to be pivoted at the front edge thereof in removable relation therewith and has its front inclined outwardly from the top toward the bottom thereof and provided with a glazed opening for the display of merchandise, like the bins shown in the first three patents aforesaid, and, like the bin shown in said Patents 728,054 and 1,027,945, is constructed wholly of metal. However, as shown in the latter patents each bin was provided with an individual metal casing and it is the object of my present invention to not only simplify and lessen the cost of construction of metallic bins of this general type but to provide a metallic casing adapted to hold a plurality of such bins especially adapted for coöperation with the casing to exclude the rodents and insects which ordinarily prey upon the contents of such bins.

My invention includes the various novel features of construction and arrangement hereinafter more definitely specified.

In the drawings; Figure I is a side view of a convenient embodiment of my invention.

Fig. II is a fragmentary front view of the structure shown in Fig. I.

Fig. III is a vertical sectional view, taken on the line III, III in Fig. II but showing the lower bin tilted outwardly.

Fig. IV is a horizontal sectional view, taken on the line IV, IV in Figs. I and II.

Fig. V is a side view of a modified form of my invention.

Fig. VI is a fragmentary front view of the structure shown in Fig. V.

Fig. VII is a vertical sectional view, taken on the line VII, VII in Fig. VI but showing the lower bin tilted outwardly.

Fig. VIII is a horizontal sectional view, taken on the line VIII, VIII in Figs. V and VI.

Referring to the form of my invention shown in Figs. I to IV inclusive; the bin casing 1 comprises the vertical rear wall 2, formed of a single sheet of metal having outwardly turned flanges 3 at each edge thereof. The vertical flanges on said rear wall 2 are engaged by the inwardly folded flanges 6 on the oppositely counterpart end walls 7, which have inwardly folded flanges 8 at the front thereof, extending parallel with said rear wall. The horizontal flanges 3 on said rear wall 2 are engaged by the inwardly folded flange 10 on the top wall 11 and the inwardly folded flange 12 on the bottom wall 14. Said top and bottom walls 11 and 14 have respective inwardly folded flanges 16 and 17 at the front edges thereof, extending parallel with said rear wall 2 and overlapping said flanges 8 on the end walls.

The vertical partition walls 19 extend parallel with said end walls 7 and have flanges 20 turned at right angles thereto and riveted in connection with said top, bottom and rear walls, and have at the front edges thereof double vertical flanges 22, extending in unitary T-shaped relation with said partition walls 19 and riveted thereto, as indicated in Fig. IV. The horizontal partition walls 24, which fit between said vertical walls, have upwardly turned flanges 25 at their edges riveted in engagement with said vertical walls, as indicated in Fig. III. Said vertical walls 7 and 19 and horizontal walls 24 are connected by metal strips 27 which are continuous from end to end of the casing 1 and have inwardly folded flanges 28, as indicated in Fig. III, to engage the front flanges 25 on said walls 24, extending above the latter, to form pivot rails for the upper series of bins 30. Said strips 27 also have inwardly folded flanges 29 extending below and abutting said horizontal partition walls 24, so as to retain said strips in engagement with said walls 24 and form a stop rail for the lower series of bins 31, as indicated in Fig. III.

The outer walls of each of said bins 31 are formed of three sheets of metal viz., a single sheet forming the swell front 32, having the glazed opening 33, bottom wall 34,

rear wall 35 and top wall 36, in unitary relation with the reinforcing folded flanges 38 and 39, respectively at the front and rear top edges of the bin as shown in Fig. III, the stop flange 40 extending transversely between said walls 35 and 36 and adapted to encounter said flange 29 of said strip 27, and the pivot member 41 extending transversely with respect to said bin between the walls 32 and 34 thereof, for pivotal engagement with the flange 17 at the front edge of the bin casing. Said single sheet of metal has flanges 42 at its opposite edges engaged with the edges of the other two sheets of metal which respectively form the opposite counterpart side walls 45 of said bin 31, as best shown in Fig. IV. Said side walls 45 have, in unitary relation therewith, outwardly projecting channel flanges 46 extending from the top to the bottom thereof, as shown in Fig. III, and bearing upon the front face of the bin casing, as shown in Fig. I, so as to close the joint between said bin and casing, vermin tight, said bin flanges 46 bearing upon the vertical flanges 8 and 22 of the casing, as shown in Fig. IV. Said channel flanges 46 also form guides and holding means for the partition 48 separating the display compartment 49 from the remainder of the bin. As shown in Fig. II, said display compartment 49 may be packed with articles 50 covered by the glass 51 which is held over said display opening 33, in sliding engagement therewith, by the angle bars 52 which are secured to the said walls 45 of the bin, in the position shown in Fig. IV, by solder or rivets. It may be observed that said glass 51 is resiliently held against said bars 52 by the inwardly turned flanges 53 at the margins of said opening 33; said flanges 53 forming a beveled edge for said opening.

Each of said bins is conveniently provided with a handle 54, and it is to be noted that the rivets 56 by which said handle is secured to the front wall 32 of the bin also extend through the reinforcing flanges 38, so that a double thickness of sheet metal is afforded at that portion of the bin which is subjected to the greatest strain, and said strain is distributed to the side walls of the bin, by the extension of the handle bases 57 to the edges of the bin, as shown in Fig. II.

The bins 30, shown in the upper tier of said casing 1, are constructed and arranged like the bins 31 above described, except that the lower part of their swell fronts 55 is curved, instead of being straight as in the bins 31.

Although I prefer to provide my improved bins with display fronts, I do not desire to limit myself to the inclusion of that feature of construction, as bins 58 otherwise similar to those above described may be made without any display opening, and the partition 48 be omitted from the opposite channel flanges 59 thereof so that the entire space within such bins is available for articles in position to be dispensed, as distinguished from the other bins wherein a portion of the contents of the bin is reserved, and detained in registry with the openings therein for display purposes.

Referring to the form of my invention shown in Figs. V to VIII inclusive, the bin casing 60 is similar to the casing 1 above described but both the vertical flange 61 on the bottom wall, which forms a pivot rail for the bins 62, and the metal strip 64 which engages the vertical flange 65 on the horizontal partitions and forms both a stop rail, at its lower edge, and a pivot rail at its upper edge for said bins 62, are of greater vertical extent than the corresponding elements of said bin casing 1, in order to accommodate said bins 62 which differ from the bins 30 and 31 above described in that their swell fronts 67 extend straight from top to bottom and merge into the bottom walls 68 of the bins, which extend exterior to the bin casing 60 in the same plane as within said casing.

It may be observed that the construction of said bins 62 is simpler and consequently less costly than the construction of the bins 30 and 31, and said bins 62 have greater capacity exterior to the bin casing, but they cannot be as compactly arranged as the bins 30 and 31 because of the downward extension of their swell fronts when in the tilted position shown in Fig. VII, which necessitates the greater vertical extent of pivot rails above described.

Said bins 62 have flanges 70 in unitary relation with the side walls thereof and extending from top to bottom thereof, adapted to fit tightly against the front face of the bin casing like said flanges 46, but do not afford channels for the partitions 71 which separate the display compartments 72 from the remainder of the bins. As shown in Fig. VIII, said partitions 71 have inwardly folded flanges 73 engaging the angle bars 74 which hold the glass panels 75 over the display openings 76 in said bins 62. It may be observed that such construction and arrangement of the display compartments 72 afford a greater amount of space for articles to be dispensed within the bin 62 than is afforded within the bins 30 and 31.

As shown in Fig. VII, said bins 62 have outwardly projecting stop flanges 80 in unitary relation with their rear walls 81 and top wall 82, extending transversely between said walls and adapted to encounter the lower flange on the strip 64.

It is to be understood that said top walls 36 and 82 are so constructed and arranged as to overhang the interior of the bin so as to prevent such articles as coffee or beans

from splashing out when the bins are quickly tilted to closed position. Of course, the addition of such walls to the respective bins enables them to hold more articles than if said walls were omitted.

Referring to Figs. IV and VII, it may be observed that the pivot members 41 and 84, respectively in unitary relation with the bottom walls of the bins 30 and 62 are of such angular trough shape that when said bins are tilted to closed position their vertical side flanges 46 and 70 are brought tightly against the front of the bin casings, and such shape, being continuous throughout the transverse extent of the bin, does not afford any crevice between the bin and bin casing as is afforded by a hinge connection. Moreover, the angular shape of said pivot members is such that when the bins are tilted to their open position, as shown in Figs. IV and VII, the bins are tightly held upon their respective pivot rails by their own weight, but by lifting them vertically to the slight extent necessary to clear their respective pivot rails, swinging them outwardly upon their respective stop flanges 40 and 80 until their bottom walls clear their respective stop rails and then lowering them until their respective stop flanges 40 and 80 are clear of said casings they may be bodily withdrawn from their chambers in the respective bin casings.

It may be observed that the construction of the bins above described is much simpler, and consequently less costly, than the bins described in my Letters Patent aforesaid in that the essential elements thereof are formed of a less number of pieces, thus avoiding several of the soldering or riveting operations necessary with the old construction. Moreover, a further economy is effected by having certain of the elements serve a double purpose, for instance, the channel flanges 46 not only prevent access of vermin to the bin casing, and thus to the contents of the bins, but also constitute means for holding the partition 48. Furthermore, the rivets 56 not only secure the handles 54 but also hold the flanges 38 in position to reinforce the bins at the region of greatest strain thereon.

I do not desire to limit myself to the precise details of construction and arrangement above set forth as it is obvious that various modifications may be made therein without departing from the essential features of my invention as defined in the appended claims.

I claim:

1. A tiltable bin with a swell front having its walls formed of three sheets of metal, to wit, two sheets forming oppositely counterpart side walls thereof having outwardly projecting channel flanges extending from the top to the bottom thereof arranged to bear upon the front of a bin casing; said side walls having flanges at their edges interlocked with flanges at the opposite edges of a single sheet of metal forming the front, bottom, back and top walls of the bin; said single sheet of metal having an inwardly folded flange at its upper front edge, a display opening with beveled flanges in its upper front portion, having a portion extending transversely between the front and bottom walls of said bin, in unitary relation therewith, forming a trough shaped recess for engagement with a pivot rail in said casing, and an outwardly projecting folded stop flange on said single sheet of metal arranged to encounter said casing and limit the outward tilting movement of the bin; a partition slidably engaged in said channels in the side walls of said bin, forming a display compartment separate from the main compartment of the bin; a transparent panel covering said display opening and bearing upon the beveled flanges thereof; and angle bars respectively secured to the opposite side walls of said bin, bearing upon said transparent panel and normally retaining the latter covering said display opening; and a handle connected with said bin by rivets extending through the front thereof and the folded reinforcing flange at the top edge thereof; whereby said bin is pivoted at the front edge of said casing so as to have a swell front projecting beyond the front of said casing and normally overbalanced by the portion of said bin within said casing, but said bin may be tilted outwardly upon its pivotal member in engagement with said rail, to an extent limited by said stop flange, and when thus outwardly tilted is overbalanced so as to remain open until manually retilted.

2. A tiltable bin with a swell front having its walls formed of three sheets of metal, to wit, two sheets forming oppositely counterpart side walls thereof having outwardly projecting channel flanges extending from the top to the bottom thereof arranged to bear upon the front of a bin casing; a single sheet forming the front, bottom, back and top walls of the bin; said single sheet having an inwardly folded flange at its upper front edge, a display opening in its front portion, having a portion extending transversely between the front and bottom walls of said bin, in unitary relation therewith, forming a trough shaped recess for engagement with a pivot rail in said casing, and a folded stop flange of said single sheet of metal, arranged to encounter said casing and limit the outward tilting movement of the bin; a partition slidably engaged in said channels in the side walls of said bin, forming a display compartment separate from the main compartment of the bin; a transparent panel covering said display opening; angle bars bearing upon said transparent panel

and normally retaining the latter covering said display opening; whereby said bin is pivoted at the front edge of said casing so as to have a swell front projecting beyond the front of said casing and normally overbalanced by the portion of said bin within said casing, but said bin may be tilted outwardly upon its pivotal member in engagement with said rail, to an extent limited by said stop flange, and when thus outwardly tilted is overbalanced so as to remain open until manually retilted.

3. A tiltable bin having its walls formed of three sheets of metal, to wit, two sheets forming oppositely counterpart side walls thereof having outwardly projecting channel flanges extending from the top to the bottom thereof arranged to bear upon the front of a bin casing; a single sheet forming the front, bottom, back and top walls of the bin; said single sheet having a display opening in its front portion, having a portion extending transversely between the front and bottom walls of said bin, in unitary relation therewith, forming a trough shaped recess for engagement with a pivot rail in said casing, and an outwardly projecting folded stop flange on said single sheet of metal arranged to encounter said casing and limit the outward tilting movement of the bin; a partition slidably engaged in said channels in the side walls of said bin, forming a display compartment separate from the main compartment of the bin; a transparent panel covering said display opening; and means bearing upon said transparent panel and normally retaining the latter covering said display opening.

4. A tiltable bin having side walls with outwardly projecting channel flanges extending from the top to the bottom thereof, in spaced relation to the front thereof, arranged to bear upon the front of a bin casing; whereby the bin opening in said casing is closed, and the bin is held with its front projecting from said casing; a pivot member extending transversely between the front and bottom walls of said bins, in unitary relation therewith, forming a trough shaped recess for engagement with a pivot rail in said casing, and an outwardly projecting folded stop flange in unitary relation with the rear wall of said bin arranged to encounter said casing and limit the outward tilting movement of the bin.

5. A tiltable bin having side walls with outwardly projecting channel flanges extending from the top to the bottom thereof, in spaced relation to the front thereof, arranged to bear upon the front of a bin casing; and whereby the bin opening in said casing is closed, and the bin is held with its front projecting from said casing; a pivot member extending transversely between the front and bottom walls of said bin, in unitary relation therewith, forming a trough shaped recess for engagement with a pivot rail in said casing.

6. A tiltable bin having side walls with outwardly projecting flanges extending from the top to the bottom thereof, in unitary relation therewith, and in spaced relation to the front thereof, arranged to bear upon the front of a bin casing; whereby the bin opening in said casing is closed, and the bin is held with its front projecting from said casing, and a partition mounted to slide in said flanges within said bin.

7. A tiltable bin having side walls with outwardly projecting flanges extending from the top to the bottom thereof, in unitary relation therewith, and in spaced relation to the front thereof, arranged to bear upon the front of a bin casing; whereby the bin opening in said casing is closed, and the bin is held with its front projecting from said casing.

8. A tiltable bin having side walls formed of sheet metal with outwardly projecting folded flanges extending from the top to the bottom thereof, in spaced relation to the front thereof, and in unitary relation therewith, arranged to overlap and bear upon the front of a bin casing; whereby the bin opening in said casing is closed, and the bin is held with its front projecting from said casing.

9. A tiltable bin having metallic side walls with respective outwardly projecting flanges, arranged to overlap and bear upon the front of a bin casing, in spaced relation with the front of the bin; each of said walls with its flange being formed of integral structure.

In testimony whereof I have hereunto signed my name at Philadelphia, Pennsylvania, this seventh day of July, 1914.

EDWIN J. WALKER.

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