No. 622,494. Patented Apr. 4, 1899.

F. KNOBELOCH.

PAPER BOX OR LID.

(Application filed Nov. 11, 1897.)

(No Model.)

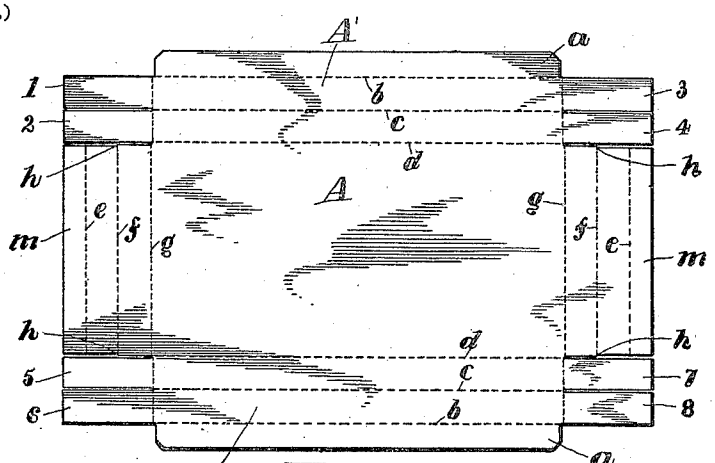


Fig. 1

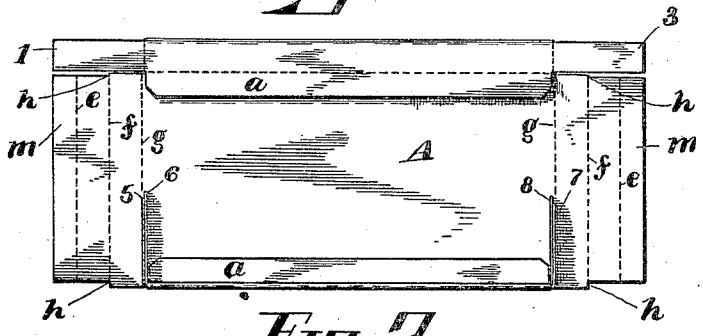


Fig. 2

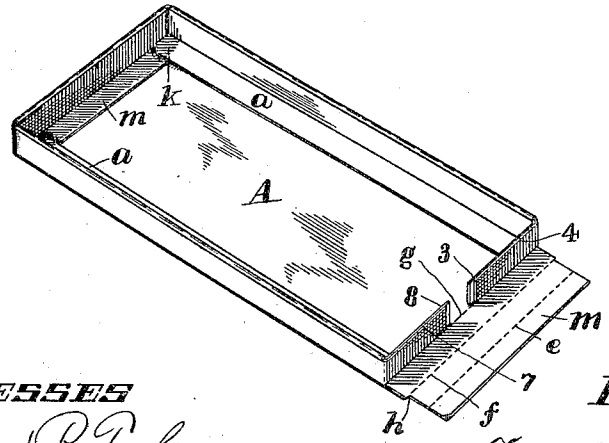


Fig. 3

WITNESSES

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UNITED STATES PATENT OFFICE.

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

PAPER BOX OR LID.

SPECIFICATION forming part of Letters Patent No. 622,494, dated April 4, 1899.

Application filed November 11, 1897. Serial No. 658,129. (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 certain new and useful Improvements in Paper Boxes or Lids, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to improvements in what may be termed "collapsible" boxes or lids cut and formed of one piece of cardboard or other suitable material (the present invention was designated more particularly for a lid, but of course is equally applicable to a box) 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 cut and scored in the desired manner to form my improved box or lid. Fig. 2 is a plan view of the blank or sheet with one side partly folded in the scores and the other side folded entirely into place, the two ends still unfolded. Fig. 3 is a perspective view of the same with the sides and one end folded into place.

Like letters and numerals 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 dotted lines indicating the scores. 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 A′ A″ of the blank A are not cut the same width throughout, as seen in Fig. 1, but at the corners the blank is cut narrower, thus producing the additional flaps *a a*. The ends or corners of the blank are preferably slit, thus forming the extensions or tongues 1 2 3 4 5 6 7 8. The sides A′ A″ are scored at *b c d*, Fig. 1, thus producing intermediate portions of the same width as the tongues 1 2 3 4 5 6 7 8. The ends of the blank A are scored at *e f g* to form intermediate portions or folds of the same width as the intermediate portions of the sides between the scores *b c d*. The ends of the blank are disconnected from the extensions or tongues of the sides, being slit or cut as far as the score *g*, the cut being made the thickness of the folded side extensions as far as the score *f*, as seen at *h*, to permit the folding into place of the end extensions.

After the blank is cut and scored, as described and illustrated, in order to form a lid or box the sides are folded over at the inner score or crease *c* in the manner shown in Fig. 2. The portions between the scores *d* and *c* and the scores *c* and *b* are then preferably glued together, securely holding them in place. By thus folding the sides at the score *c* the tongues or extensions are also necessarily folded over each other, bringing tongues 1, 3, 6, and 8 on top, Fig. 2. These tongues are then bent in at right angles to the sides, as shown in Figs. 2 and 3. The ends are then folded over the double extensions 3 and 8, the portion between scores *g* and *f* being on the outside, the portions between scores *f* and *e* being on the inside, and the portion or flap *m* lying flat on the bottom of the box or lid. In order to hold these flaps flat on the bottom, and consequently the ends perpendicular, the ends or corners of the side flaps *a a* are lifted at the corners and the corners of *m* slipped under them. By this construction the box or lid has the perpendicular sides of double thickness and the ends at the corners of quadruple thickness, making a very strong firm box. Of course both of the end flaps need not be used if it is desired to make the box lighter or use less material and the corners may be made of triple thickness instead of quadruple by omitting one of these flaps at each corner. It is very easily folded from the flat form shown in Fig. 1, and by the use of the flaps, as described, the ends are made very strong and are anchored in place without the use of slots or slits in the material to receive locking-tongues, which are unstable and very likely to be torn in handling.

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

1. A rectangular collapsible box or lid formed from a single blank of cardboard or other suitable material, cut and scored so

that the sides and ends are formed of double thickness by folding the flaps upon themselves, the flaps forming the sides being provided with extensions which are bent in at right angles to the sides, and which are enfolded by the end flaps, both the sides and the ends being provided with additional flaps or extensions *a*, *m*, which lie along the bottom of the box or lid in such a manner that the corners of one may be slipped or locked under the corners of the other, substantially as shown and described.

2. A collapsible box having end and side walls, said side walls having laterally-extending flaps, and end and side laps adapted to fold down inside the walls of the box, said laps all having lap extensions adapted to fold down upon the bottom of the box and be locked at the corners of the box, substantially as shown and described.

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Witnesses:
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