

J. BIRO.
FOLDING BOX AND CRATE.
APPLICATION FILED JUNE 18, 1910.

977,263.

Patented Nov. 29, 1910.

2 SHEETS—SHEET 1.

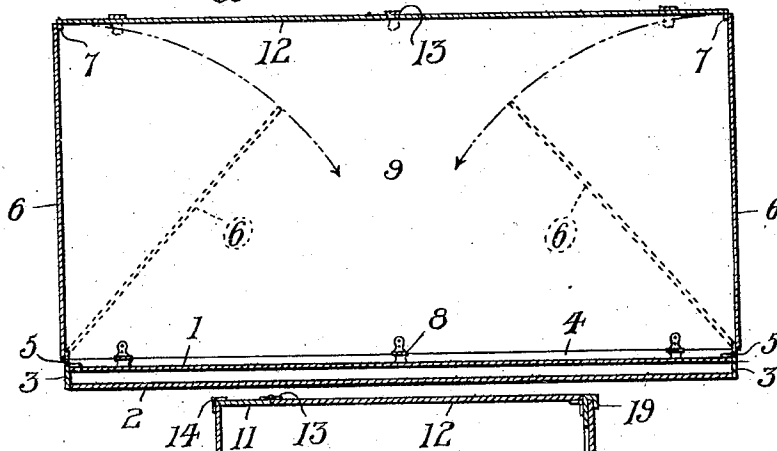
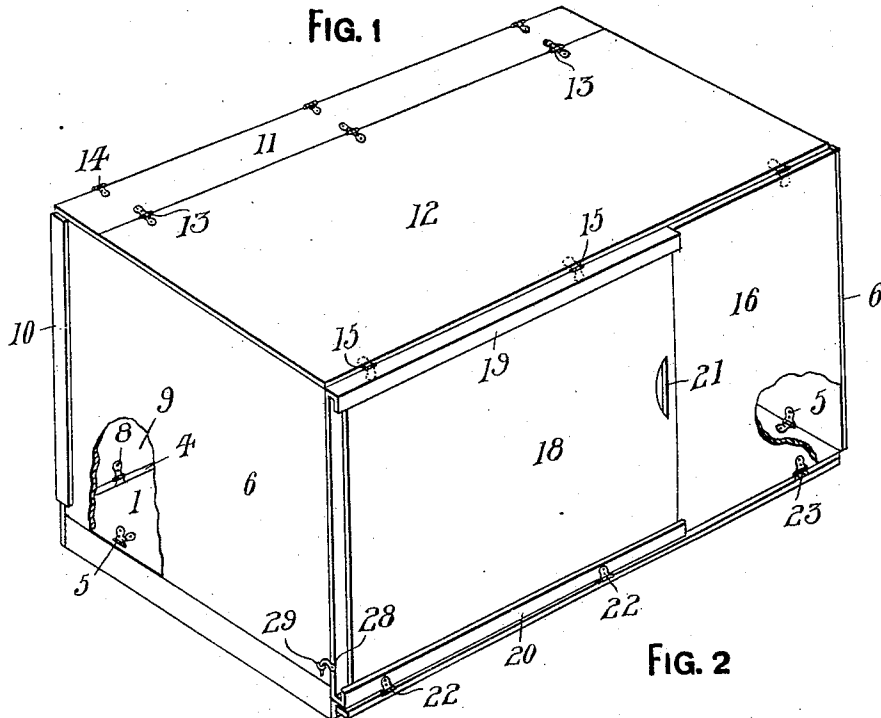
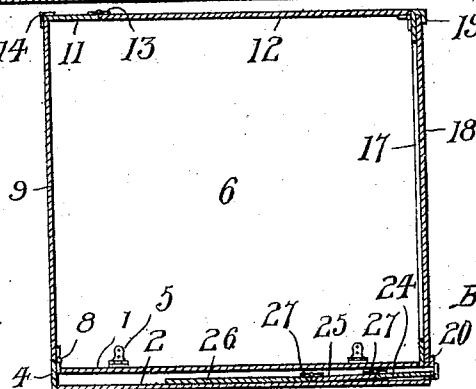


FIG. 3



WITNESSES

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2 SHEETS—SHEET 2.

FIG. 4

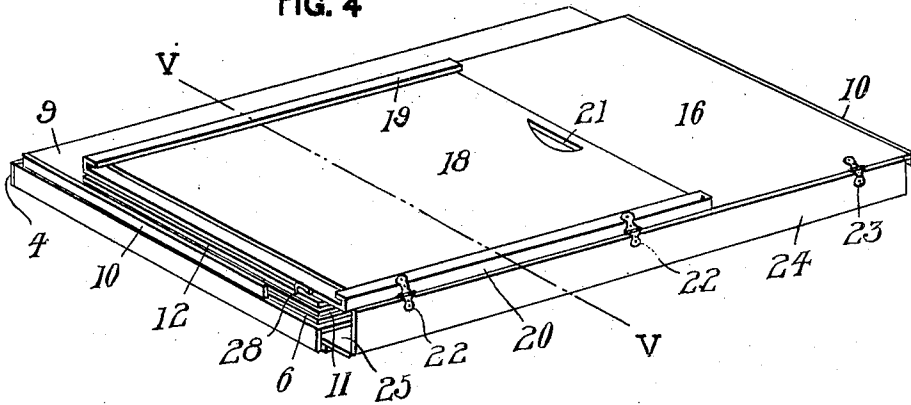


FIG. 5

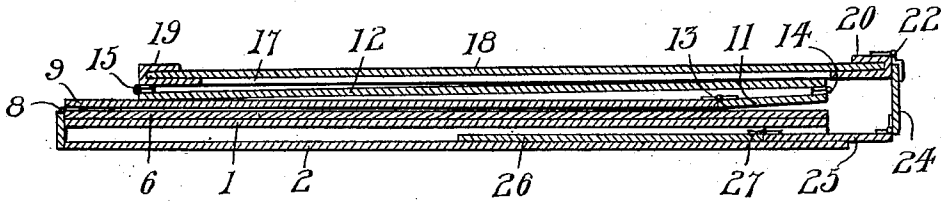
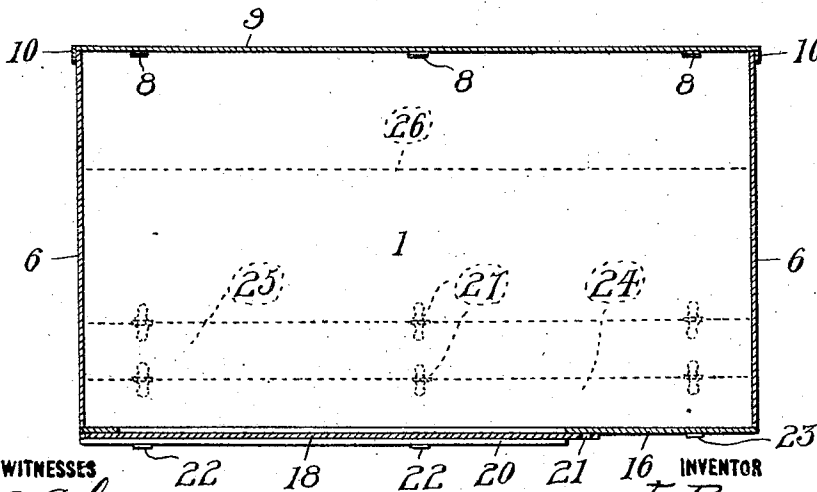


FIG. 6



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UNITED STATES PATENT OFFICE.

JOSEPH BIRO, OF HOOVERVILLE, PENNSYLVANIA.

FOLDING BOX AND CRATE.

977,263.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEPH BIRO, a citizen of the United States of America, residing at Hooversville, in the county of Somerset and State of Pennsylvania, have invented certain new and useful Improvements in Folding Boxes and Crates, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to folding boxes and crates, and the objects of my invention are, first, to provide a folding box that can be advantageously used for shipping various kinds of merchandise; second, to provide a box consisting of comparatively few parts easily and quickly assembled; third, to furnish a box with novel means whereby it can be collapsed to occupy a comparatively small space during transportation or while in storage; and fourth, to provide a box that is strong and durable, inexpensive to manufacture, and efficient as an inclosure either for merchandise or poultry. These and such other objects as may hereinafter appear are attained by the novel construction, combination, and arrangement of parts to be hereinafter specifically described and then claimed.

Reference will now be had to the drawings forming a part of this specification, wherein:

Figure 1 is a perspective view of the box partly broken away and partly in section. Fig. 2 is a vertical longitudinal sectional view of the box. Fig. 3 is a vertical cross sectional view of the same. Fig. 4 is a perspective view of the box collapsed and folded. Fig. 5 is an enlarged cross sectional view taken on the line V—V of Fig. 4, and Fig. 6 is a horizontal sectional view of the box in a set-up position.

A folding box or crate in accordance with my invention comprises a hollow bottom, end walls hinged thereto and adapted to fold upon said bottom, a rear wall hinged to the rear edge of said bottom and adapted to fold upon said end walls, a sectional lid hinged to the upper edge of said rear wall, a sectional slide arranged in said hollow bottom, and a front wall hinged to one of the sections of said slide.

The hollow bottom comprises horizontal plates 1 and 2 spaced apart by end plates 3 and a rear plate 4, thus leaving the front side of the hollow bottom open.

Hinged to the end plates 3, as at 5, are

end walls 6 adapted to be swung inwardly, as indicated by dotted lines in Fig. 2, upon the top plate 1 of the hollow bottom. The upper edges of the end walls 6 are provided with stops or lugs 7 adapted to limit the inward movement and support the sectional lid of the box.

The rear plate 4 extends above the top plate 1 of the hollow bottom and has hinged thereto, as at 8 the rear wall 9 of the box, the vertical edges of the wall 9 being provided with cleats 10 adapted to limit the outward movement of the end walls 6.

The sectional lid comprises sections 11 and 12 hinged together, as at 13. The section 11 is hinged to the upper rear edge of the rear wall 9, as at 14.

Hinged to the front edge of the lid section 12, as at 15, is the front wall 16 and this front wall has an opening 17 adapted to be closed by a slide door 18 slidably mounted in longitudinal guides 19 and 20 arranged at the upper and lower edges of the wall 16. The door 18 is provided with a suitable hand-grip 21 at one end thereof whereby said door can be easily moved.

Hinged to the lower guide 20, as at 22, and to the front wall 16, as at 23, is a sectional slide, comprising sections 24, 25, and 26, these sections being connected by hinges 27.

The hollow bottom, when the box is knocked down, is adapted to receive the sections 26 and 25 of the slide so as to permit of the end walls 6 folding directly upon the top plate 1 of the hollow bottom which enables the compact folding of the walls of the box. The lower plate 2 of the hollow bottom constitutes a support for the section 26 of the slide when the sections 25 and 24 are extended.

With the box in a set-up position, as shown in Fig. 1 of the drawings, the sectional slide is retained within the hollow bottom by hooks 28 attached to the vertical edges of the front wall 16 adjacent to the lower edge of said wall, said hooks engaging in staples 29 carried by the end walls 6 adjacent to the forward edges thereof.

To collapse or fold the box, the hooks 28 are removed from the staples 29 and the slide pulled outwardly. This movement of the slide can be accomplished owing to the fact that it is composed of hinged sections. After the slide is removed from the hollow bottom, the end walls 6 are folded inwardly upon the top plate 1 of the hollow bottom,

the rear wall 9 folded upon the end walls, the sectional lid folded rearwardly upon the outer side of the rear wall, the front wall folded downwardly upon the inner side of the section 12 of the hinged lid, with the sections 25 and 26 of the slide extending into the hollow bottom.

It is obvious that for crate purposes the walls of the box can be made of frames provided with slats.

What I claim, is:

1. A folding box embodying a hollow bottom having the front edge thereof open, end walls hinged to the ends of said hollow bottom and adapted to fold inwardly upon said hollow bottom, a rear wall hinged to the rear edge of said hollow bottom and adapted to fold inwardly upon said end walls, a sectional lid hinged to the upper rear edge of said rear wall and adapted to fold rearwardly upon the outer side of said rear wall, a front wall hinged to the forward edge of said lid, and a sectional slide hinged to the lower edge of said front wall and adapted to slide in said hollow bottom, substantially as described.

2. A folding box embodying a hollow bottom having the front edge thereof open, end walls hinged to the ends of said hollow bottom and adapted to fold thereon, a rear wall hinged to the rear edge of said hollow bottom and adapted to fold upon said end walls, a sectional lid hinged to the upper edge of said rear wall and adapted to fold

rearwardly thereon, a front wall hinged to the front edge of said lid, said front wall having an opening formed therein, a slide door carried by said front wall and adapted to close said opening, and a sectional slide hinged to the lower edge of said front wall and adapted to slide into said hollow bottom.

3. A folding box embodying a hollow bottom having the front edge thereof open, end walls hinged to the ends of said hollow bottom and adapted to fold thereon, a rear wall hinged to the rear edge of said hollow bottom and adapted to fold upon said end walls, a sectional lid hinged to the upper edge of said rear wall and adapted to fold rearwardly thereon, a front wall hinged to the front edge of said lid, said front wall having an opening formed therein, a slide door carried by said front wall and adapted to close said opening, a sectional slide hinged to the lower edge of said front wall and adapted to slide into said hollow bottom, and means adapted to connect the vertical edges of said front wall to the vertical front edges of said end walls to retain said slide within said hollow bottom when the box is in a set-up position.

In testimony whereof I affix my signature in the presence of two witnesses.

JOSEPH BIRO.

Witnesses:

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C. H. FYOEK.