

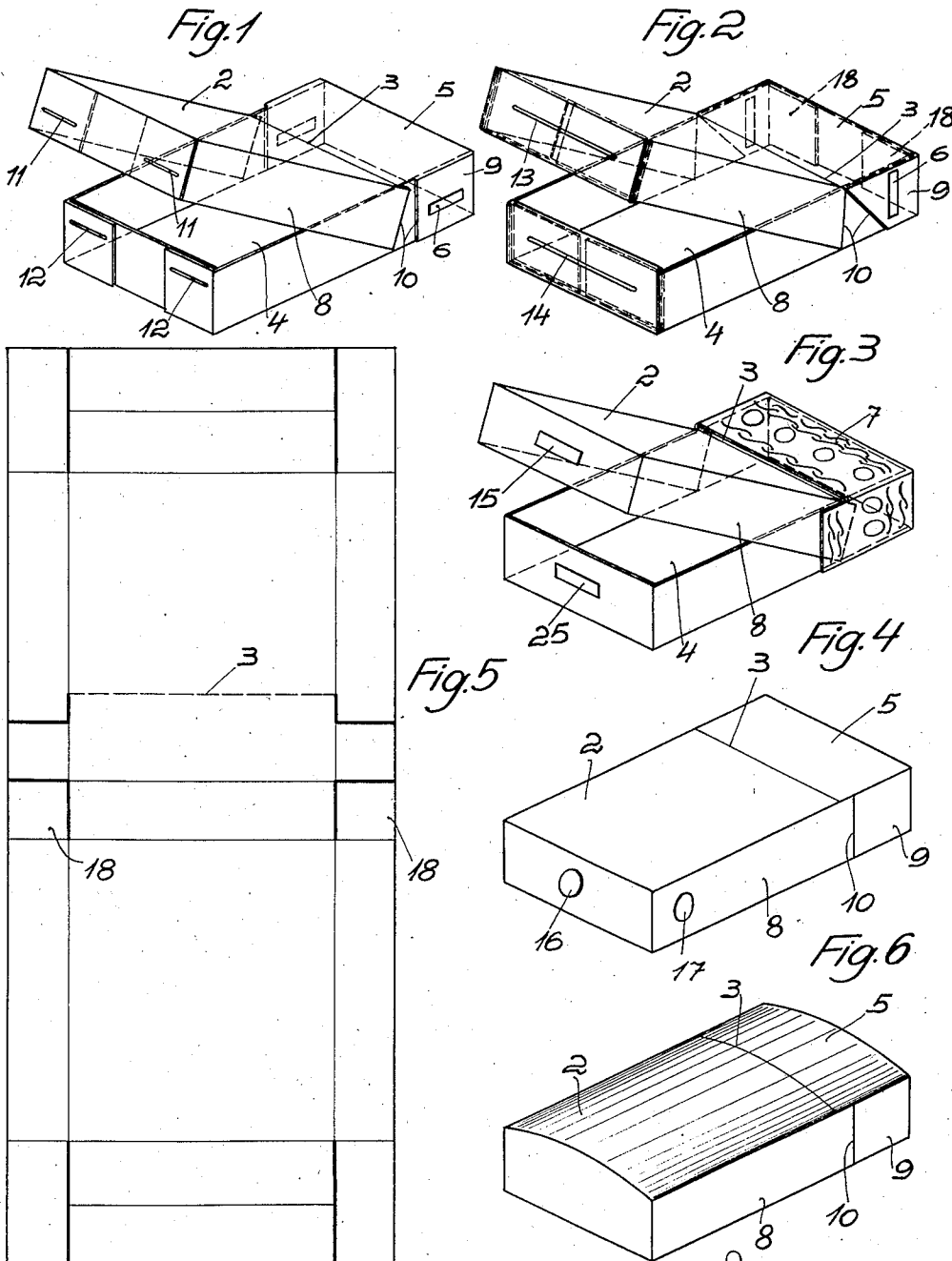
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CARDBOARD BOX AND THE LIKE

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CARDBOARD BOX AND THE LIKE

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My invention relates to improvements in boxes, and particularly to those made of a single piece of cardboard or the like, and having a trough-like or basin-shaped underpart open on the top side but permanently closed on all other sides even when the lid of the box is raised, and including a lid overlapping the underpart on all sides when the box is closed. In boxes of this kind, the contents of the box can be withdrawn only from above and after the lid has been raised.

According to my invention, I provide the lid of such a box with a hinge which subdivides the lid into two parts; a movable part and an immovable part, the latter being permanently fixed to the underpart of the box so as to permanently cover a portion of the interior of the box. Such a formation of the box has the advantage, compared with the known boxes having the entire lid movable, that not the whole interior of the box, but only a portion thereof will be exposed when the box is opened. Thus, the contents of the box are better prevented from falling out and those parts of the contents which are easily subjected to deterioration (like the heads of matches) can be better protected from moisture and other detrimental influences. Furthermore, the entire lid cannot so easily be torn off or damaged, as by careless usage. All these advantages are obtained without complicating the construction of the box and without raising the price of manufacture. The invention also facilitates the handling of boxes, because the box may easily be seized and held by its permanently closed portion with one hand without hindering the movable part of the lid from being raised or lowered.

In order that my invention may be the better understood, I will now describe it in relation to the accompanying drawing, reference being had to the letters and figures marked thereon, like numerals referring to like parts in the various figures in which:—

Figures 1 to 4 and Fig. 6 illustrate in perspective views various forms of boxes constructed according to my invention, and

Figure 5 illustrates a blank employed in making a box.

In these figures, Figs. 1 to 3 show the boxes with the movable part of the lid partly raised, while the boxes illustrated in Figs. 4 to 6 are closed. Fig. 6 shows a box having the lid surface cambered.

Referring first to Figs. 1-4 and 6, these figures show boxes according to my invention in the case of which the hinge 3 divides the lid into a movable part 2 which can be raised and a fixed part 5, which latter is permanently connected with the underpart 4 of the box, so that a part of the interior of the box is always covered by the lid. By this means, part of the contents, for instance, the heads of matches, are better protected from damage by external influences.

In order to increase the capacity for resistance of the hinge 3, this may be reinforced by a strip of material arranged thereon, which may be effected during the production of the box or subsequently, for instance, by simply pasting a reinforcing strip on same. This strip may at the same time serve other purposes also, and may, for instance, be formed as a closing band or a label or, alternatively, act as a base for igniting-materials, and the like.

The fixed part 5 of the lid is firmly fixed to the underpart of the box by any suitable means. This may be effected, for instance, by stitches 6 in its side surfaces, as indicated in Figs. 1 and 2, or alternatively, a sleeve or jacket 7 (Fig. 3) may be pushed over it to enclose the fixed portion 5 of the lid and the underpart 4 of the box, and the side surfaces may be so formed that they form or contain a guide for the side surfaces 8 of the movable part 2 of the lid; the sleeve 7 may also serve at the same time as a reinforcement of the hinge 3. In another mode of fixing the fixed part 5 of the lid, a stitching thread is wound round 5 and round the underpart of the box 4. The side surfaces 8 may be shaped in any manner desired, as also the side surfaces 9 of the fixed part of the lid; it is, however, of advantage to form them in such manner that they offer as good a guide as possible for the lid in rotating round its hinge. For this purpose, the surface 8 will be separated from the surface 9 only by the necessary in-

cision or cut 10, so that these surfaces are directly contiguous to one another when the box is closed. The guiding of the side flaps 8 of the movable part of the lid on the respective side walls of the underpart 4 is still further improved if the incisions 10 are arranged so as to run obliquely from the ends of the hinge line 3 towards the back of the box (Fig. 2), or not in one plane with the hinge 3 (Figs. 1, 4 and 6), the movable side surfaces 8 in both cases projecting towards the back wall of the box, as indicated in Figs. 1, 2 and 4.

Moreover, it is possible to fold the wings 18 so as to cover therewith the side surfaces 9 after having pasted them on the respective side walls of the underpart 4, whereupon the wings 18 may be pasted on the outside of the surfaces 9. In this case it is preferred to make the length of the side flaps 9 smaller than the length of the wings 18 so that the wings 18 extend beyond the cuts 10, the space between the projecting part of the wings and the side walls of the underpart 4 serving as a pocket-like guide to the side surfaces 8 of the lid during the raising and lowering of the lid and as a protection when the box is closed.

In order to render difficult or to prevent any undesired automatic opening of the closed box, the surfaces of the box may be cambered or curved in the longitudinal or transversal direction (see Fig. 6) or elevations, stitching threads, locking parts or the like may be arranged on the front and side surface of the lid and of the underpart, which come into contact with one another on closing the box and so make the opening of same difficult. For instance, in the case of the box shown in Fig. 1, the front surface of the movable part 2 of the lid is provided with stitching threads 11 and that of the underpart with stitching threads 12; these stitchings are so arranged that they overlap when the lid is closed to and that 12 is consequently higher than 11, whereby the closing of the box is ensured. The box shown in Fig. 2 is fastened by means of clamps 13 and 14, that shown in Fig. 3 shows a locking arrangement in which a projection 15 on the lid is in engagement with a resilient portion 25 of the underpart when the box is closed. In Fig. 4, which shows a closed box, two locking arrangements 16 and 17 are indicated, each one comprising a projection on the underpart which projects into an eye 17 on the movable part of the lid.

The walls of the box can be shaped as desired, and they may consist wholly or partly of one or more layers of material. The figures show various instances of forms of construction with walls of a number of layers. For the production of the boxes, it will be advantageous under certain circumstances if the layers of material of which the walls of

the box consist are so connected with one another that the entire box gives a complete rectangle when developed. Fig. 5 shows such a rectangular development of a box blank.

I claim:

1. A single-piece cardboard box having a rectangular, trough-like underpart with walls permanently enclosing the interior of the box like a frame also when the box is open and a lid overlapping said underpart on all sides when the box is closed, said lid being subdivided by a hinge into a movable part fixed to the underpart and permanently covering a portion of the interior of the box, the side flaps of the said movable part of the lid being separated from the corresponding side flaps of the immovable part of the lid by incisions running obliquely from the end of the said hinge towards the back wall of the box.

2. A single-piece cardboard box having a rectangular trough-like underpart with walls permanently enclosing the interior of the box like a frame also when the box is open and a lid overlapping said underpart on all sides when the box is closed, said lid being subdivided by a hinge into a movable part fixed to the underpart and permanently covering a portion of the interior of the box, the side flaps of the said movable part of the lid being separated from the corresponding side flaps of the immovable part of the lid by incisions arranged in a plane different from that of the said hinge.

3. A single-piece cardboard box having a rectangular trough-like underpart with walls permanently enclosing the interior of the box like a frame also when the box is open, and a lid overlapping said underpart on all sides when the box is closed, said lid being subdivided by a hinge into a movable part and an immovable part fixed to the underpart and permanently covering a portion of the interior of the box, the lid surface which is subdivided by the hinge being cambered and the said hinge line being curved when the box is closed.

4. A single-piece cardboard box having a rectangular trough-like underpart with walls permanently enclosing the interior of the box like a frame when the box is open and a lid overlapping said underpart on all sides when the box is closed, said lid being subdivided by a hinge into a movable part and an immovable part fixed to the underpart and permanently covering a portion of the interior of the box, and guide means for the side flaps of the said movable part of the lid, said means comprising a sleeve enclosing the immovable part of the lid together with the underpart fixed thereto.

5. A single-piece cardboard box having a rectangular, trough-like underpart with walls permanently enclosing the interior of the box like a frame also when the box is open and

a lid overlapping said underpart on all sides when the box is closed, said lid being subdivided by a hinge into a movable part and an immovable part fixed to the underpart and
5 permanently covering a portion of the interior of the box, and intermediate flaps covering the side flaps of the immovable part of the lid and extending beyond the cuts separating these side flaps from the side flaps of
10 the movable part, so as to form pocket-like spaces with the side walls of the underpart, said spaces being adapted to guide the said side flaps of the movable part during the raising and lowering of the lid.

15 In testimony whereof I affix my signature.
VIKTOR CZERWENY.

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