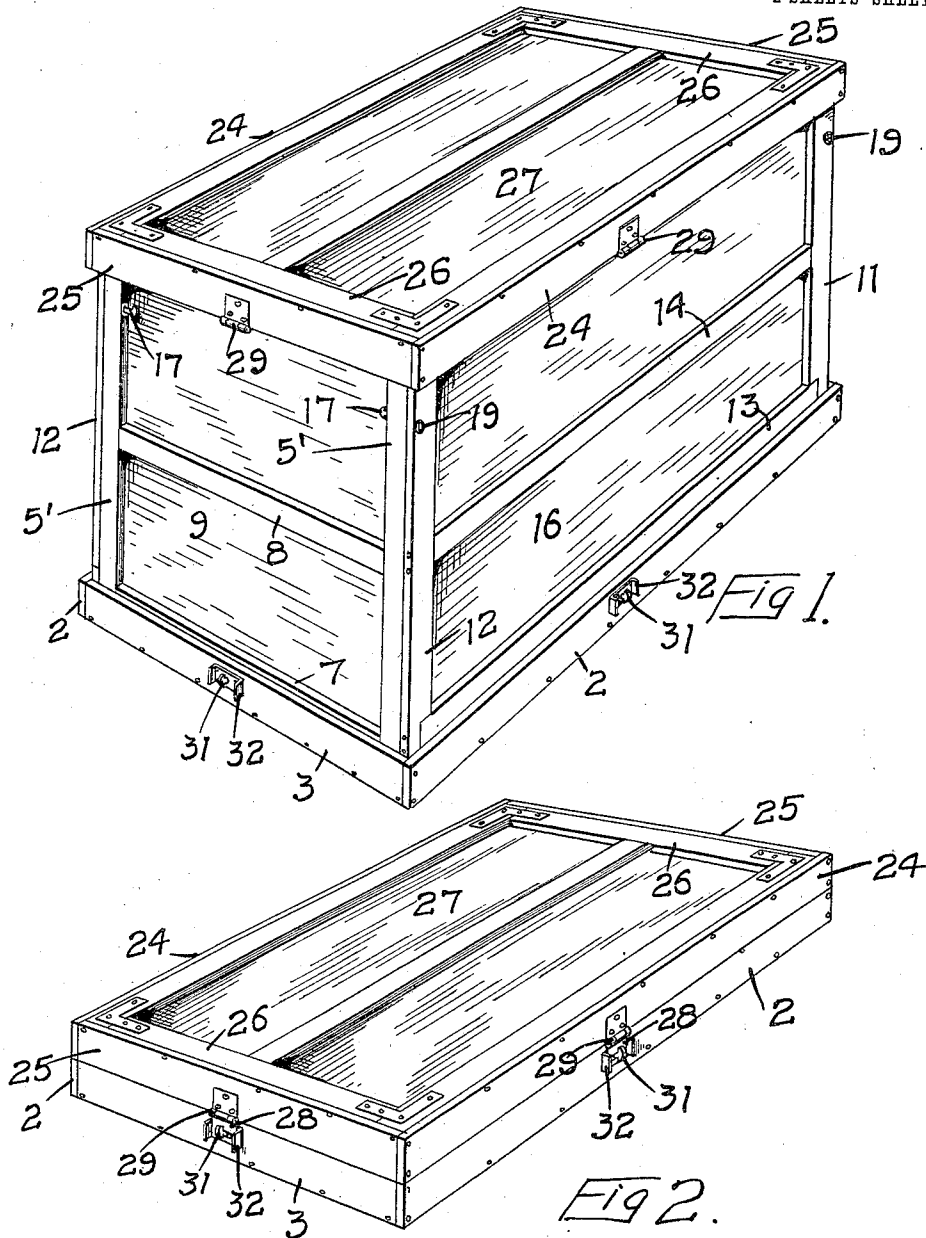


C. A. WOOLSEY.
FOLDING BOX.
APPLICATION FILED JUNE 21, 1909.

1,043,995.

Patented Nov. 12, 1912.

2 SHEETS-SHEET 1.



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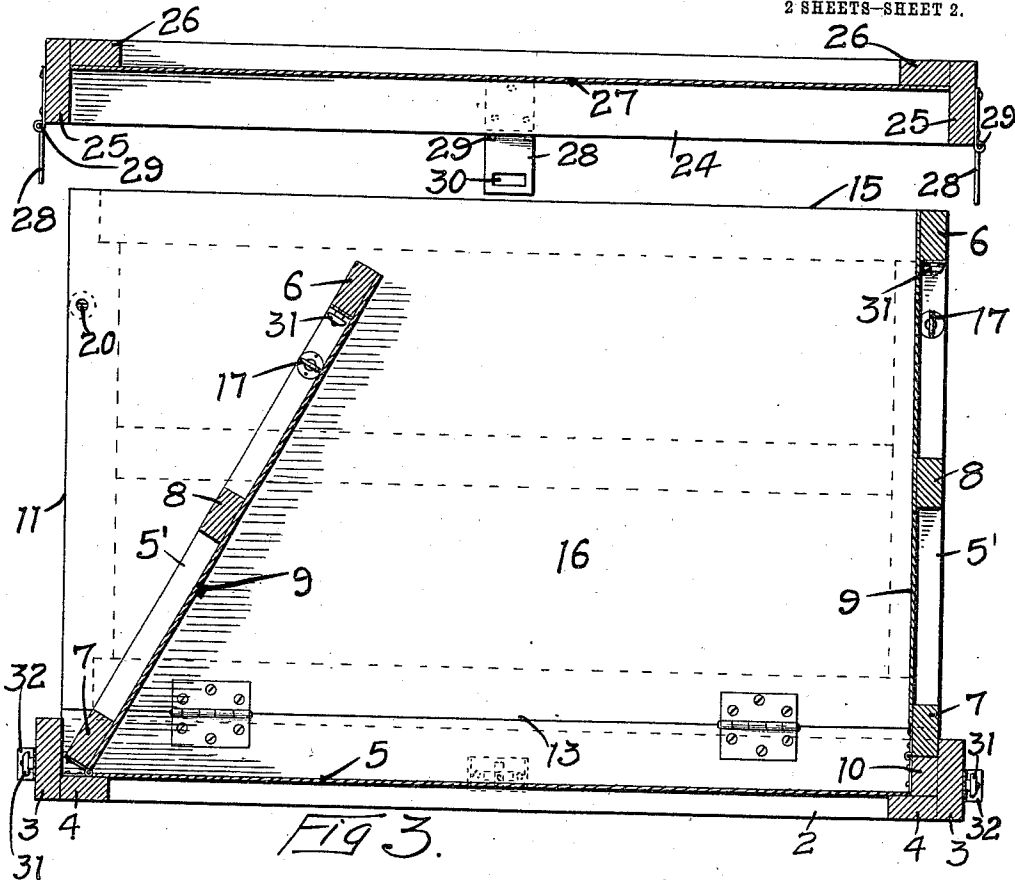


Fig 3.

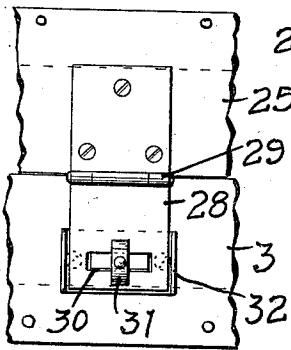


Fig 4.

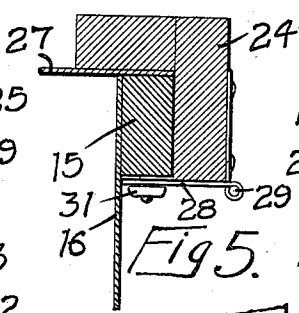


Fig 5.

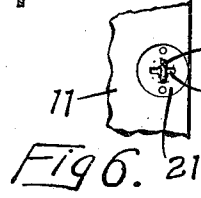


Fig 6.

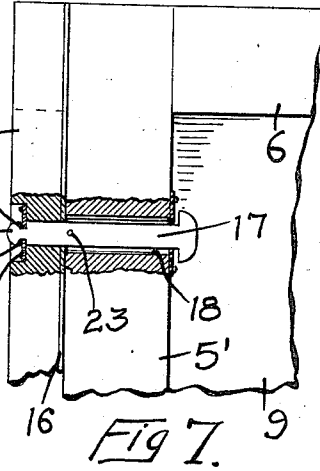


Fig 7.

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UNITED STATES PATENT OFFICE.

CHARLES A. WOOLSEY, OF MINNEAPOLIS, MINNESOTA.

FOLDING BOX.

1,043,995.

Specification of Letters Patent.

Patented Nov. 12, 1912.

Application filed June 21, 1909. Serial No. 503,362.

To all whom it may concern:

Be it known that I, CHARLES A. WOOLSEY, of Minneapolis, Hennepin county, Minnesota, have invented certain new and useful
5 Improvements in Folding Boxes, of which the following is a specification.

My invention relates to that type of box adapted particularly for use in shipping bread from a bakery, the empty boxes being returned by the express company for a nominal charge.

The object of my invention is to provide a box that is capable of folding into compact form and taking up comparatively
15 small space when empty and folded, thus greatly reducing the trouble and expense to the express company in the return transportation.

A further object is to provide a box, which, when folded, will have no loose swinging parts, which are likely to become separated in the car and are often seized by the train men in handling the boxes to the damage or destruction of the box.

A further object is to provide a folding box so constructed that when folded the cover panel will be supported and braced by the folded side and end walls, thus making it impossible to crush the folded box by
30 any ordinary pressure thereon.

A further object is to provide a box which will be practically moisture proof and thus protect the bread when exposed to wet weather.

Other objects of the invention will appear from the following detailed description.

My invention consists generally in various constructions and combinations, all as hereinafter described and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a perspective view of a folding box, embodying my invention, illustrating the box in its unfolded position, Fig. 2 is a similar view, showing the box folded ready for return shipment, Fig. 3 is a vertical sectional view, illustrating the manner of hinging the walls of the box on the base and the manner of securing the top or cover to the side and end walls, Figs. 4, 5, 6, and 7 are detail views, illustrating the manner of securing the parts of the box together.

In the drawing, 2 and 3 represent the side and end rails of the base of the box having cross bars 4, to which the bottom panel 5 is

secured. This panel, as well as the other panels of the box may be composed of any suitable material for its purpose, such as thin strips or plates of wood fiber or canvas or other fabric, which will protect the contents of the box from the entrance of dust and moisture. The ends of the box comprise vertical side rails 5', top and bottom cross bars 6 and 7 and a middle cross bar 8. The bar 7 is hinged to the cross bar 4 and a panel 9 is secured to the frame formed by the rails 5' and the bars 6, 7, and 8. The other end of the box is similarly constructed, except that it is hinged to a bar 10 that is mounted on the bar 4, so that its hinge is raised above the level of the hinge of the other end of the box. The bar 10 forms a narrow, vertical extension of the bar 4 on which it is mounted. This construction allows one end wall to swing down over the other wall into the base of the box. The side walls, consisting of upright end rails 11 and 12 and cross bars 13, 14 and 15 connecting them, are hinged to the side rails 2 of the base on different levels, so that one wall will swing in over the other one and fold down flatwise in the base of the box. These side walls have panels 16 corresponding to the panels of the end walls. When the walls are raised to an upright position, the side panels will swing in between the end ones, as indicated in Figs. 1 and 7, and to secure them together, I provide pins 17 arranged in sockets 18 in vertical rails 12 and having heads 19 formed thereon, which are adapted to slip into the slots 20 provided in plates 21 that are secured to the rails 5'. The heads 19 have notches 22 therein, which allow the pins to be rotated partially after the heads are thrust through the slots in the plates 21, to prevent the separation of the walls while the box is in use. A stop 23 is provided in each pin to limit its movement.

In setting up the box, the pins are adjusted so that their heads will slip through the slots in the plates 21 and then the pins are rotated until the heads are crosswise of the slots when the walls will be locked together until such time as the pins are again rotated. The construction and manner of mounting these pins is shown in detail in Figs. 6 and 7.

The cover for this box comprises side rails 24, end rails 25 and cross bars 26, to which the panel 27 is secured. The cover is of

sufficient size to slip down outside of the upper ends of the side and end walls of the box, as indicated in Figs. 1 and 3, and for the purpose of securing the cover in place, I provide plates 28 hinged at 29 to the side and end rails and having transverse slots 30 therein, which are adapted to receive buttons 31, which are mounted on the lower edges of the cross bars 6 and 15 of the side and end walls. The cover drops down sufficiently so that the plates may be swung in horizontally under the bars of the walls where they will be held securely by the buttons, and at the same time, the buttons will be partially concealed and thoroughly protected from damage by contact with objects in the car or in loading or unloading the box. The cover will also securely hold the walls together and projecting outwardly beyond the panels a considerable distance, will protect them. When the box is collapsed and the walls are folded down into the base, the rails 24 and 25 will rest on the rails 2 and 3 of the base, and buttons similar to those described are mounted in the base rails and adapted to enter the slots in the plates 28 and lock the base and top securely together. Guard plates 32 are preferably provided on the base rails to protect the buttons.

The folded position of the box is represented in Fig. 2 and as there shown, all the hinged sections, which in ordinary folding boxes are permitted to swing loosely, are concealed and protected between the base and the top and it is not possible for any one handling the box to grasp one of these hinged sections or any part thereof that would be likely to become separated.

From an examination of the drawings it will be noted that the side and end walls not only fold inwardly toward one another, but are hinged upon different levels so that they will lie flatwise upon one another with the middle rails of the side walls extending transversely of and resting upon the corresponding rails of the end walls, and when the cover is put in place its panel will rest upon and be supported by the rails of said side and end walls so that if any one should accidentally drop something upon the cover panel or step upon it there will be no danger of crushing or damaging the cover. The box when folded forms a compact, non-compressible device which will stand ordinary rough usage without being damaged.

The box is made of strong, durable material and is capable of withstanding the rough usage to which a package of this kind is always subjected.

I claim as my invention:—

1. A folding box comprising a base having side and end rails and cross bars between them, of a panel secured to said cross bars, side and end walls hinged on different levels to said base and adapted to fold inwardly

one upon another, said side and end walls being composed of upright rails and cross bars between them, and panels secured to said rails, said end walls being adapted when swung to an upright position to pass between the side walls, pins fitting within sockets in the vertical rails of said side walls and having heads thereon provided with notches, and slotted plates mounted in the abutting vertical rails of said end walls and adapted to receive said pins and lock said heads in said slots when said pins are rotated partially, a cover comprising side and end rails and a panel therefor, said cover being adapted to drop down outside of said side and end walls, and means for securing said cover and said walls together.

2. A folding box comprising a base having side and end rails and a panel secured thereto, side and end walls hinged to said base and adapted to drop down flatwise within said base, said side and end walls being composed of upright rails and cross bars connecting them and panels secured to said rails and bars, the upper cross bars having buttons mounted on their lower edges, means for securing said side and end walls together, and a cover composed of side and end rails and a panel therefor adapted to drop down outside said side and end walls and rest thereon, and plates hinged to said cover and having slots therein and adapted to swing in under the upper bars of said side and end walls and engage said buttons, thereby locking said cover and said walls together.

3. A folding box comprising a base having side and end rails, cross bars seated against the lower inner faces of said end rails and connecting said side rails across said base, one of said cross bars having a vertical extension thereon, a panel secured to the upper surfaces of said cross bars, end walls hinged respectively to the upper surface of one of said cross bars and to said vertical extension, said extension corresponding in depth substantially to the thickness of said end walls and allowing one end wall to be folded inwardly upon the other one, side walls hinged to the upper portions of said side rails and adapted to fold inwardly upon one another and upon said end walls, a cover also composed of side and end rails and a panel inclosed thereby, and cross bars seated against the upper, inner faces of said end rails, and connecting the side rails of said cover and where to said panel is secured, the rails of said cover depending below its panel and having lower longitudinal edges that are adapted to seat themselves on the upper edges of the side and end rails of said base, said cover panel being supported against a crushing pressure by the folded end and side walls of said base.

4. A folding box comprising a base hav-

ing side and end rails, cross bars seated against the lower inner faces of said end rails and connecting said side rails across said base, a panel secured to the upper surfaces of said cross bars, an end wall hinged to the upper surface of one of said cross bars, a second cross bar seated on one of said bars and the adjacent rail, a second end wall hinged to said second cross bar and adapted to fold inwardly upon said first named end wall, said second cross bar being of sufficient depth to allow one end wall to lie flatwise upon the other end wall, side walls hinged to the top of said side rails and adapted to fold inwardly upon said end walls, a cover composed of side and end rails and a flexible panel between them, said side and end rails depending below said panel and having lower longitudinal edges adapted to rest on the corresponding upper edges of the side and end rails of said base, the side and end walls of said base, when folded inwardly upon one another, filling substantially the space between said base panel and said cover panel and supporting said cover panel against a crushing pressure.

5. A folding box comprising a base hav-

ing side and end rails and a flexible panel inclosed by said rails, the upper longitudinal edges of said side and end rails forming a bearing surface extending around said panel, hinged side and end walls adapted to swing inwardly to a flatwise position upon one another and upon said panel, a cover comprising side and end rails and a panel, also of flexible material, inclosed by the upper portions of said side and end rails, the lower longitudinal edges of said cover rails having bearing surfaces that are adapted to rest upon the upper longitudinal edges of the side and end rails of said base, forming with said base rails a rectangular frame inclosing said panels, the side and end walls filling the space substantially between the panel of said base and the panel of said cover and supporting them against a crushing pressure.

In witness whereof, I have hereunto set my hand this 16th day of June 1909.

CHARLES A. WOOLSEY.

Witnesses:

J. M. SULLIVAN,
J. A. BYINGTON.

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