

Jan. 21, 1936.

E. R. EVANS

2,028,276

BOX

Filed Aug. 20, 1934

2 Sheets-Sheet 1

Fig. 1

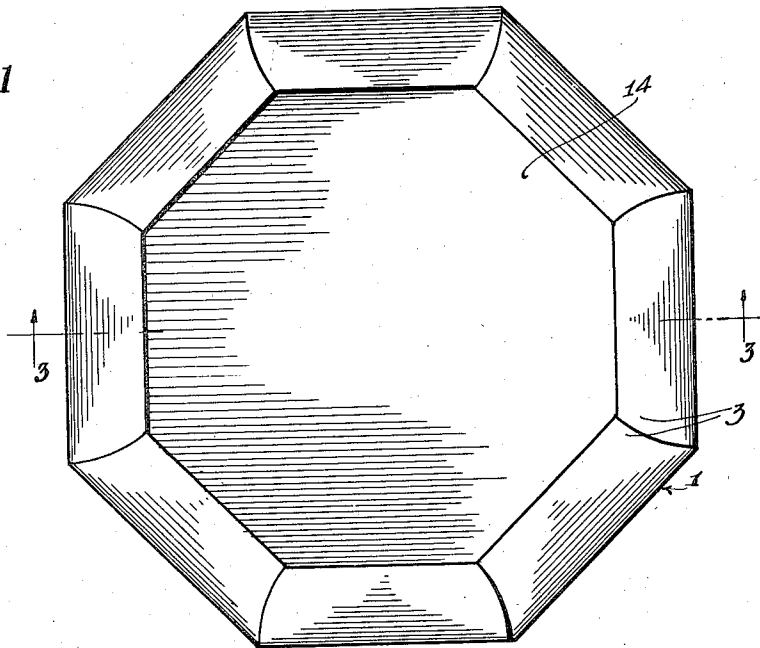


Fig. 2

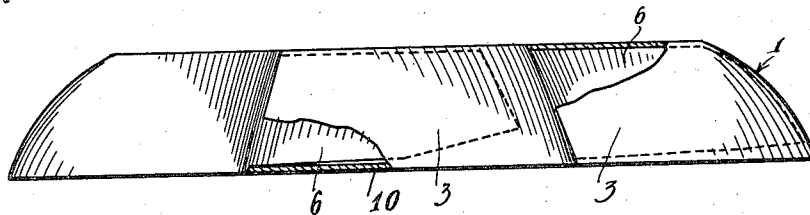
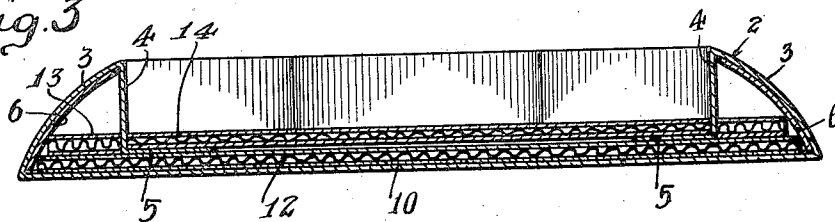


Fig. 3



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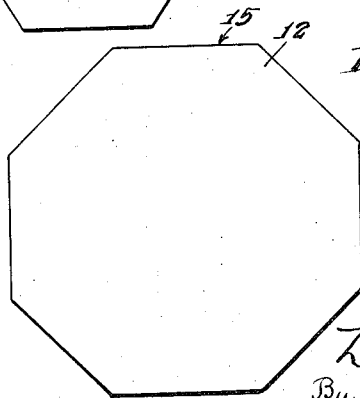
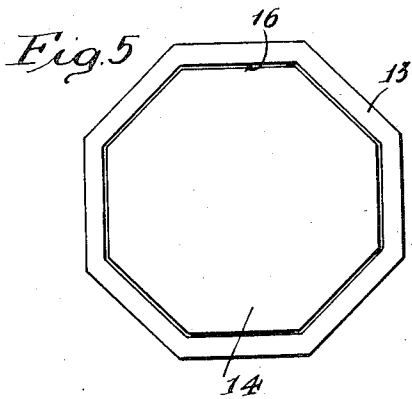
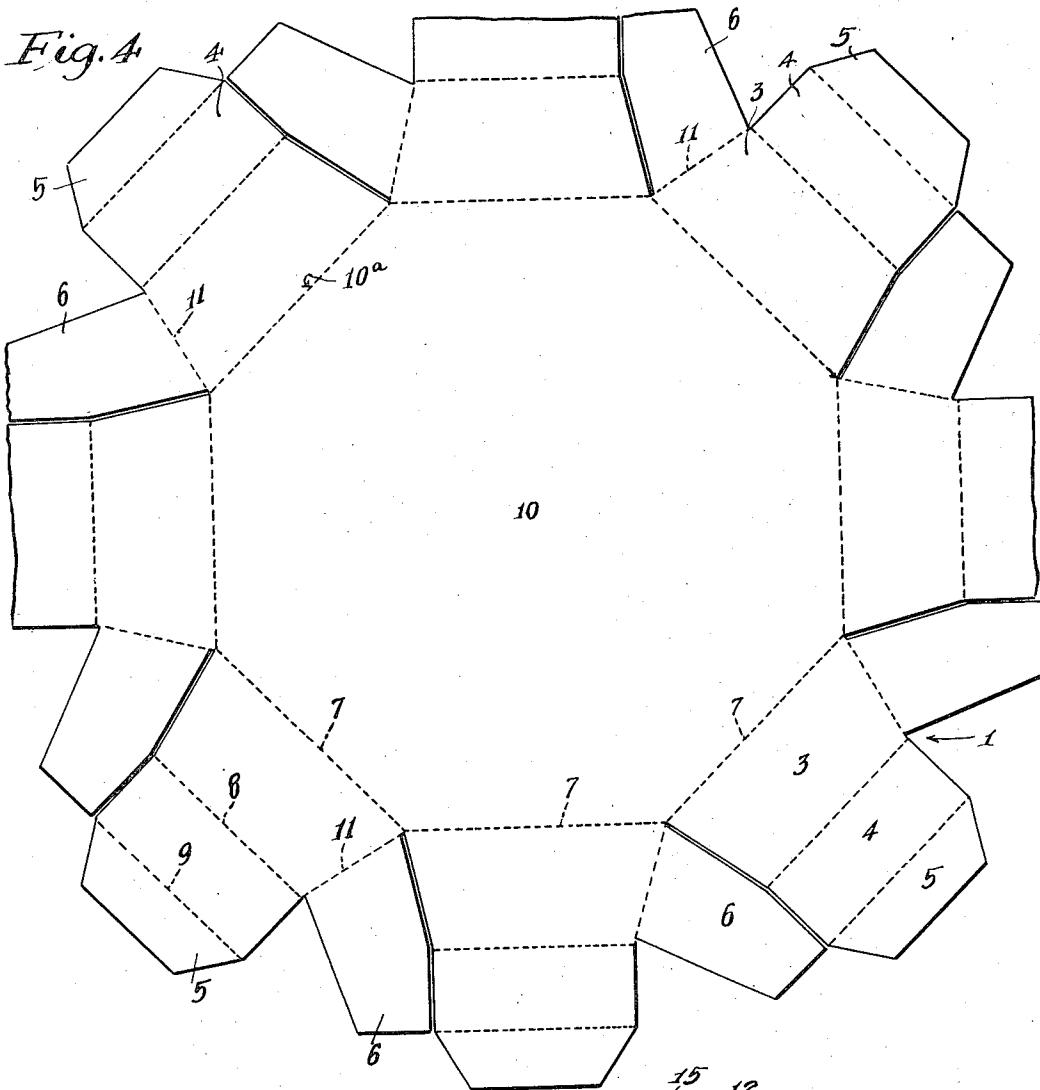
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,028,276

BOX

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Application August 20, 1934, Serial No. 740,603

5 Claims. (Cl. 229—34)

This invention relates to boxes, and more particularly to boxes made up of paper, cardboard or other similar materials, which may be readily set up by the user.

5 It is an object of this invention to provide a box or tray for holding fruit, confections, candies or other substances, which is of a knock-down or set-up type and is of ornamental appearance when set up and is of reinforced construction.

10 Another object of this invention is to provide a box or tray of the character above set forth which includes a multiplicity of inwardly tapered sides terminating at a substantially vertically walled packing chamber and which box may be constructed of relatively light cardboard or similar material and is reinforced with reinforcing and holding sections of corrugated board or other similar heavier material.

20 Another object of this invention is to provide a box which includes a body having a plurality or multiplicity of sides which are inwardly tapered or similarly constructed to produce a box or tray of ornamental appearance, which side members are held in position by means of sections of corrugated board or other reinforcing material interfitting together to hold the side portions in their proper position and to reinforce the structure of the box or tray.

30 Other objects and advantages of this invention it is believed will be apparent from the following detailed description of a preferred embodiment thereof as illustrated in the accompanying drawings.

In the drawings:

Figure 1 is a plan view of a box constructed in accordance with my invention.

40 Figure 2 is a side elevation thereof partly in vertical section.

Figure 3 is a sectional side elevation taken substantially on the line 3—3 of Figure 1.

50 Figure 4 is a plan view of the cut-out blank forming the body of the box embodying my invention and before the sections of the box are folded.

Figure 5 is a top plan view of the forming ring and tongue holding member embodied in my invention illustrated on a reduced scale.

50 Figure 6 is a plan view of the reinforcing bottom member embodied in my invention illustrated on a reduced scale.

In the preferred embodiment of my invention as illustrated in the accompanying drawings, 1 indicates the body of the box or tray,

which body may be formed of relatively thin cardboard or other similar material and which body is formed with a multiplicity of outwardly or upwardly projecting side members 2 which extend from the sides 10^a of the bottom portion 10 of the body 1. As illustrated in the drawings, the box or tray is of octagonal construction, but a polygon of any other desired number of sides might be provided without departing from my invention.

10 The side members 2 include outer side portions or walls 3 and inner side portions or walls 4 and holding tongues 5 as the body 1 is cut from the portion of relatively thin cardboard or other material of which it is composed. Extending from corresponding edges of the outer side portions 3 of the side members 2 are lateral holding tongues 6.

15 In forming the body 1 to make a box which is easily set up, the portion of material forming the body 1 is scored at the side edges 7 of the bottom portion or outer bottom 10 on the score lines 8 between the outer and inner portions of the side members 2, and is scored on the score lines 9 between the outer of the side portions 3 and the holding tongues 5 and at the point of joinder of the outer side portions 3 and the lateral holding tongue 6 a portion of the material is scored on the score line 11. Thus the blank of the box is formed so that it may readily be set up by the user. In the set-up box all of the tongues 6 preferably project in the same direction with respect to a radial line from the center of the box.

20 In order to reinforce the box or tray and also to aid in setting up the box and to reinforce the box after it is set up, I prefer to employ portions of stiff material such as corrugated paper board including an inner bottom member 12, a forming ring 13, and a tongue holding member 14. The forming ring 13 consists of a flat board of polygonal form with its flat faces lying in a horizontal plane, and with an opening of polygonal form cut through the same.

25 The bottom member 12 is formed with the same number of sides as the sides 10^a of the bottom portion 10 of the body 1 and of approximately the same dimensions, so that when the bottom member 12 is placed on the bottom portion 10 of the body 1, the side members 2 may be folded upwardly over the edges 15 of the bottom member 12.

30 The inner side portion 4 of the side members 2 is preferably shorter in width than the outer side portion 3 of the side members 2 for the pur-

pose which is apparent from Figure 3 in that the outer side portions 3 taper or curve inwardly when the box or tray is set up toward the center of the box or tray and the inner side portions 4 extend vertically downwardly to provide vertical walls for the packing chamber of the box or tray.

In order to hold the side portions 3 and 4 of the side members 2 correctly formed, the forming ring 13 is positioned within the space between the inner and outer portions 4 and 3 of the side members 2. In order to hold the side members 2 set up with the forming ring 13 in position, I prefer to employ a holding member 14 which fits into the opening of the forming ring and is positioned within the packing chamber of the box or tray. It is preferably likewise formed of corrugated board or similar material and is formed with the same number of sides as there are side members 2 and is formed to fit within the chords 16 of the forming ring 13 so as to provide a means for gripping and holding the inner portion 4 of the side members 2 in substantially vertical position. The tongues 5 of the side portions are folded in position to lie upon the bottom member 12 so that they are held down when the holding member is inserted into position within the forming ring 13 and so that the weight of the material packed within the box or tray likewise acts to hold the tongues 5 in position and therefore hold the side members in proper position.

In order to maintain the side members 2 in proper position, the laterally projecting tongues 6 are provided which, during the setting up of the box, are folded to lie within the inside of the outer portion 3 of the side members 2 next adjacent to the side member carrying the respective lateral holding tongues 6.

Having fully described my invention, it is to be understood that I do not wish to be limited to the details herein set forth, but my invention is of the full scope of the appended claims.

I claim:

1. In a polygonal paper box, the combination of an outer bottom of relatively thin cardboard of polygonal form, an inner bottom of relatively thick stiff material also of polygonal form lying on the outer bottom and conforming thereto, a forming ring consisting of a flat board with its flat faces lying in a horizontal plane, and of relatively stiff material, also of polygonal form and with a polygonal opening therethrough, said forming ring lying on the inner bottom and conforming thereto, said outer bottom having a plurality of integral extensions extending upwardly above the forming ring and constituting the outer side walls of the box, said outer walls with extensions extending downwardly and engaging the inner edge of the forming ring, and a holding member of polygonal form fitting into the opening in said forming ring and securing the vertical extensions in position.

2. In a polygonal paper box, the combination of an outer bottom of relatively thin cardboard of polygonal form, an inner bottom of relatively thick stiff material also of polygonal form lying on the outer bottom and conforming thereto, a forming ring consisting of a flat board with its flat faces lying in a horizontal plane, and of relatively stiff material, also of polygonal form and with a polygonal opening therethrough, said forming ring lying on the inner bottom and conforming thereto, said outer bottom having a plurality of integral extensions extending up-

wardly above the forming ring and constituting the outer side walls of the box, said outer side walls having extensions constituting inner side walls of the box, extending downwardly and engaging the inner edge of the forming ring, said inner side walls having horizontal extensions lying on the inner bottom, and a holding member consisting of a stiff board of polygonal form fitting into the opening in said forming ring and holding down said horizontal extensions.

3. In a polygonal paper box, the combination of an outer bottom of relatively thin cardboard and of polygonal form, an inner bottom of corrugated board also of polygonal form lying on the outer bottom and conforming thereto, a forming ring consisting of a flat corrugated board also of polygonal form with its flat faces in a horizontal plane and having a polygonal opening therethrough, said forming ring lying on the inner bottom and conforming thereto, said outer bottom having a plurality of integral extensions extending upwardly in an inclined direction above the forming ring, constituting the outer side walls of the box, said outer side walls having integral substantially vertical extensions extending downwardly to form the inner side walls of the box and engaging the inner edge of the forming ring, and a holding member of corrugated board of polygonal form fitting into the opening in said forming ring and securing the vertical extensions in position.

4. In a polygonal paper box, the combination of an outer bottom of relatively thin cardboard and of polygonal form, an inner bottom of corrugated board also of polygonal form lying on the outer bottom and conforming thereto, a forming ring consisting of a flat corrugated board also of polygonal form with its flat faces in a horizontal plane, and having a polygonal opening therethrough, said forming ring lying on the inner bottom and conforming thereto, said outer bottom having a plurality of integral extensions extending upwardly in an inclined direction above the forming ring, constituting the outer side walls of the box, said outer side walls having integral substantially vertical extensions extending downwardly to form the inner side walls of the box and engaging the inner edge of the forming ring, and a holding member of corrugated board of polygonal form fitting into the opening in said forming ring and securing the vertical extensions in position, each of the said outer side walls of the box having a lateral holding tongue projecting into the space between the inner and outer side walls of an adjacent side of the box.

5. In a polygonal paper box, the combination of an outer bottom of relatively thin cardboard of polygonal form, a forming ring consisting of a flat board with its flat faces lying in a horizontal plane, of relatively stiff material, also of polygonal form and with a polygonal opening therethrough, said forming ring lying over the bottom and conforming thereto, said bottom having a plurality of integral extensions extending upwardly above the forming ring and constituting the outer side walls of the box, said outer side walls having integral extensions extending downwardly, constituting the inner side walls of the box and engaging the inner edge of the forming ring, and a holding member of polygonal form fitting into the opening of said forming ring and securing the lower ends of the inner side walls in position.