Dec. 7, 1926. 1,609,875

M. HOGE

KNOCKDOWN PAPER BOX

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Fig 1

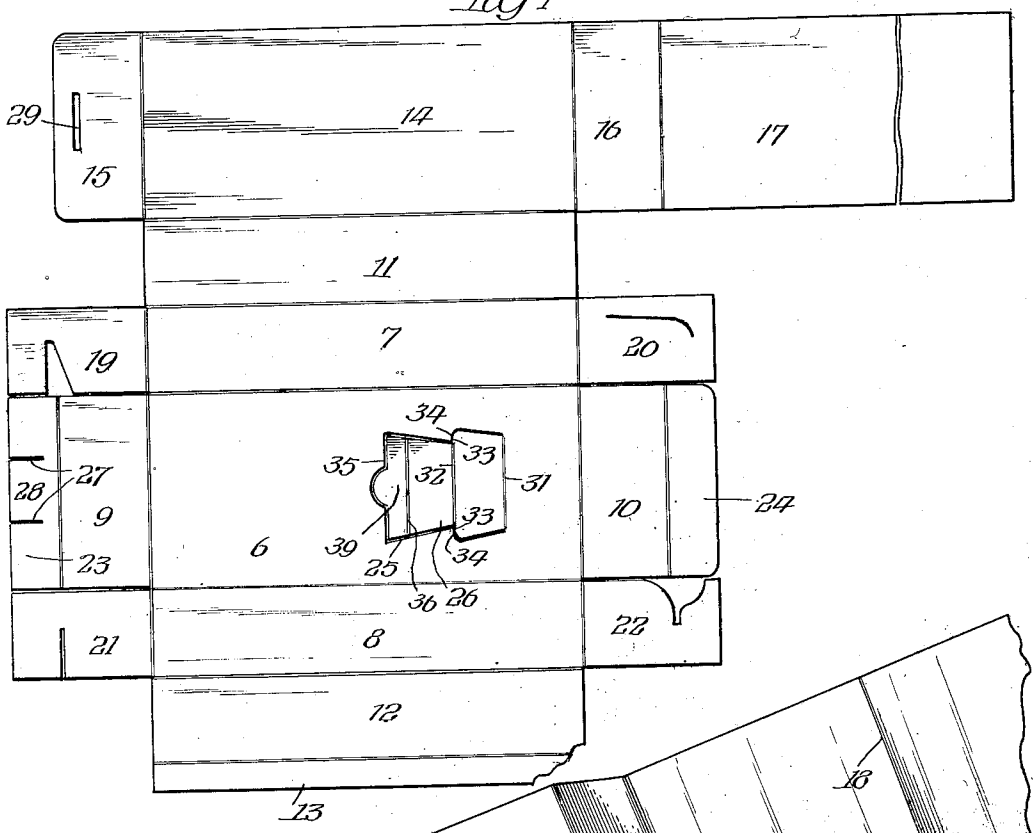
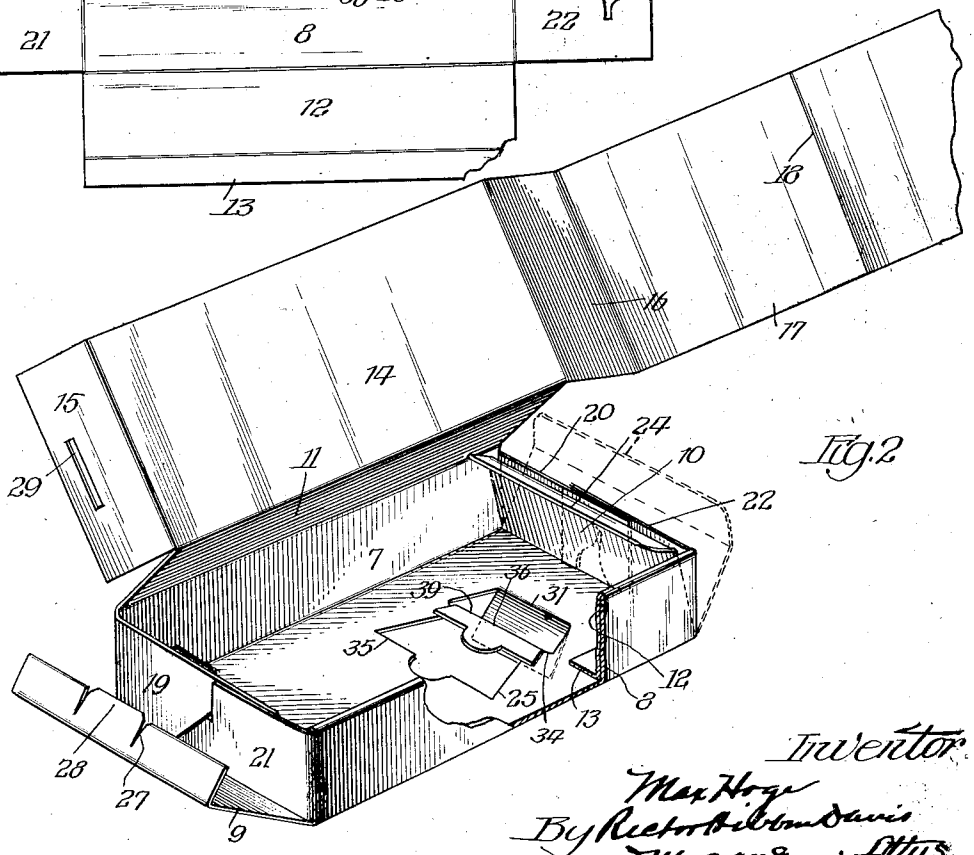


Fig. 2



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Fig. 3

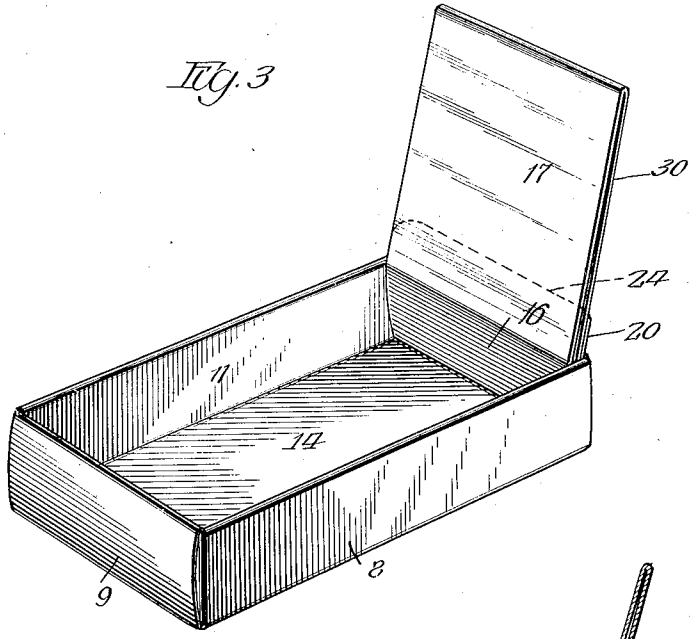


Fig. 4

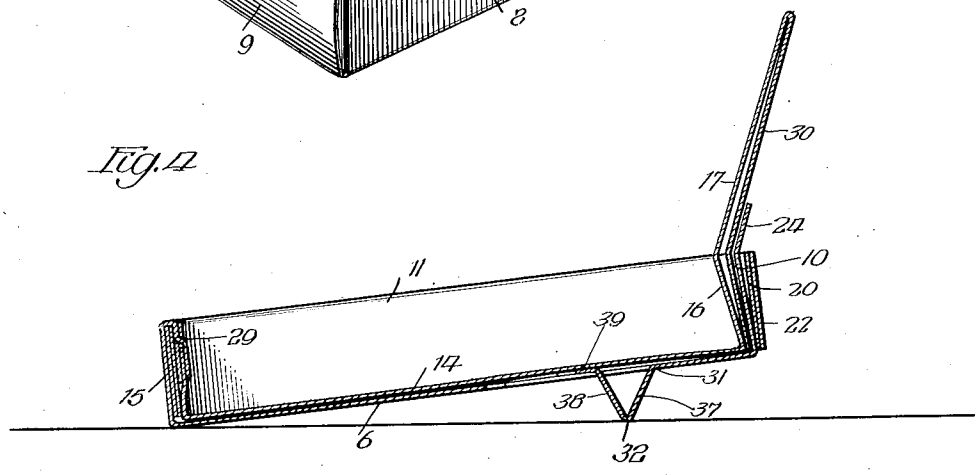
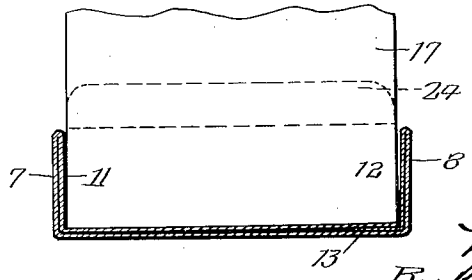


Fig. 5



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KNOCKDOWN PAPER BOX

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Fig. 6

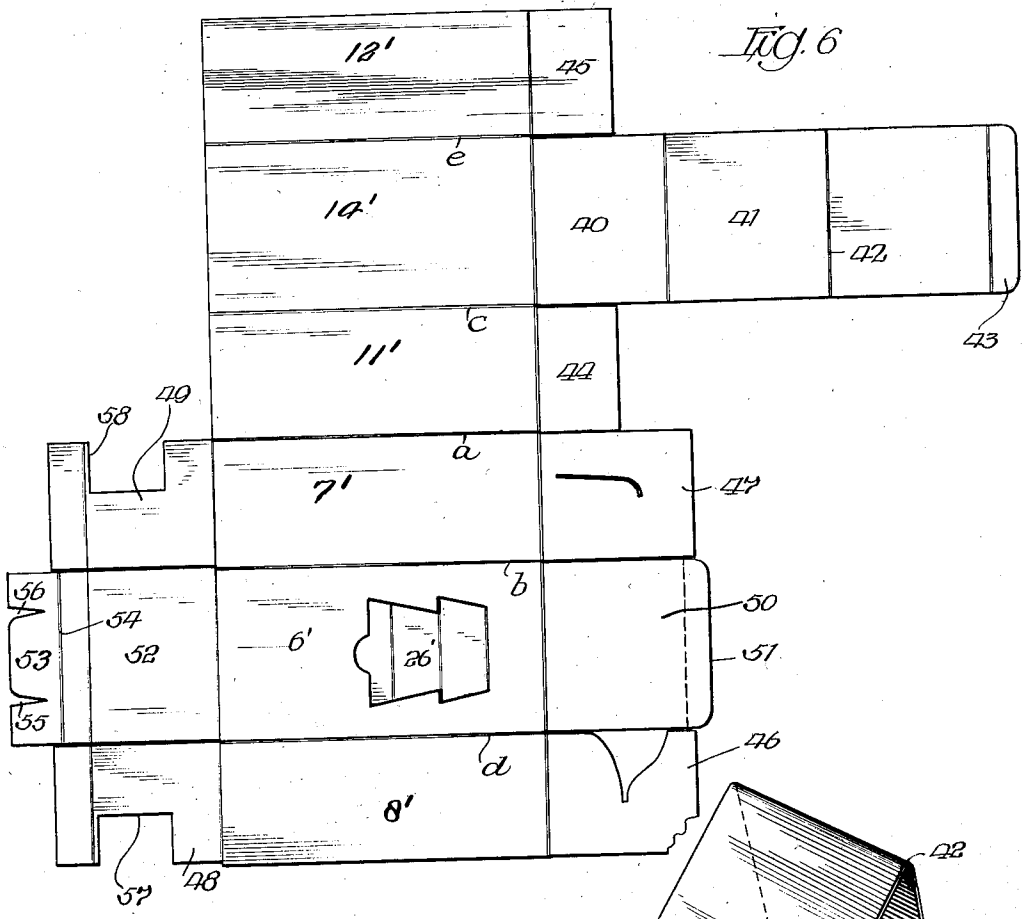
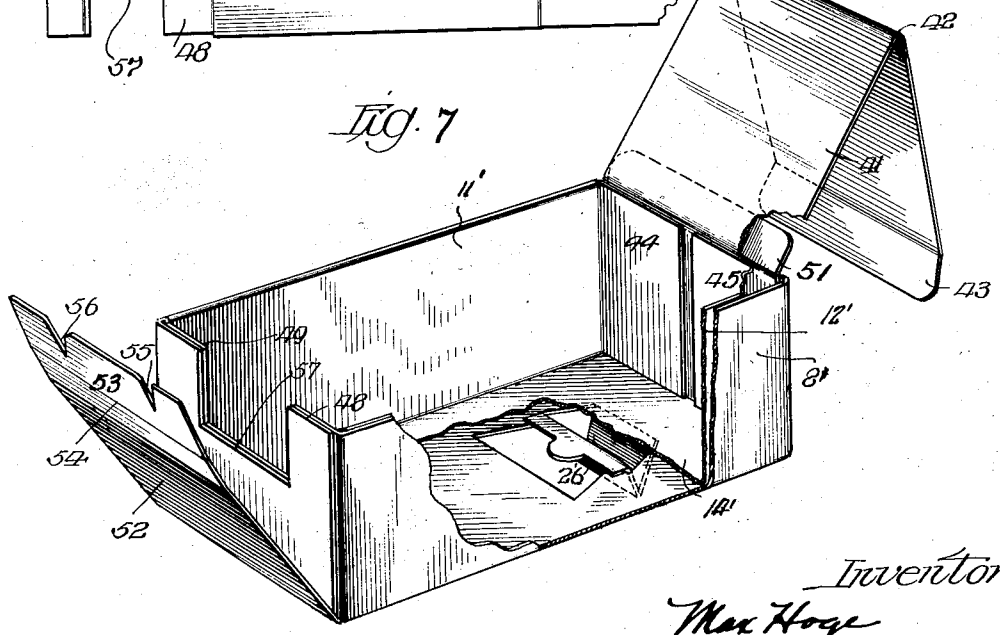


Fig. 7



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Fig. 8

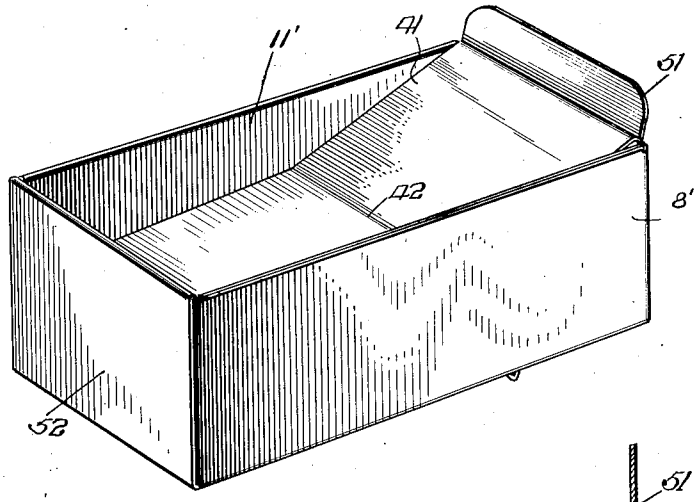
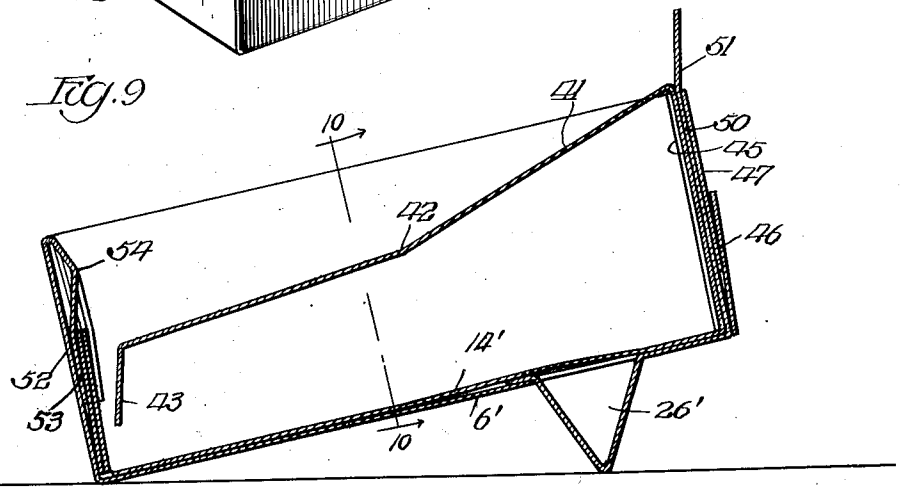


Fig. 9



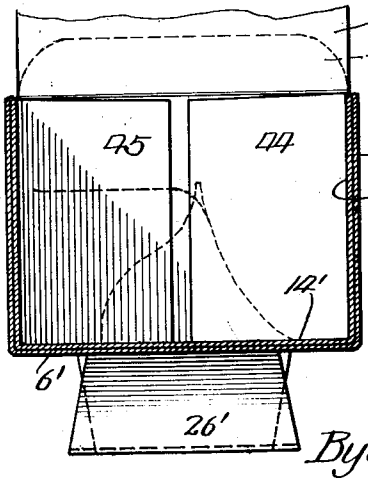


Fig. 10

Inventor

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By Watson Cole Grindle & Watson Atty's

Patented Dec. 7, 1926. 1,609,875

UNITED STATES PATENT OFFICE.

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KNOCKDOWN PAPER BOX.

Application filed November 26, 1920. Serial No. 426,354.

It is the object of the invention which forms the subject matter of the present application to provide a single blank which may be readily and quickly folded to form a firm rigid box suitable for the storage and shipment of relatively heavy commodities such as candy and the like, and which may be conveniently used for display purposes on store counters and the like, being provided for this purpose with an integral element which may be bent to form a foot or support near one end of the box to hold the latter in inclined position.

In the drawings accompanying and forming part of this application Fig. 1 is a plan showing the unitary blank in extended position; Fig. 2 a perspective of the partially folded box made from the blank, partially broken away to better show the construction; Fig. 3 a perspective of the completely folded box; Fig. 4 a central longitudinal section of the same; Fig. 5 a transverse vertical section thereof; Fig. 6 a plan view of a modified form of the box blank; Fig. 7 a perspective view of the box formed from said blank, partly folded and partly broken away to show the construction; Fig. 8 a perspective view of the box completely folded; Fig. 9 a longitudinal vertical section thereof, and Fig. 10 a transverse section on the line 10—10 of Fig. 9 but showing the cover raised. Each part is identified by the same reference character wherever it occurs in the several views.

Referring first to the form of the invention shown in Figs. 1 to 5 inclusive, the blank as shown in Fig. 1 comprises an outer bottom panel 6 to the edges of which are hinged by scoring the outer side panels 7, 8 and the end panels 9, 10. Inner side panels 11, 12 are hinged by scoring to the respective outer side panels and a narrow bottom flap 13 is hinged to the edge of inner side panel 12. The inner bottom panel 14 is hinged to the edge of inner side panel 11 and to the opposite ends thereof are hinged the inner end panels 15, 16. To the outer or upper edge of the latter is hinged the top panel or cover 17 which preferably is scored at 18 for a purpose which will appear. Interlocking flaps 19, 20, 21, 22 are hinged to the respective ends of the outer side panels 7, 8 and end flaps 23, 24 are hinged to the outer or upper edges of the outer end walls or panels 9, 10. The outer bottom panel 6 is slit or cut at 25 to form an easel leg or support 26.

The box may be formed from the blank in the following manner; supposing the blank to be laid on a flat table the outer side walls 7 and 8 are raised to a substantially vertical position and the inner side panels 11, 12 are bent down inside said outer panel to form walls of double thickness, the end flap 13 extending between the outer bottom panel 6 and the inner bottom panel 14 which secures said flap in place, and extends along the outer bottom panel so that the box has substantially a double bottom as well as double sides. The inner end panels 15, 16 are then bent up into substantially vertical position, the top section 17 projecting upwardly from the latter. The flaps 19, 21 are then interlocked to support end wall 15 and then outside end wall 9 is bent up outside flaps 19, 21. It will be noted that the end flap 23 is slitted at 27 to form a tongue 28 and the inner end wall of panel 15 is slitted at 29. After the end wall 9 has been bent up flap 23 is bent over between the interlocked flaps 19, 21 and inner end wall 15 but the intermediate tongue 28 of said flap is inserted through the slot 29 in inner end wall 15 to better hold the latter in position. The outer end wall 10 may then be bent up to constitute with inner end panel 16 a double end wall and then the flaps 20, 22 interlocked to support said double end wall. The flap 24 serves to support the top when the latter is raised as seen in Fig. 3. For display the outer section 30 of the top is folded back and inserted between the flap 24 and the inner end wall 10. When the box is to be used for shipment however, the top is extended so that the two sections thereof lie in the same plane and cover the opening of the box.

In order to tilt the box to render its contents more easy of inspection when on the counter the integral tongue 26 is folded to the position best shown in Figs. 2 and 4. It will be observed that the tongue or blank support widens from the scoring 31 at which it is hinged to the outer bottom panel, to the scoring 32 at which line re-entrant angles 33, narrow the width of the tongue and form shoulders 34, 34 in the edge of the aperture in the box. From the narrowed portion 32 the tongue again expands or widens substantially to the end 35 thereof where it is sub-

stantially wider than the narrowed part along the scoring 32, but somewhat narrower than the width of the opening just above the scoring. There is a further scoring 36 just short of the end of the tongue. The folding of this tongue to constitute the easel support will be readily understood from an inspection of Figs. 2 and 4. The section 37 between the scorings 31, 32 is bent outward at the scoring 31 and the section 38 is bent inward at the scoring 32 so that said sections 37, 38 form the angle shown. The end of the tongue 39 beyond the scoring 36 is inserted at the widest portion of the aperture in the outer bottom panel just above the scoring 32 and lies between the inner and outer bottom panels, the section 38 resting at its edges against the shoulders 34 in the aperture thus sustaining the easel support in the position shown.

It will now be seen that the box formed from the single blank is substantially double walled throughout except for the top, the inside bottom panel being continuous and imperforate but the outside bottom panel having the easel support or foot formed therefrom but without materially weakening the box structure as a whole.

Referring now to the form of box shown in the second group of figures, it will be seen that in general the construction is like that of the box heretofore described.

The outside bottom panel 6′ is formed with a tongue 26′, the latter being identical in all respects with the easel supporting tongue of the first described form of the invention and used in the same way. The outside walls or panels 7′, 8′ are hinged to said bottom and to panel 7′ is hinged the inside wall panel 11′. The inside bottom panel 14′ is hinged to the inside side panel 11′ and to the opposite side of the former is hinged the other inside side panel 12′. To the end of inside bottom panel 14′ is hinged end wall panel 40 and to the latter the top 41 which may be cross scored at 42 for folding upon itself and provided with an end flap 43. The inside side panels 11′, 12′ have end flaps 44, 45 and the outside side panels 8′, 7′, have at one end interlocking flaps 46, 47. At their other ends, side panels 8′, 7′ have hinged thereto, respectively, the interlocking flaps 48, 49. The outside bottom panel 6′ is provided at one end with an end panel 50 having an end flap 51, and at the other end with an end panel 52 having an end flap 53 which is cross scored at 54 and slit at 55, 56.

In forming the box from the described blank, it is convenient to lay the latter upon a flat horizontal surface and first fold over the portion of the blank including the inside panels and the top upon the line *a* so that inside bottom panel 14′ overlies outside bottom panel 6′, side panel 11′ overlies side panel 7′, and side panel 12′ overlies side panel 8′. The double side walls are then raised to vertical position, side panels 7′, 11′ hinging respectively on the lines *b*, *c*, and side panels 8′, 12′ hinging respectively on the lines *d*, *e*, with respect to said bottom panels. The end flaps 44, 45 are then bent inwardly at right angles to the side walls and the end walls 40, 50, the former within the latter, bent upwardly to vertical position and outside said end flaps 44, 45. The flaps 46, 47 are then bent inward and interlocked outside of said end panels, thus this end of the box is completed. In order to form the other end of the box, the end walls 48, 49, which, as best seen in Figs. 6 and 7, are coextensive and provided with cut out portions 57, 58, are bent inward into the position shown in Fig. 7. The end wall 52 is then bent up into vertical position and the end flap 53 bent over, the end portions of said flap beyond the slits 55, 56 extending down within the end walls 48, 49 and the intermediate tongue between said slits being guided between the end wall 52 and walls 48, 49, as best seen in Fig. 9, scoring 54 facilitating the manipulation of this flap. The cover 41 may be bent back, as shown in Fig. 7, if the purpose is to display the contents of the box, or the end flap 43 thereof inserted between end wall 40 and end wall 50 in an obvious manner, or if the box is to be closed the top 41 is used for this purpose, the end flap 43 being bent down within the box against the inside of wall 48.

The easel support 26′ may be utilized as in the previously described form of the invention.

I claim:

In a blank for a knock-down box, having an inner and an outer bottom panel, an easel supporting tongue cut from the bottom panel and hinged thereto, the sides of the tongue being notched to form shoulders on the edge of the bottom opening and the free end of said tongue being broader than the space between said shoulders but narrower than the space above said shoulders whereby when said tongue is bent outward along the line between said shoulders to form a support for the box, the free end thereof may be engaged with said shoulders to maintain the tongue in bent position.

MAX HOGE.