No. 657,120. Patented Sept. 4, 1900.

F. KNOBELOCH.

PAPER BOX OR LID.

(Application filed Aug. 3, 1899.)

(No Model.)

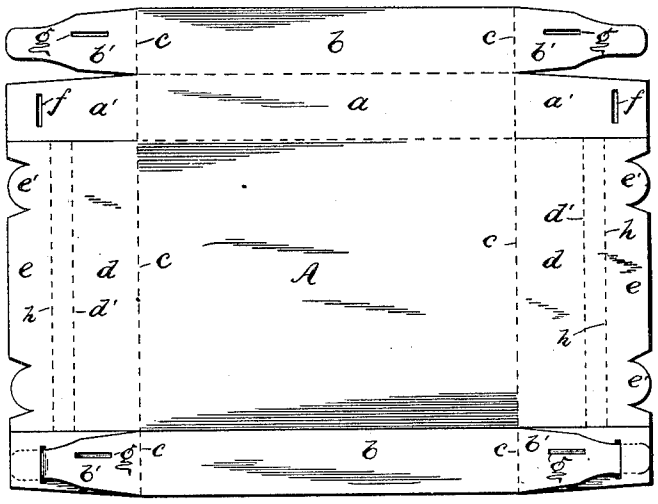
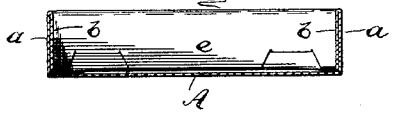


Fig. 1.

Fig. 3.



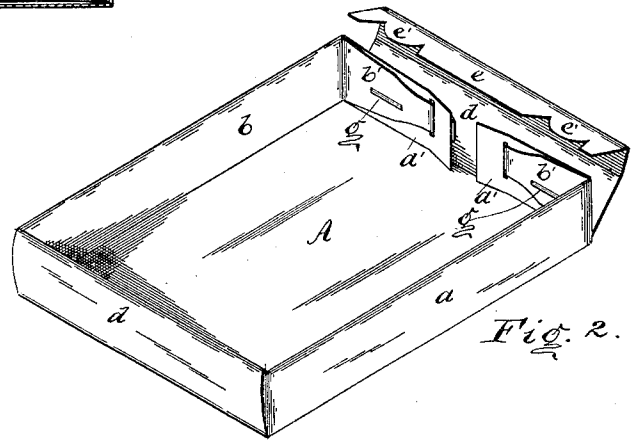


Fig. 2.

Witnesses.
Clarence E. Mehlhope
Edward Haat

Inventor.
Frank Knobeloch,
By Arthur Stem,
Attorney.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FRANK KNOBELOCH, OF DAYTON, OHIO, ASSIGNOR TO THE KINNARD MANUFACTURING COMPANY, OF SAME PLACE.

PAPER BOX OR LID.

SPECIFICATION forming part of Letters Patent No. 657,120, dated September 4, 1900.

Application filed August 3, 1899. Serial No. 725,946. (No model.)

To all whom it may concern:

Be it known that I, FRANK KNOBELOCH, a citizen of the United States, and a resident of Dayton, in the county of Montgomery and State of Ohio, have invented a certain new and useful Improvement in Paper Boxes or Lids, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

My invention relates to improvements in what are termed "collapsible" boxes or lids and formed from one piece of cardboard or other suitable material cut and scored to be very readily folded into shape, as will be more particularly set forth in the following specification.

In the drawings, Figure 1 is a plan view of a sheet of cardboard or other suitable material cut and scored to form my improved box or lid. Fig. 2 is a perspective view of the blank with three of its sides folded into place and the one end partially folded, showing the tongues of the overlapping end about to be inserted into the slots of the flaps. Fig. 3 is a cross-sectional view of the box or lid, showing the overlapping end with its tongues in place.

Like letters of reference indicate identical parts in all the figures.

A is a blank of cardboard cut the desired shape and manner and scored where it is to be folded, the scores being indicated by dotted lines. After cutting the blank to the shape shown in Fig. 1 the same is scored at its sides and ends, as indicated in dotted lines.

The sides of the blank A comprise the portions *a* and *b*, which are produced by the scores. The ends of the portions or folds *a b* are slit or cut to the score *c*, thus producing corner-flaps *a' b'*.

The ends of the blank are scored to form portions *d e*, the middle score *d'* being preferably made at such point as to produce the portion *d* of a width to correspond with the width of the side folds *a b*. The fold *e* is provided with a tongue or tongues *e' e'*, and the corner-flaps *a' b'* are each provided with a slot *f g*, the slot *f* being made crosswise of the flaps *a'* and near its end, while slot *g* is made lengthwise the flap *b'* and near the score *c*.

Having cut and scored the blank as above described and as illustrated in Fig. 1 and provided it with the slots in the corner-flaps, the blank is folded into box or lid shape in the following manner: The side portion *b* is folded over onto the side portion *a*, which of course is possible by reason of the intermediate score. The flap *b'*, which is cut away at its end in a tapering manner, as shown, is then inserted through the slot *f* of flap *a'*. The two flaps are then folded in at right angles to the sides, as shown in Fig. 2, and the ends *d* are folded up at right angles to the portion A, and the portion *e* is folded over the flaps *b' a'*, Fig. 2. The tongues *e' e'* are then inserted in slots *g* of flap *b'*, thus locking the ends in place, as seen in the sectional view of the box, Fig. 3. In order to facilitate the insertion of the tongues *e'* in the slots *g*, I provide the supplemental or intermediate score *h*.

By the use of a blank cut and scored as above described, and illustrated in the drawings, a box or lid is produced with sides and ends of several thicknesses, and the corners, which are subject to considerable wear, are greatly reinforced by the double flaps.

Another advantage to be gained by the use of a blank as described is that it may be folded into box or lid shape and made complete without the use of glue or other adhesive substance and the blank used without cutting away any of the ends or corners.

Instead of providing a slot in each of said corner-flaps it may be found desirable not to cut the flap *b'* in the tapering manner shown, but also provide it with slot *f*, cut in the direction shown, and cut the flap *a'* in the manner in which flap *b'* is shown in the drawings, and when folding the blank into box form insert the end of flap *a'* through slot *f* in flap *b'*, thus locking the flaps into place, and I do not wish to limit myself to the exact form shown in the drawings; but

What I claim, and desire to secure by Letters Patent, is—

1. In a collapsible box or lid formed from a single blank of cardboard or other suitable material, the combination of bottom, sides, and ends, the sides and ends cut and scored to fold upon themselves, said ends provided

with tongues, with corner-flaps integral with the sides and arranged to be infolded by the ends, said flaps having slots, one of which is arranged to receive the end of the adjacent flap, and the other arranged to receive the end of the tongue on the overlapping end, substantially as shown and in the manner described.

2. In a collapsible box or lid, the combination of bottom, sides and ends, the sides and ends cut and scored to fold upon themselves, said ends provided with tongues, with corner-flaps cut and scored to be infolded by the ends, one flap provided with a slot for the insertion of the end of the other flap, and said other flap provided with a slot for the insertion of the tongues on the overlapping ends, substantially as shown and in the manner described.

FRANK KNOBELOCH.

Witnesses:
GEORGE HEIDMAN,
EDWARD HUAT.