No. 877,757. PATENTED JAN. 28, 1908.

W. R. COMINGS.

PAPER OR CARDBOARD BOX.

APPLICATION FILED NOV. 13, 1905.

2 SHEETS—SHEET 1.

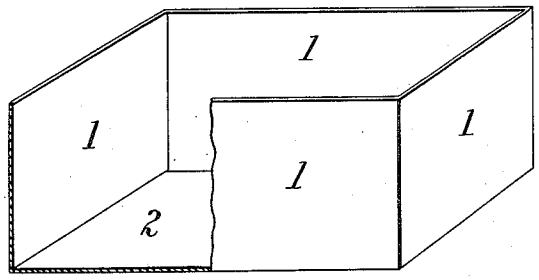


Fig. 1.

Fig. 2.

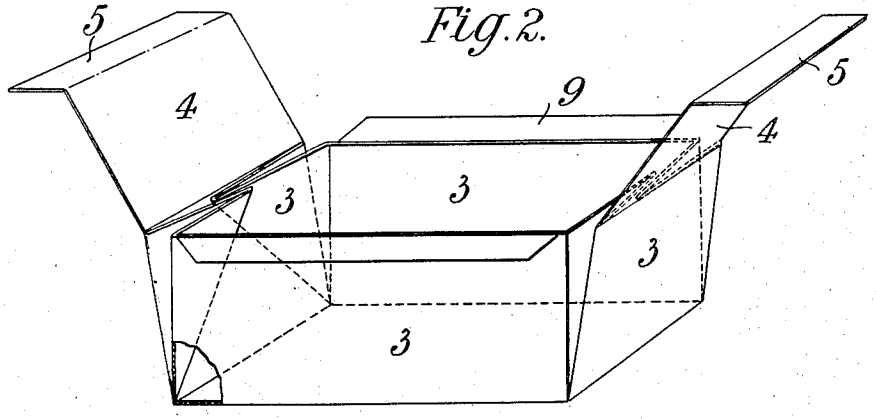


Fig. 3.

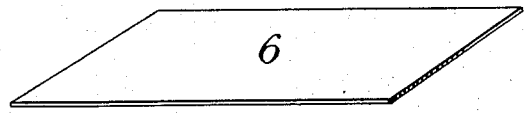
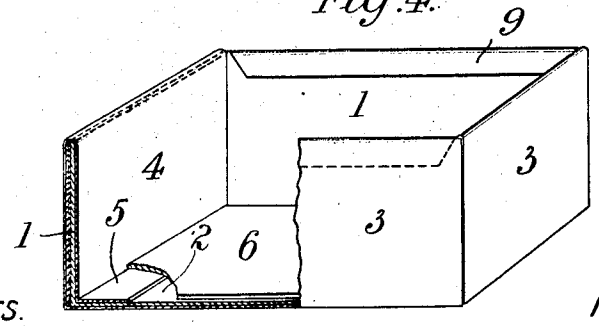


Fig. 4.



WITNESSES.

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2 SHEETS—SHEET 2.

Fig. 5.

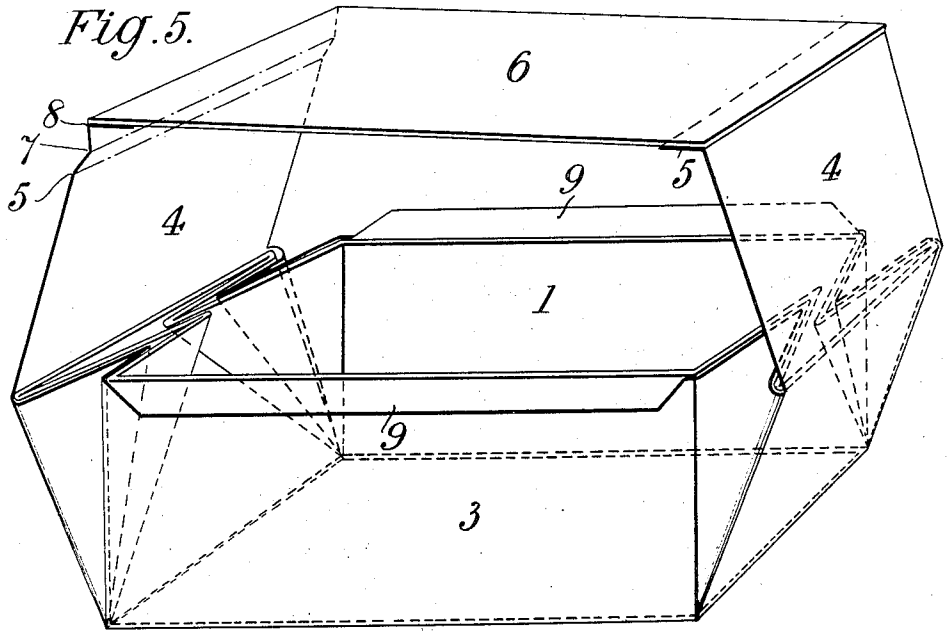


Fig. 6.

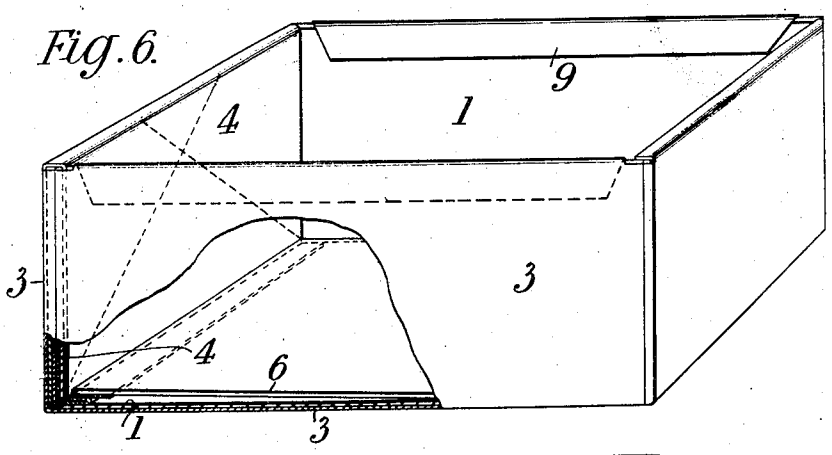
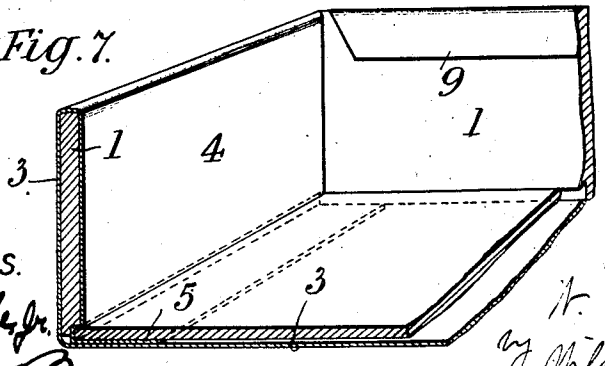


Fig. 7.



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UNITED STATES PATENT OFFICE.

WILLIAM RIGHTER COMINGS, OF WIMBLEDON, ENGLAND.

PAPER OR CARDBOARD BOX.

No. 877,757. Specification of Letters Patent. Patented Jan. 28, 1908.

Application filed November 13, 1905. Serial No. 287,136.

To all whom it may concern:

Be it known that I, WILLIAM RIGHTER COMINGS, a citizen of the United States of America, residing at Wimbledon, England, have invented certain new and useful Improvements in Paper or Cardboard Boxes, of which the following is a specification.

This invention relates to paper or cardboard boxes.

Boxes of the collapsible or "knock down" type are now well known and are generally constructed by cutting the material from which they are to be formed with a series of tongues which when the box is set up are adapted to enter slots in the then sides or ends. Such construction is open to objection both from the possibility of the tongues being unintentionally disengaged and from the breaking of the level or the face of the box due to the exposed cut edges and open joints.

According to this invention it is proposed to so cut and score the blank that it may be folded up to form the box or box and lid body from an unbroken sheet without any exposed cut edges; projecting ears or tabs of the material being then folded from the exterior to the interior where they may be held without gluing by the simple insertion of a locking piece or frame, or they may be glued to the interior of the box when so turned in. Where desired two or more layers of different material may be thus cut and folded together in which case they will mutually support each other. Thus a common stiff material may be externally and internally covered with a thin material of a higher class and a completed box or box and lid be produced, and thus the invention is not only adapted for the manufacture of collapsible boxes but also for covering rigid boxes.

To more clearly define the nature of the invention reference is made to the accompanying drawings which illustrate a few of the numerous forms of covering a rigid box body with a bottom or of a collapsible or rigid box frame or of forming such box from two or more layers of different material previously cut and scored so as to be capable of folding together and mutually supporting each other.

Where reference is made in this specification to the scoring of the blank it is intended to signify that such blank must be so cut, creased or efficiently marked with lines as to cause it to naturally bend at the predetermined places, and where in the specification the word "box" is employed it is intended to cover any form of box or box lids of similar construction, and also where a reference is made to a box body it is intended to apply to a box frame or rough box intended to be covered.

In the accompanying drawings Figure 1 represents a box body of the usual kind, Fig. 2 a previously cut and scored and partially folded in covering blank for same, Fig. 3 a locking piece adapted to hold the covering blank to the box body, Fig. 4 the box body and covering blank when locked by the locking piece, Fig. 5 a covering blank with locking piece attached and an inner scored blank adapted to fold in unison therewith, Fig. 6 a completed box formed with the inner cut and scored blank and covering blank illustrated in Fig. 5, and Fig. 7 a box frame without a bottom after being covered. Several of the figures are partly in section so as to more clearly show the position of the parts.

In said drawings the rigid box body (Fig. 1) is shown as having the four usual sides 1 and bottom 2, but the invention is not limited to the construction of rectangular boxes as it is evident that by properly cutting and scoring the covering blank boxes of hexagon or other shape may be equally well folded or covered. The covering blank 3 is cut and scored so that it will neatly embrace the rigid box body 1 and 2 and is provided with tabs or ears 4 which may be on two or more sides adapted to be folded into the box body, the outer ends 5 of such tabs when so folded in being adapted to rest on the bottom 2 in which position they are held by locking piece 6 as most clearly seen in Fig. 4. If only two tabs or ears 4 with outer ends 5 are employed then the outer ends 9 of blank 3 may be turned in and pasted in the usual way.

If it be desired to attach locking piece 6 to the ends 5 of the tabs so as to prevent loss then additional scoring lines 7 and 8 are desirable so that the locking piece may lie flat and such scores are shown in Fig. 5. In Fig. 6 the completed box is shown as being composed of an inner cut and scored blank adapted to fit within the covering blank 3, with which it corresponds except that it carries no tabs 4. In Fig. 7 the box body consists of a frame 1 without a bottom such frame being slightly cut away at the bottom and the locking piece 6 is made slightly

larger than the inside of the box so that it may be sprung into its locking position when it will exert a stretching effect on the covering blank.

It will be evident that the covering blanks must be cut and scored so as to neatly fit the particular form of rigid box body the box frame or the previously cut and scored inner blank to which they are to be applied, and that covering blanks such as illustrated in Figs. 2 and 5 are adapted for covering any of these forms of inner body and that other forms of folding of the covering blanks can be effected by varying the cutting and scoring.

In the claims the skeleton is described as made of card-board, but it will be obvious that celluloid, thin sheet metal, wood, leather, or any other suitable material may be substituted for card-board, and yet come within the scope of the claims, the idea being that the covering of paper or thin flexible material shall be applied to a skeleton of more rigid but still flexible material.

What is claimed is:

1. A box comprising a box body and a covering blank adapted to fold over and envelop the box body, with a locking piece adapted to fit snugly in the bottom of the box body and lock the parts together, substantially as described.

2. A box comprising a box body and a covering blank creased along its folding edges and adapted to fold over and envelop the box body, with a locking piece adapted to fit snugly in the bottom of the box body and lock the parts together, substantially as described.

3. A box comprising a box body, and a covering blank adapted to fold over and envelop the box body and a locking piece attached to the covering blank adapted to fit snugly in the bottom of the box body and lock the parts together, substantially as described.

4. A box comprising a box body and a covering blank adapted to fold over and envelop the box body and a locking piece attached to the covering blank by a double fold for facilitating the fitting of such locking piece into the bottom of the box body where it will lock the parts together, substantially as described.

5. A box comprising a box body and a covering blank creased along its folding edges and adapted to fold over and envelop the box body and a locking piece attached to the covering blank adapted to fit snugly in the bottom of the box body and lock the parts together, substantially as described.

6. In a box, and in combination, a polygonal box body, a groove along its bottom, a cover folded over and inclosing said box body, and a locking piece adapted to be sprung into said groove and to hold the box body and cover together, substantially as described.

7. In a box, and in combination, a polygonal box body, a groove along its bottom, a previously creased covering blank folded over and inclosing said box body and a locking piece adapted to spring into said groove and hold the box body and covering blank together, substantially as described.

8. A box comprising a box body, a covering blank adapted to fold over and envelop the box body, and a locking piece made slightly larger than the interior of the box body and adapted to be sprung into the bottom of the box body and lock the parts together, substantially as described.

9. A box comprising a box body and a covering blank creased along its folding edges and adapted to fold over and envelop the box body, with a locking piece made slightly larger than the interior of the box body and adapted to be sprung into the bottom of the box body and lock the parts together, substantially as described.

10. In a box, and in combination, a box body, a cover folded over and engaging said box body, and a locking piece adapted to be sprung into said box body and to both secure the parts rigidly together and to stretch said parts, substantially as described.

11. In a box, and in combination with a box body, a previously creased covering blank folded over and engaging said box body, and a locking piece adapted to be sprung into said box body and to both secure the parts rigidly together and to stretch said parts, substantially as described.

12. In a box, and in combination, a rectangular box body, a groove along its bottom, a cover folded over and inclosing said box body, and a locking piece adapted to be sprung into said groove and to hold the box body and cover together and to stretch the same, substantially as described.

13. In a box and in combination with a rectangular box body, a groove along its bottom, a previously creased covering blank inclosing said box body and a locking piece adapted to be sprung into said groove and to hold the box body and cover together and to stretch same, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

WILLIAM RIGHTER COMINGS.

Witnesses:
ADDISON A. RIGHTER,
STANLEY P. WILLIAMS.