

Dec. 22, 1936.

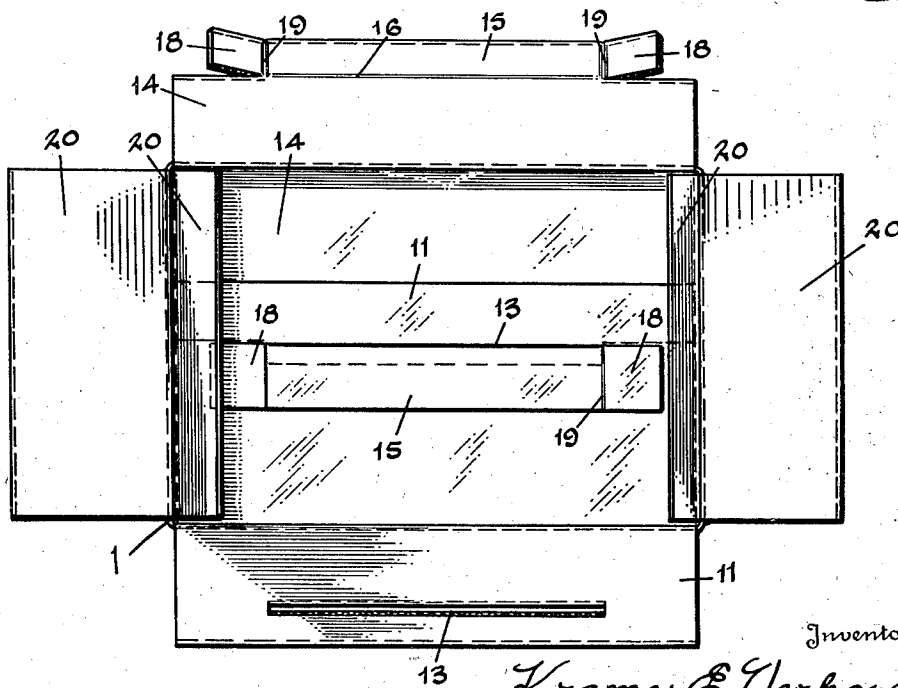
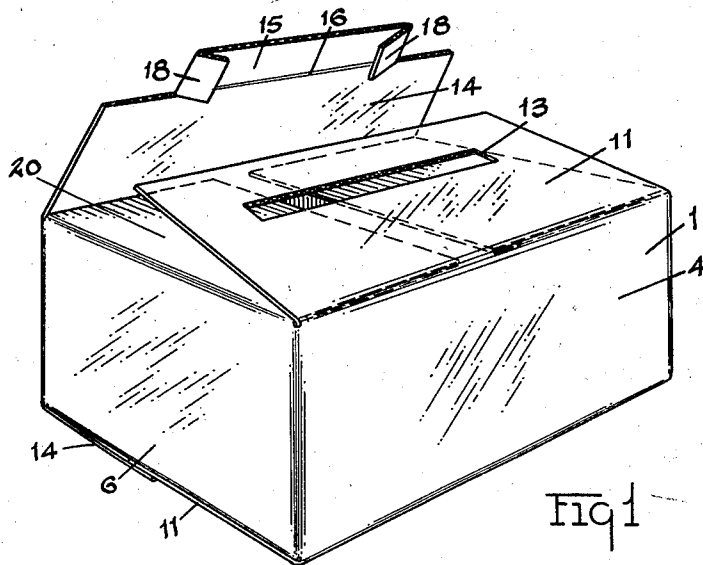
K. E. VERHOVEN

2,065,482

CONTAINER

Filed Sept. 23, 1935

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

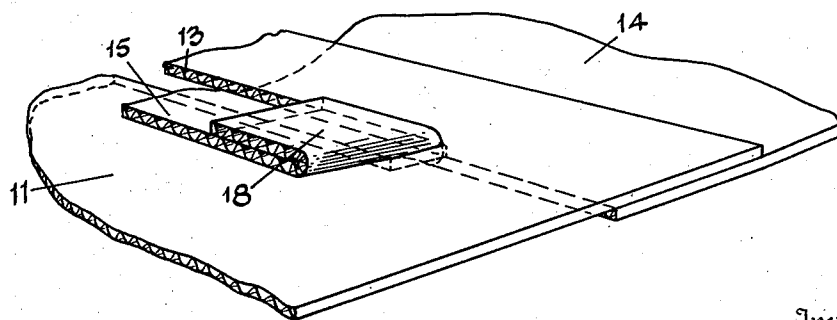
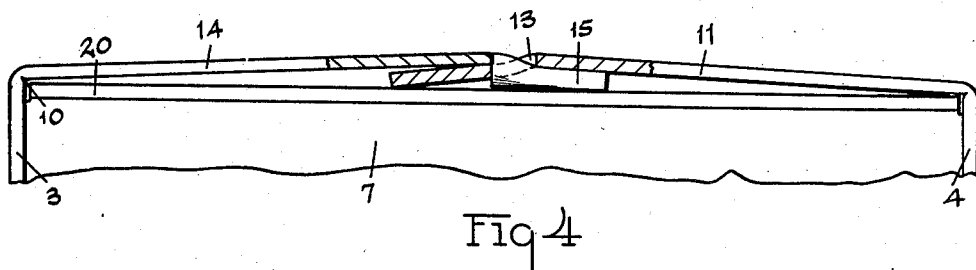
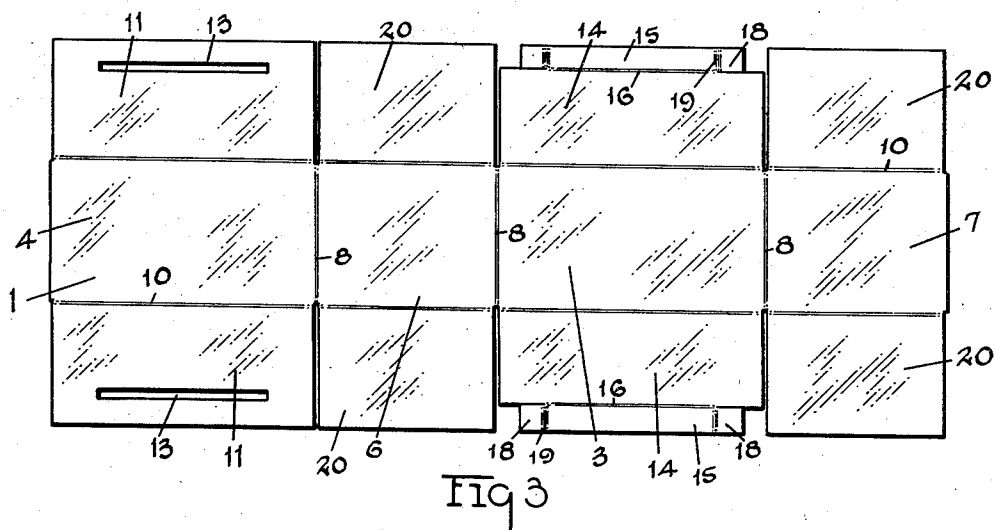


Fig 5

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UNITED STATES PATENT OFFICE

2,065,482

CONTAINER

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Application September 23, 1935, Serial No. 41,707

1 Claim. (Cl. 229—39)

My invention has for an object to provide a container that is particularly adapted for the delivery or shipping of articles. The container of my invention is strongly made and provides a light weight delivery or shipping container, preferably formed from a tough, strong, sheet material such as fabric board or corrugated board, that will withstand the wear and tear of rough usage to which containers are commonly subjected. The container is preferably formed from a blank which may be shipped flat and readily folded to produce an exceedingly durable, light weight container.

The container is so constructed that the parts forming the top and bottom portions, or either of the portions, may be positively interlocked to form rigid, weight supporting portions and can be opened only when the container is quite completely torn to destruction. Preferably the container is formed of corrugated paper board, which affords a considerable width to the edge surfaces or areas that interengage to form from the parts a positive lock and a substantially unitary top or bottom portion that cannot be separated except by tearing one or both parts. Thus a rigid, strong container is formed, the parts of which maintain their relative positions regardless of the wear and tear of rough usage to which the container is subjected, and the necessity of gluing or taping the top and bottom portions is completely eliminated. The parts that form the top and bottom portions are easily and readily assembled, and the container may be locked about its contents with a minimum of effort and in such a way as to insure the maintenance of the seal at the top or bottom or both.

Other features and advantages of the invention will appear upon examination of the drawings and the description hereinafter set forth. The invention may be contained in boxes and containers of different forms without departing from the spirit of the invention. To illustrate a practical application of the invention, I have selected a container that is particularly adapted for delivery and shipping as an example of the different forms of construction that embody my invention. The particular form of container selected as an example is shown in the drawings and described hereinafter.

Fig. 1 is a perspective view of a container formed from sheet material such as fabric board or corrugated board. Fig. 2 is a view of the container and particularly illustrates the means whereby the parts forming the bottom portion are interlocked. Fig. 3 illustrates the blank

from which the container shown in Fig. 1 may be formed. Fig. 4 shows a portion of the parts which form the top portion of the box and particularly illustrates the means by which these parts are interlocked. Fig. 5 is a view of the section of the top of the box and particularly illustrates the position of the interlocking device.

The blank 1 is cut and scored to form the sides 3 and 4 and the ends 6 and 7. These parts are rendered foldable relative to each other by means of the score lines 8. The score lines 8 are of the type well known and are produced by depressing the board along the lines 8 and rendering adjacent parts foldable relative to each other within limited angular movements. Thus the score lines 8 enable the parts 3, 4, 6, and 7 to be folded to planes at right angles to each other. The free edge sections of the side 4 and the end 7 may be fastened together by a suitable cloth gluing tape or by any suitable cementing means to maintain the blank in the form of a rectangular cube.

The sides and ends are provided with flaps formed integral with the sides and ends and foldable at right angles to the sides and ends along the score lines 10. The flaps, when assembled, form the top and bottom portions of the container. The side 4 is provided with the flaps 11, each of which is provided with a longitudinal slot 13, preferably located in the vicinity of the outer edge portion of the flap. The side 3 is provided with flaps 14, foldable relative to the side 3 along the score line 10. Each flap 14 is provided at the edge opposite the score line 10 with the tab 15, foldable with respect to the flap 14 along the score line 16 and having a width substantially the same as the displacement of the slot 13 from the edge of the flap 11. The tab 15 is provided at its ends with locking tongues 18 which are rendered foldable relative to the tab 15 and are adapted to be folded to the plane of the tab 15 by the double score lines 19. The ends 6 and 7 are provided with the flaps 20 which serve to also protect the contents of the box.

The parts that form the top and those that form the bottom may be identical and, consequently, in assembly when so formed, special positioning relative to the top and bottom is eliminated. In assembly, the side 4 and the end 7 are fastened together by suitable means, and the flaps 20 are bent along the score lines 10 substantially at right angles to the plane of the ends 6 and 7. The flaps 11 and 14 are bent along the score

lines 10 to a plane at substantially right angles to the sides and ends. The tab 15 of the flap 14 is folded along the score line 16, and the locking tongues 18 are folded to the plane of the tab 15 and against the interior surface of the tab. When so folded, the longitudinal dimension of the tab 15 is substantially the same as the longitudinal dimension of the slot 13. When the tab 15 has been inserted in the slot, the locking tongues 18 are returned to their normal position by folding along the double score lines 19 away from the interior surface of the tab 15. When so folded the locking tongues 18 extend beyond the end edges of the slot 13 and extend over parts of the flap 11 adjacent the ends of the slot 13. The locking tongues 18 abut along the end edges of the slot 13 to positively interlock the portions forming the bottom. The flaps 20, subsequent to the assembly of the locking device, are folded down along the score lines 10 against the interior surfaces of the flaps 11 and 14. The box may then be packed with whatever it is desired to ship or deliver.

When it is desired to close the box, the others of the flaps 20 are folded along the score lines 10 and at right angles to the ends 6 and 7 to form the protective flaps of the top portion. The flap 11 is then folded along the score line 10 and over the flaps 20. The locking tongues 18, if the tab 15 of the top of the box is also provided with locking tongues 18, are folded along the double scored lines 19 and against the interior surface of the tab 15. The tab 15 is then bent along the score line 16 and is inserted in the slot 13, the longitudinal dimension of which is substantially the same as the length of the tab, and the transverse width of which is sufficient to receive the double thickness of board where the locking tongues are folded against the tab. When the tab has been inserted in the slot 13, the flap 14 is pushed down to a plane at substantially right angles to the side 3, and the locking

tongues press against the interior surface of the flap 11. The locking tongues 18 tend to open back to the plane of the tab 15 along the double score lines 19, and consequently the ends of the locking tongues drop slightly because of the play between surfaces of the flap 14 and the flap 20, thereby locating the relative thick edges of the tongues in abutting engagement with the end edge parts of the slot 13. Thus if the flaps 14 and 11 are pulled toward vertical planes, the tighter the tab 15 and the tongues engage the edge of the slot, and consequently the parts that form the top of the box cannot be separated until the tough board of which the box is formed is torn and ripped open. Thus the strength of the container as a load sustaining agent is limited only by the inherent strength of the material employed in the construction of the box, that is by the fracturing point of the material of the box.

I claim:

In a container formed from elastic, relatively thick, sheet paper, flaps formed integral with the ends of the container and foldable at substantially right angles to the ends, other flaps formed integral with the sides of the container and foldable over the first named flaps, one of the second named flaps having a tab foldable relative to the said flap, locking tongues hingedly connected to the ends of the said tab and foldable against the inner surface of the tab, another of the second named flaps having a slot adapted to receive the said tab when the tongues are folded against the inner surface of the tab to locate the tab and tongues between the first named flaps and the flap having the slot, the locking tongues biased by the material to move them to positions inclined to the plane of the tab to produce abutments along edges of the tongues and along edge parts of one of the edges of the slot to securely lock the parts together.

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