J. H. CARTER.

BOX.

APPLICATION FILED JAN. 27, 1910.

975,121.

Patented Nov. 8, 1910.

Fig. 1.

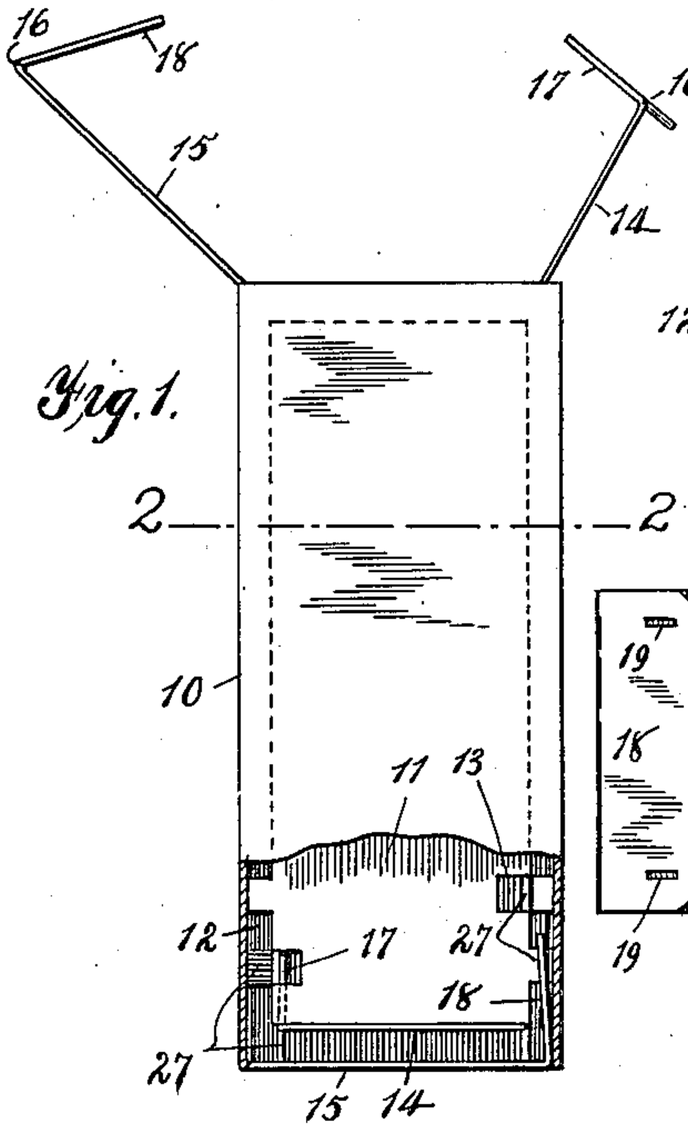


Fig. 2.

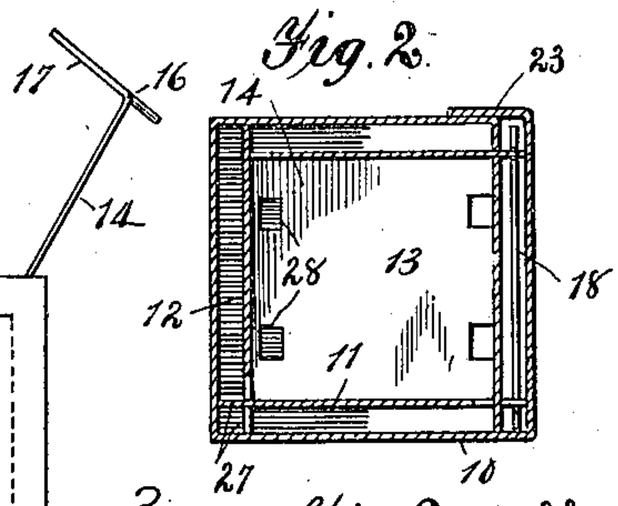


Fig. 3.

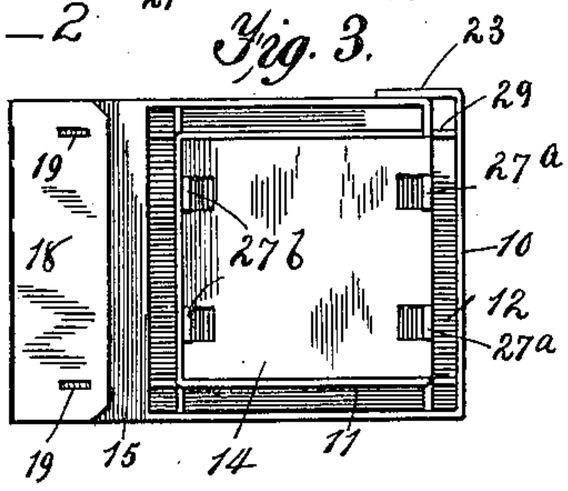


Fig. 4.

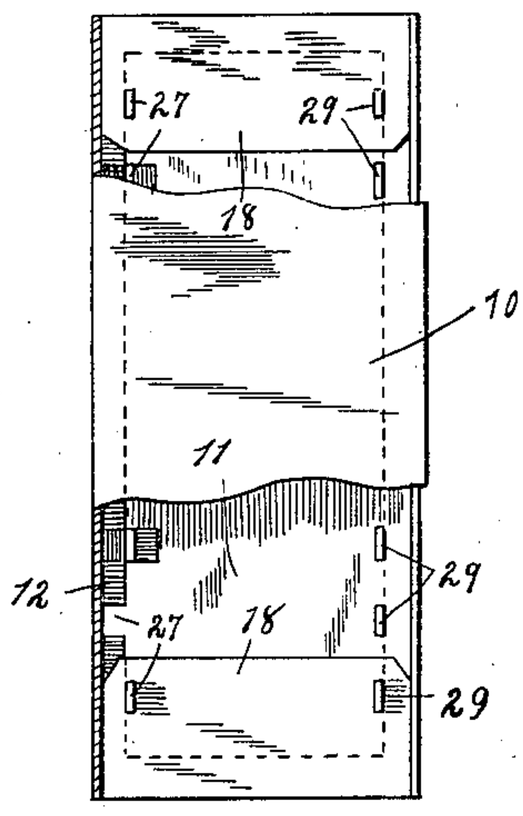


Fig. 5.

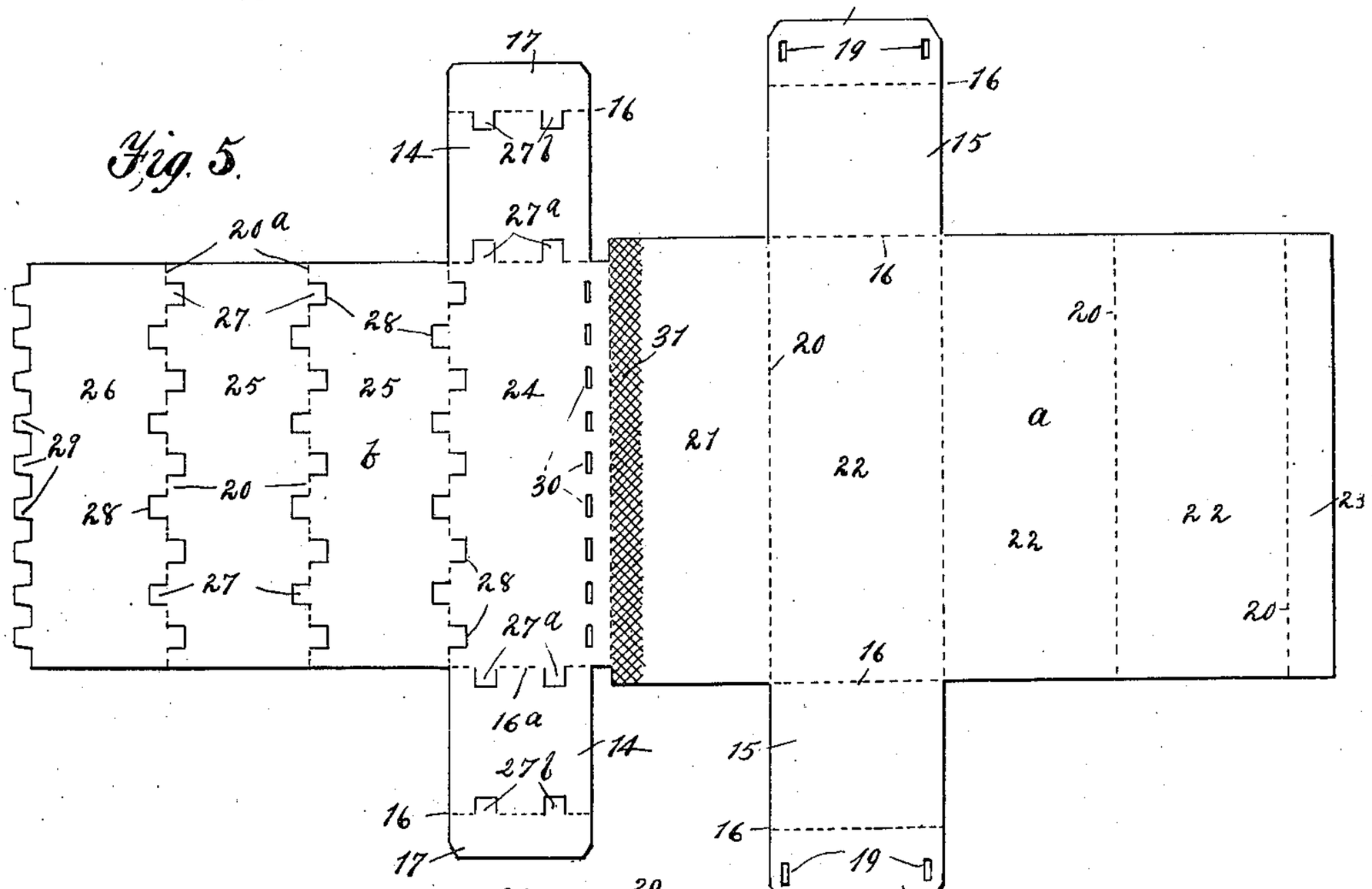
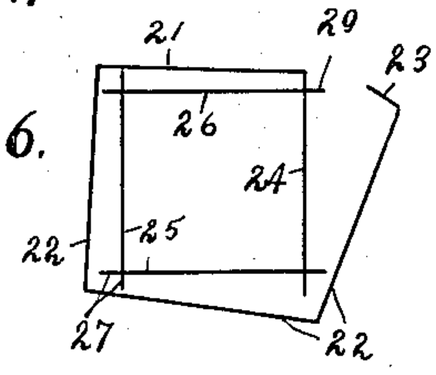


Fig. 6.



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BOX.

975,121. Specification of Letters Patent. Patented Nov. 8, 1910.

Application filed January 27, 1910. Serial No. 540,412.

To all whom it may concern:

Be it known that I, JAMES H. CARTER, citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Boxes, of which the following is a specification.

My invention relates to boxes and has particular reference to the construction of containers or cartons designed for the protection of the contents while in storage or being transported through the mails or otherwise.

The chief object of the improvements which constitute the subject matter of this application for patent is, to provide a duplex or double-walled box for the purpose stated formed of a single piece of sheet material having coöperating parts so arranged that when properly folded and interlocked, two complete integrally joined boxes will be produced, one of said boxes being contained within and protected by the other.

Another object of this invention is to provide a double-walled container formed from a single blank that can be produced by a single operation, thus promoting rapidity and economy in the manufacture.

Other objects of the invention are to furnish a carton formed of a single piece so constructed that the box can be easily and quickly assembled by folding and interfolding, and when put together, will combine the desired properties of strength, rigidity and light weight to an unusual degree; to furnish a duplex or double walled container, in which the outer and inner walls of sides and top are spaced apart by integral lugs or ears that project at right angles to the wall faces, and to arrange hinged closures or covers that will permit both boxes to be opened or closed, the outer cover being adapted to interlock with adjacent spacing members thus affording a secure fastening that will not be likely to be accidentally released, but that may be manually detached to give access to the interior of the box.

A particular advantage pertaining to the novel construction of the duplex container herein described lies in the opportunity afforded to utilize both the inner and outer boxes. Thus the chamber between the spaced walls may be filled with a protective material which may be of a nature calculated to withstand pressure or rough usage, or a non-conductor of heat or cold or a moisture resisting substance may be used, thus preventing the entrance of liquids into the inner box although the outer enveloping wall may be in contact therewith.

I accomplish the desired results by means of the construction illustrated in the accompanying drawing, which forms a part of this application, the details of the blank and manner of folding and interfolding being disclosed in the following views:—

Figure 1 is a side elevation of a duplex box or carton embodying my improvements, a portion of the outer wall being broken away to disclose the interior parts; Fig. 2 is a transverse section taken on the line 2—2 of Fig. 1; Fig. 3 is a top plan view with the outer cover open and the inner cover closed; Fig. 4 is an elevation showing another side of the carton, with portions of the outer wall broken away; Fig. 5 is a plan view of the completed blank, showing the outer face, and Fig. 6 is a diagrammatic view showing the manner of folding the blank to produce a duplex or double box.

The construction of the receptacle will be best understood by referring first to the blank from which it is formed, and designating the various parts thereof, and thereafter pointing out the particular manner of bending and arranging the said parts so as to produce a finished box. The completed blank composing the receptacle is shown in the flat in Fig. 5.

The body portion of the blank comprises two main portions indicated by the reference characters *a*, *b*, representing, respectively, the outer and inner portions of the receptacle. The portion *a* is oblong in outline, and is furnished with transverse scores 20 extending between the lateral margins, and dividing the said portion or part *a* into sections 21, 22, and 23. The sections 21 and 22 form the outside walls of the quadrangular carton, the section 21 being slightly narrower than the sections 22. The fifth section 23 is left at the outer end to form an attaching flap. The sections 22 lie between the sections 21 and 23, and the section 22 adjacent the section 21 is provided at the ends with the extensions 15, which form closures for the ends of the carton when completed. The portion *b* is slightly narrower and shorter than the portion *a*, and is divided in like manner by transverse scores 20^a into sections 24, 25, and 26, which form the walls of the inner box or compartment. There are two of the sections 25,

precisely alike, arranged between the sections 24 and 26. Arranged at spaced intervals and in staggered relation with each other upon opposite sides of the score lines which separate the sections 25 from the adjacent sections and from each other, are lugs 27 formed by rectangular cuts 28. The score lines 20^a are made in the material at points between the said lugs as shown, thus leaving the lugs firmly attached to their respective sections. As a result of this arrangement, when the sections are folded at right angles along the lines of said scores, the said lugs remaining in the planes of the sections to which they are attached will project outwardly from the bend, as shown in Figs. 2 and 3. Projecting from the ends of the section 24 are extensions 14, provided with scores 16^a at the line of junction with the said section, and adjacent the said scores 16 and 16^a are lugs 27^a, 27^b, formed in the same manner as the lugs 27. The lugs 27^a are attached to the section 24, and the lugs 27^b to the corresponding tongue 17, so that when the parts are assembled the said lugs will project at a right angle with the cover. The free margin of the end section 26 is provided with spaced tongues 29 which are adapted when the sections are folded to project through similarly spaced slots 30 arranged near one edge of the section 24.

To assemble the blank to form a carton the sections 25 and 26 are bent relatively to each other along their score lines and the tongues 29 passed through the slots 30, thus forming a rectangular structure or tube open at both ends. These open ends are then closed by bending the extensions 14 along the scores 16^a, the tongues 17 being inserted within the cavity 13. The portion *a* is then folded along the score lines and carried entirely around the said inner rectangular structure, the section 23, forming the attaching flap, engaging a corresponding portion of the outer surface of the section 21, to which a suitable adhesive 31 is applied, thus binding the entire structure firmly together. The inner faces of the outer walls formed by the sections of the portion *a* will be held away from the inner walls by the projecting lugs and tongues, as previously explained. One or both of the outer covers are then folded along the scores at their junction with the corresponding section and the tongues 18 passed between the outer ends of the adjacent tongue 29 and the corresponding lug 27, until the said tongue and lug enter the slots in the said tongue, thus securing the cover in closed position.

Having thus described my invention what I claim as new, is:—

1. A folding box, comprising an inner and an outer wall, spacing members integral with the inner wall and abutting the outer wall, and closures integral with the inner and outer walls, respectively, some of said closures adapted to interlock with said spacing members.

2. A duplex box formed of a single piece of material and comprising two complete boxes, one of said boxes entirely inclosed within the other box and integral therewith, integral means for spacing the said boxes apart, integral closures for the boxes, and integral locking means for some of said closures.

3. A duplex box formed of a single piece of flexible material and comprising an inner box, an outer box completely surrounding the said inner box and integral therewith, spacing means integral with the inner box, a plurality of closures for each of said boxes, the closures of the outer box being adapted to removably interlock with the spacing means on the inner box.

4. A duplex carton formed of a single piece of flexible material and comprising two complete boxes, one of said boxes containing the other box and integral therewith, means for spacing the said boxes apart, and a plurality of closures for each of said boxes, the closures of the outer box being adapted to interlock with portions of the inner box.

5. A box blank adapted to be folded to form a duplex container, said blank comprising two portions having different dimensions, foldable extensions on the larger portions provided with slots, tongues projecting from one margin of the smaller portion, and adapted to engage said slots when the blank is folded, spacing lugs on the smaller portion, and foldable extensions on said portion.

6. A blank for a folding box, comprising two connected portions differing in size and provided with scores dividing the blank into a series of parallel sections, foldable extensions attached to the ends of one section in each portion, a series of spaced tongues formed on the margin of one section of the smaller portion and adapted to engage slots in another section, and lugs formed by cuts made adjacent to the scores separating the intermediate sections, said lugs being arranged in staggered relation upon opposite sides of each of the corresponding scores.

7. A blank for a folding box, comprising two connected portions provided with scores, and adapted to be folded along said scores to form two integral rectangular receptacles arranged with their centers coincident and having their walls spaced apart.

8. A new article of manufacture, consisting of a container formed of a single piece of material and comprising a plurality of receptacles having their sides and ends held apart by integral members.

9. A new article of manufacture, consisting of a container formed of a single piece

of material and comprising a plurality of receptacles having coincident geometrical centers, integral spacing means between said receptacles, and closures for the receptacles adapted to interlock with some of said spacing means.

10. A new article of manufacture, consisting of a container comprising an inner receptacle and an outer receptacle having their walls held in spaced relation by integral lugs projecting from the walls of the inner receptacle and bearing against the walls of the outer receptacle.

11. In a container comprising an inner box and an outer box, a closure for the inner box having spacing lugs projecting therefrom, and a closure for the outer box adapted to detachably engage portions of the inner box and to bear upon the said spacing lugs.

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

JAMES H. CARTER.

Witnesses:
CHAS. F. BASSETT,
M. A. MILORD.