W. C. DAMBMAN.

KNOCKDOWN PAPER BOX.

APPLICATION FILED OCT. 12, 1912.

1,121,582. Patented Dec. 15, 1914.

Fig. 3.

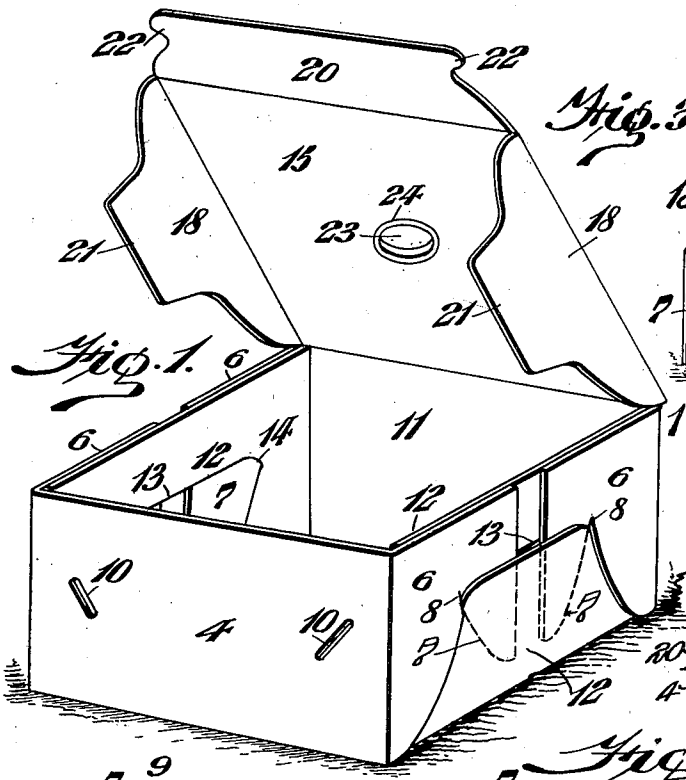


Fig. 1.

Fig. 4.

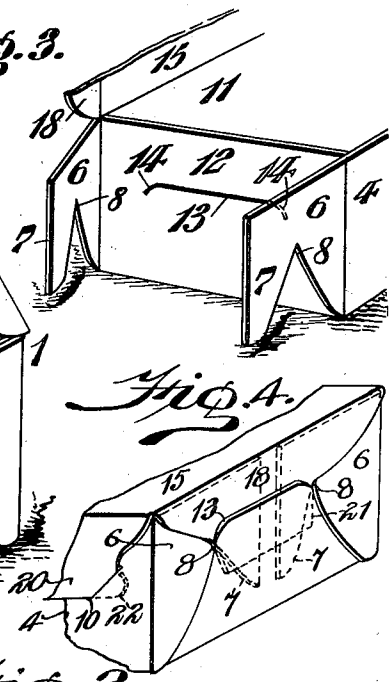
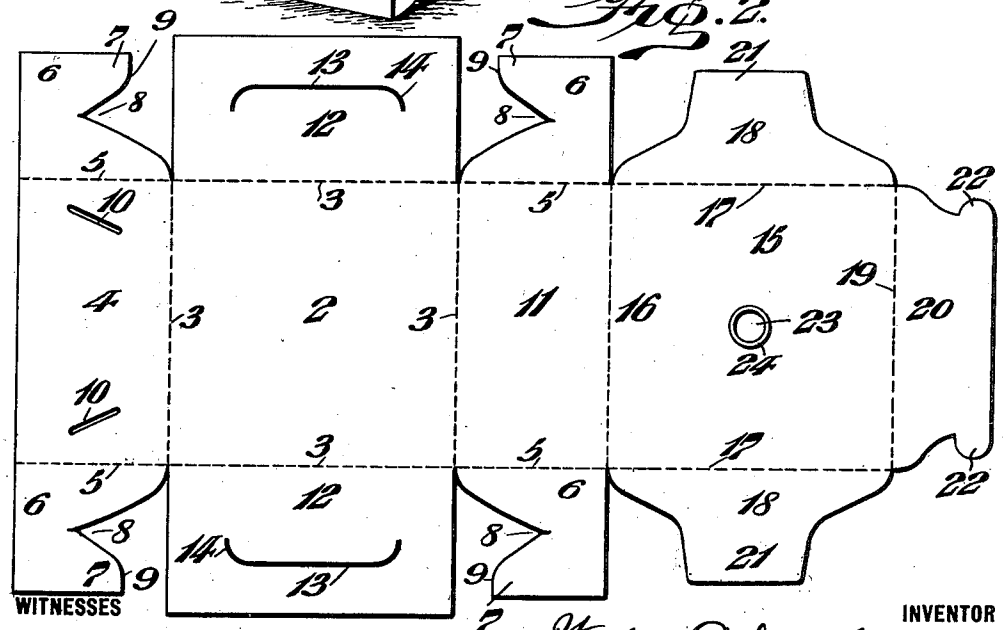


Fig. 2.



WITNESSES

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WALTER C. DAMBMAN, OF HIGHLAND PARK, PENNSYLVANIA, ASSIGNOR TO FIRM TRADING AS ALFRED F. MOORE, OF PHILADELPHIA, PENNSYLVANIA, CONSISTING OF THE ESTATE OF ALFRED F. MOORE AND ANTOINE BOURNONVILLE.

KNOCKDOWN PAPER BOX.

1,121,582. Specification of Letters Patent. **Patented Dec. 15, 1914.**

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To all whom it may concern:

Be it known that I, WALTER C. DAMBMAN, a citizen of the United States, residing at Highland Park, county of Delaware, State of Pennsylvania, have invented a new and useful Knockdown Paper Box, of which the following is a specification.

This invention relates to boxes or cartons and more particularly to a novel knock-down or collapsible carton which may be shipped or packed in a folded or collapsed condition, thus occupying a minimum amount of space and making a compact substantially flat article, adapted to be packed one on top of another and ready for use at any time when desired.

It has for an object to provide a carton blank having such form and configuration that it may be readily and quickly folded into a box form and maintained in such form through the medium of certain adjuncts, which interlock and reinforce the box at desired points.

It further consists of other novel features of construction, all as will be hereinafter fully set forth.

For the purpose of illustrating my invention, I have shown in the accompanying drawings one form thereof which is at present preferred by me, since the same has been found in practice to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of these instrumentalities as herein shown and described.

Referring to the drawings:—Figure 1 represents a perspective of a knock-down box or carton embodying my invention. Fig. 2 represents a plan of the blank adapted to form my novel box. Fig. 3 represents a detail in perspective of one side of the box showing the relation of the end flaps to the sides of the box. Fig. 4 represents a perspective view of an end portion of the box in fully closed condition.

Similar numerals of reference refer to similar elements in the drawings.

1 designates generally a box or carton embodying the novel features of my invention, which is preferably formed from a blank of suitable material and adapted to be folded into the particular shape required and so maintained through certain novel interlocking adjuncts.

2 designates the portion of the blank forming the bottom of the completed box, and the same is bounded by creases 3, indentations or the like in the material, to make possible the proper folding of the blank.

4 designates one end of the box which is likewise provided with creases 5, to form end-flaps 6, which are adapted to fold on the said creases 5 and are provided with tongues 7 formed by angular incisions 8, which it will be noted are rounded off as shown at 9, for the purpose of more easily assembling and interlocking the parts of the box. This end member 4 is also provided with a pair of slits 10 angularly disposed, and preferably converging toward the bottom portion 2 of the box, the function of these slits being to retain certain interlocking adjuncts of the blank. 11 designates the other end of the box, the same, in the present instance, being attached to the opposite side of the bottom 2 from the end 4, and likewise being provided with side flaps and tongues, which, in view of the fact of being similar to the flaps 6 and tongue 7 are identified by the same reference numeral.

12 designates the sides of the box and are oppositely disposed with respect to the bottom 2, and are formed integral therewith, being marked off or located by a pair of the creases 3. These sides 12 are each provided with a longitudinally extending slot 13, the ends of which are each downwardly deflected as indicated at 14 to form suitable seats for the side flap tongues 7, and permit the walls of the angles at the tops of the incisions 8 to engage the lower terminals of said deflected ends 14 of the slots 13, so that portions of the flaps 6 in which said incisions are formed are considerably below said terminals thus increasing the frictional contact of the surfaces of said flaps 6 and sides 12, whereby said parts are held more firmly together in the assembled condition of the box.

15 designates the portion of the blank forming the top of the box, and it is marked off from the side 11 by the crease 16, and by creases 17, from a pair of tabs 18 and by

a crease 19 from a front flap 20. The tabs 18 are preferably formed at the base of the same width as the top 15, but have their sides tapering toward the center to form the tab tongues 21, which in assembled condition are adapted to interfit with the sides 12 through the medium of the slots 13. The front flap 20, in the present instance, is provided with a pair of laterally disposed lips 22, each of which is adapted to be inserted in one of the slits 10 and form a means to lock the top in closed position.

23 designates an opening formed in the top 15 and having an eyelet 24 of reinforcing material to prevent tearing of the box top when the said opening is used to withdraw twine, cord, wire or twisted insulated electrical conductors.

When the box or boxes of this type are not in use, or when packed in large quantities, they are kept or stored in the shape shown in Fig. 2, and are therefore flat so that they take up little room and a large number may be superposed ready for use.

In the commercial use of the box or carton the blank is folded along the several creases to bring the sides and ends to an upright or vertical position, and the tongues 7 pass through the slots 13, so that the parts assume the position shown in Fig. 1, and it will be noted that when so positioned the end flaps 6 serve as a strong reinforcement for the sides 12, which is further strengthened when the top 15 is closed to bring the tab tongues 21 through the slots 13. It will thus be noted that a triple reinforcement of the sides of the box is provided.

It will now be apparent that I have devised a complete unitary structure effective as a container for articles of a suitable nature or for coils of twine, wire or electrical conductors of different types, and which also provides a means for unreeling the wire or the like, when it is used for such purpose, without making it necessary to open the box for the purpose.

It will further be noted that when the box is assembled, and all the tabs, tongues and side flaps interlock in the proper manner, and the top closed with its lips locked in place, there is provided a compact strong and efficient carton produced, adapted to withstand rough usage and maintain its proper shape.

It will now be apparent that I have devised a novel and useful construction of a knock-down paper box which embodies the features of advantage enumerated as desirable in the statement of the invention and the above description, and while I have, in the present instance, shown and described a preferred embodiment thereof which has been found in practice to give satisfactory and reliable results, it is to be understood that the same is susceptible of modification in various particulars without departing from the spirit or scope of the invention or sacrificing any of its advantages.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

A knock-down box comprising a bottom, sides foldably connected to two opposite edges of said bottom and each formed with a longitudinal slot, with downwardly deflecting ends, end portions foldably connected to the other opposed edges of the bottom and having end-flaps foldably connected to the end-edges of said portions and angularly-incised to form tongues adapted to hook into the downwardly deflected ends of the slots in the sides, and a top foldably connected to the edge of one of the end-portions and having means for locking its free edge to the opposite end-portion and having tabs foldably connected to their side-edges and formed with tongues adapted to enter the slots in the sides to lock the hooked tongues of the end-flaps of the end-portions in such slots.

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