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3,301,461

FILE CASES

Filed Aug. 28, 1963

2 Sheets-Sheet 1

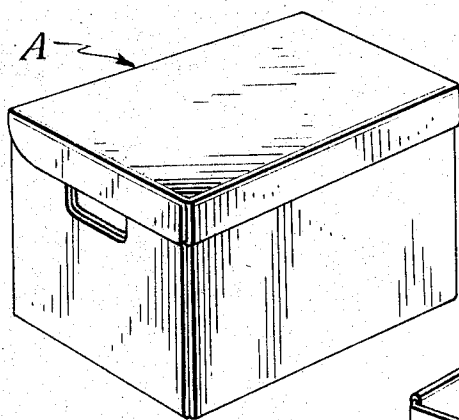


FIG. 1

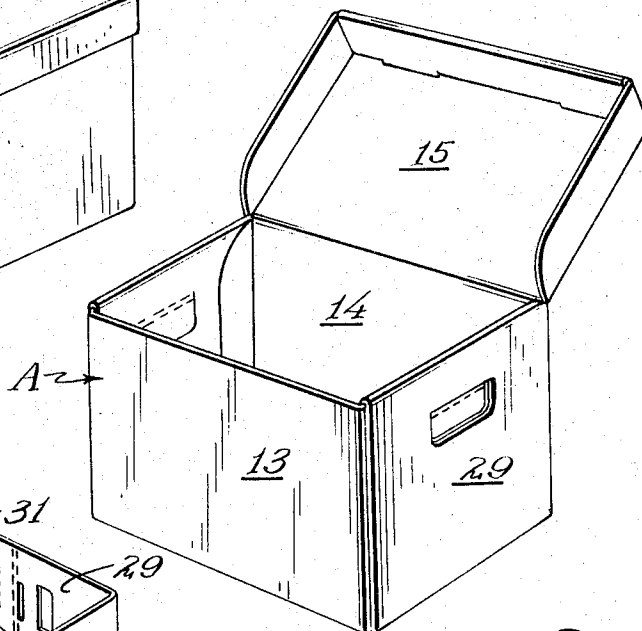


FIG. 2

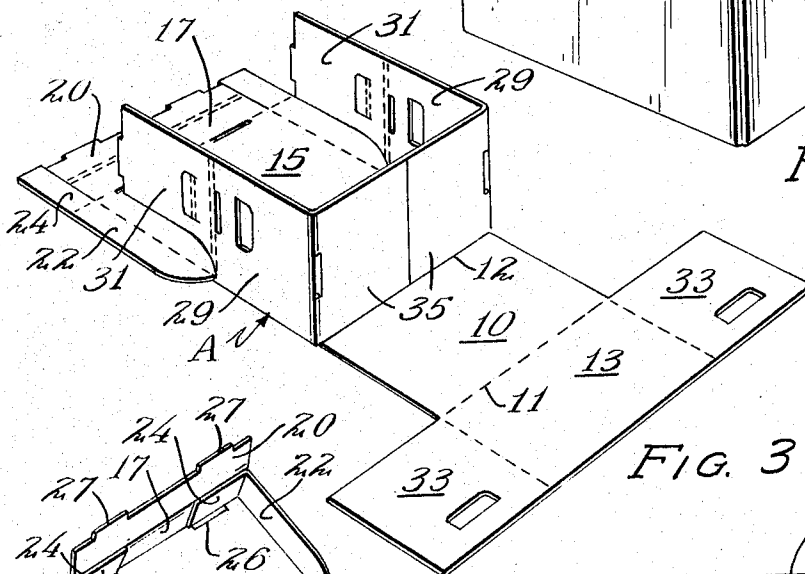


FIG. 3

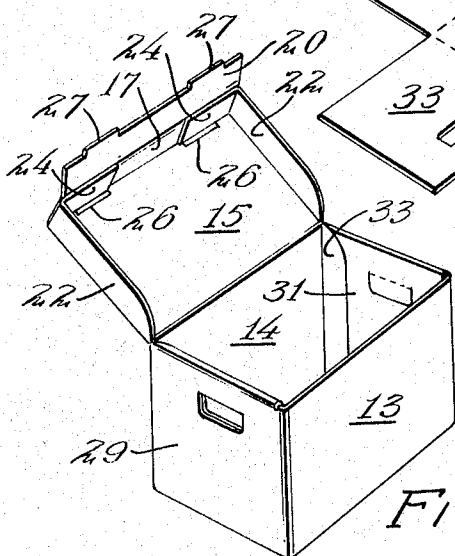


FIG. 6

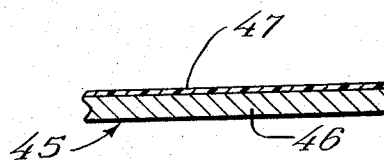


FIG. 7

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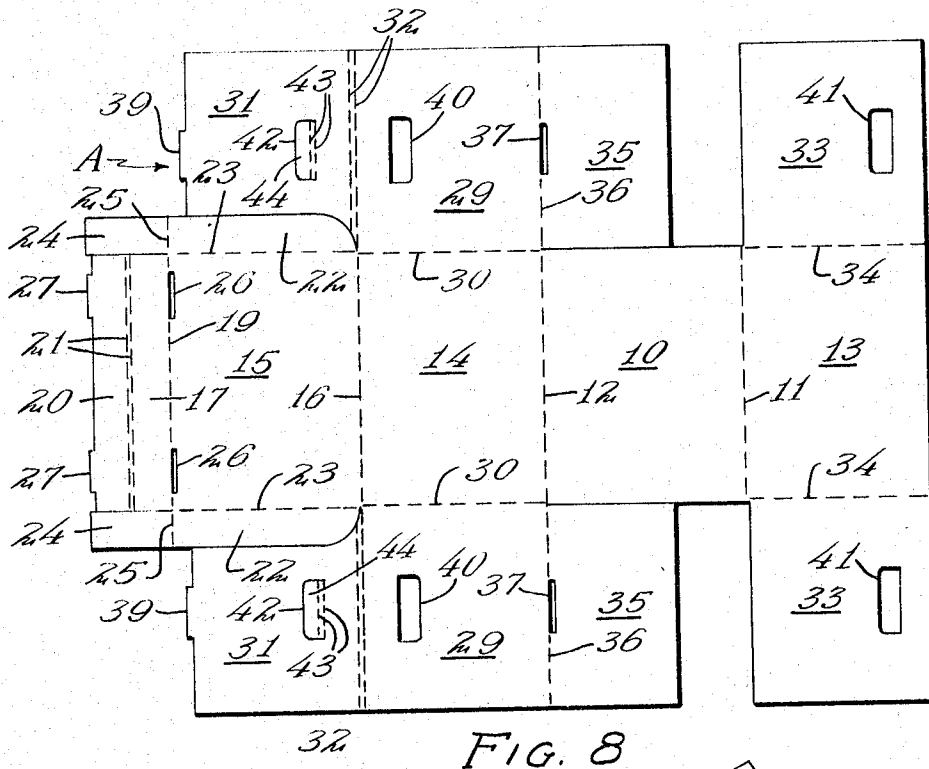


FIG. 8

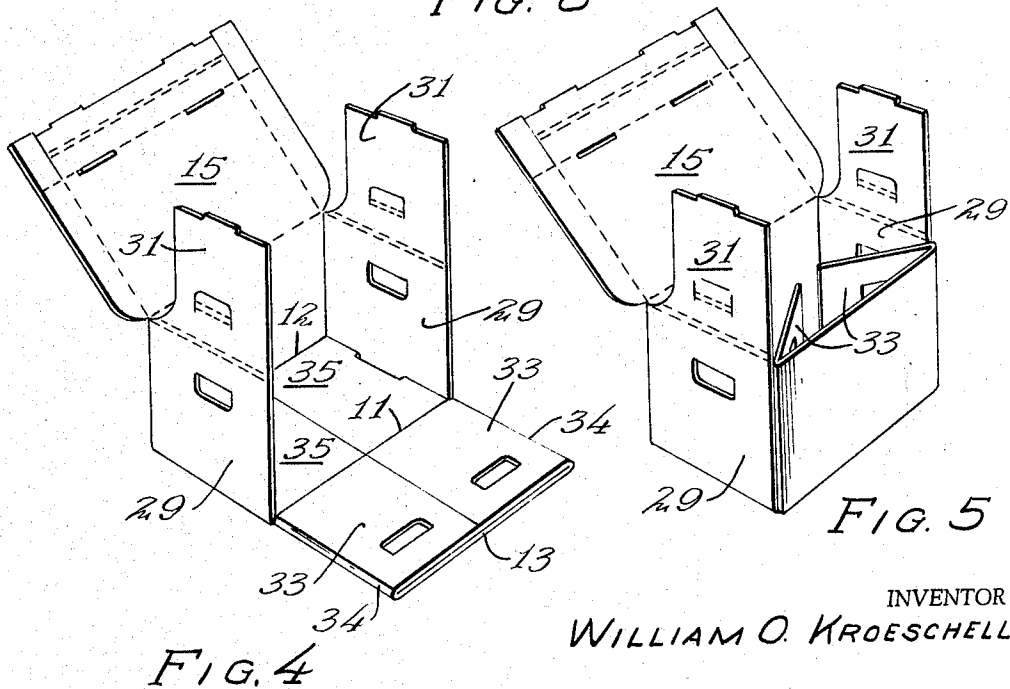


FIG. 4

FIG. 5

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1

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FILE CASES

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5 Claims. (Cl. 229—16)

This invention relates to an improvement in file cases and deals particularly with a container used for the storage of papers and which is relatively light proof for assistance in preserving the papers stored.

Various types of cases had been made of paperboard for the storage of letter files and other papers, which must be saved for long periods of time. While sheet metal file cabinets may be effectively used for this purpose, such cabinets are also expensive and are also relatively heavy. The main advantages of metal cabinets over paperboard file containers lies in the fact that metal cabinets are relatively lightproof and the papers stored do not have as much of a tendency to fade and discolor as those contained in paperboard containers. It is an object of the present invention to provide a paperboard container, which, when closed, is relatively lightproof and is accordingly capable of storing papers over longer periods of time without deleterious effects on the papers stored.

A feature of the present invention resides in the production of file cases made of corrugated paperboard having one or both of the liners bearing a coating such as polyethylene containing silver metallic particles. One such coating is known as Tenite Polyethylene E2085-1DE Silver Metallic produced by Eastman Chemical Products, Inc. Another such material is the Tenite Polyethylene E2036-063BE Silver Metallic. When the liner, which is usually about nine thousandths of an inch in thickness is coated with a plastic coating of the type described in a thickness of about 1/2 mil and the coated liner used in the formation of the corrugated board, the ability of the light rays to penetrate the board is greatly reduced, thereby materially increasing the effectiveness of the containers for containing papers.

A further feature of the present invention resides in applying a coating of the plastic film such as polyethylene embodying metallic silver as a pigment to reduce the passage of light through the paperboard into a file storage container and the like.

These and other objects and novel features of the present invention will be more clearly and fully set forth in the following specifications and claims.

In the drawings, forming a part of the specifications:

FIGURE 1 is a perspective view of the file case in folded form.

FIGURE 2 is a perspective view of a filing cabinet with the cover thereof open.

FIGURE 3 is a perspective view of the blank in partially set-up form.

FIGURE 4 is a view similar to FIGURE 3 showing a later step in the folding operation.

FIGURE 5 is a view similar to 3 and 4 showing a later stage in the setting-up operation.

FIGURE 6 is a perspective view of the almost set-up form of case.

FIGURE 7 is a greatly enlarged sectional view showing the coating in place upon the paperboard.

FIGURE 8 is a diagrammatic view of the blank from which the filing case is formed.

The drawings illustrate one type of file storage case which has been produced in considerable volume. Obviously, other forms of cases can be used as long as the case is free of cracks through which light may pass. In the form of container illustrated, which is indicated in

2

general by the letter A, the container includes a bottom panel 10 hingedly connected along parallel fold lines 11 and 12 to a front wall panel 13 and a rear wall panel 14, respectively. A cover panel 15, which is approximately the same size as the bottom panel 10, is hinged to the rear wall panel 14 along a fold line 16 parallel to the fold lines previously described. A cover front flange 17 is hinged to the forward edge of the cover panel 15 along a fold line 19. A front flange liner flange 20 is hinged to the front flange 17 along a wide score or pair of mostly spaced scores 21.

Cover side flanges 22 are foldably connected to the cover panel 15 along parallel fold lines 23 which intersect the previously described fold lines at right angles. Corner flaps 24 are foldably connected to the forward ends of the side flanges 22 along fold lines 25 which are extensions of the fold line 19. The cover panel 15 is provided with a pair of narrow slots 26 along the fold line 19, and the front cover flap lining flange 20 is provided with a pair of locking tongues 27 designed to fill the slots 26 when the case is set up, and will be later described.

The end walls of the container are formed of three thicknesses of board to increase the stacking strength of the container A. Outer end wall panels 29 are hinged to the rear wall panel 14 along parallel fold lines 30. End wall lining panels 31 are foldably connected to the upper edges of the end wall panels 29 along double score lines 32 which are generally aligned with the fold line 16. As will be seen, the lining panels 31 are the full height of the outer end wall 29, but these panels 31 are notched along their rear edges because of the cover side flanges 22 which are cut from this portion of the blank. Intermediate end wall panels 33 are foldably connected to the ends of the front wall panel 13 along parallel fold lines 34 which are generally aligned with the fold lines 30 connecting the outer end walls 29 to the rear panel 14. While certain of the fold lines have been described as being aligned, it should be understood that the fold lines may be offset sufficiently to take care of the thickness of the paperboard.

Bottom liner panels 35 are hingedly connected to the lower edges of the outer end wall panels 29 along aligned fold 36 which are generally extensions of the fold line 12 of the blank. Slots 37 are provided in each bottom liner panel 35 extending along the fold lines 36. The end wall liner panels 31 are provided with locking tongues 39 of approximately the same length as the slots 37. The outer end wall panels 29 and the intermediate end wall panels 33 are provided hand openings 40 and 41 which are in registry when the case is set-up. The end wall liner panels 31 are provided with U-shaped cut lines 42 which generally register with the apertures 40 and 41 when the case is set-up. Double fold lines 43 connect the ends of the U-shaped cut lines to provide flaps 44 which may be folded inwardly if desired for lifting the case, but which otherwise close the hand hold openings.

One convenient way of erecting the flat blank into a completed container is to fold the outer end wall panel 29 and inner wall panel 31 upwardly into right angular relation to the remainder of the blank, and folding the bottom liner panels 35 into a common plane as indicated in FIGURE 3 of the drawings. The blank is then folded along the fold line 12 so as to swing the bottom liner panels 35 down into face contact with the bottom 10 as indicated in FIGURE 4 of the drawings. As is also indicated in the drawings, the end wall intermediate panel 33 may be folded along the fold lines 34 to overlie the front wall 13, and this structure is then swung upwardly along the fold line 11 and the end wall intermediate panels 33 are swung outwardly against the outer end wall panels 29. It is only necessary to swing the intermediate panels

3

33 upwardly into right angular relation with the front wall 13, but these panels are usually folded inwardly to prebreak the scores or fold lines 34. FIGURE 5 of the drawings indicate the manner in which the intermediate panels are swung outwardly against the outer end walls 29.

After the end wall intermediate panels 33 are in face contact with the outer end wall 29, the inner end wall panels 31 are swung inwardly and downwardly to line the end wall structure as indicated in FIGURE 6. The cover is then formed by folding the cover front flange 17 and the cover side wall flanges 22 into right angular relation to the cover panel 15, and folding the corner flaps 24 to lie inwardly of the cover flange 17. To complete the operation, the cover front flange lining flange 20 is swung inwardly and downwardly, the tongues 27 on the flange engaging in the slots 26 to fill the slot and to lock the cover in assembled position as shown in FIGURE 2.

The containers A are preferably made of corrugated paperboard, which include an outer liner, and inner liner, and a corrugated medium adhered therebetween. One or both of these liners, shown in greatly exaggerated size in FIGURE 7 of the drawings and indicated by numeral 45 includes a sheet 46 of paperboard upon which has been extruded a relatively thin coating 47 of silver pigmented plastic material. One such material is made by the Eastman Chemical Products, Inc., and is commercially known as Tenite Polyethylene E2085-1BE Silver Metallic, and another also commercially produced by the same company is known as Tenite Polyethylene E2036-063BE Silver Metallic. The liner sheets are usually about nine-thousandths of an inch in thickness, while the coating may be of a thickness of 1/2 mil or thicker. Even a thinner film is capable of reducing the transmission of light but a film of the thickness described, or a thicker film, is preferable.

In order to test the effectiveness, samples of paperboard were dyed with methyl until a dark violet color was obtained. Certain samples of the board were then covered with a clear polyethylene film, and others were covered with a silver polyethylene film. Others of the samples remained uncovered. These samples were placed in an Atlas Fade-Ometer for a period of 12 hours. The Fade-Ometer is a product of the Atlas Electric Devices Company in Chicago, Illinois, and includes an enclosed high intensity arc light capable of directing light through the samples arranged at equal distances therefrom. After a period of 12 hours, the uncovered board, as well as the board covered with clear polyethylene showed very noticeable faded areas. There was no marked difference between the degree of fading of the uncovered board and the board covered with clear polyethylene, although the board covered with clear polyethylene seemed to fade slightly more than the uncovered board. In contrast the board covered with 1/2 mil film of the silver polyethylene film fades so little that the samples had to be carefully

4

examined to note the areas exposed to the intense light. Thus the resulting containers made of corrugated paperboard using Metallic Silver Polyethylene are much less penetrable to light than the uncoated board or to board coated with a clear film. Other similar films such as polypropylene containing metallic silver particles may also be used. However, polyethylene has been adopted in practice because of its lower cost.

In accordance with the patent statutes an attempt has been made to describe the principles of construction and operation of the improvement in file cases, and while it has been endeavored to set forth the best embodiment thereof, it should be understood that changes may be made within the scope of the following claims without departing from the spirit of the invention.

I claim:

1. A file container for use in storing papers, the container comprising a non-opaque closable container body, a continuous film of pigment of plastic incorporating silver metallic particles on said body, whereby said container is relatively lightproof.

2. A file container for use in storing papers, the container including a closable container body of non-opaque corrugated paperboard having a pair of parallel liners connected by a corrugated medium, at least one said liner comprising a paper base sheet and a coating of plastic film incorporating silver metallic particles.

3. The structure of claim 2 and in which the paper base sheet is of about 0.009 inch in thickness and the plastic film is relatively thin and of at least about 0.0005 inch in thickness.

4. The structure of claim 2 and in which said container body comprises an open topped portion having a cover hinged to one wall thereof and foldable into telescoping relation to said open topped portion.

5. The structure of claim 2 and in which said container body comprises an open-topped portion having a cover panel hinged to one wall thereof, and cover flanges secured to the unhinged edges of said cover panel and overlapping the container walls in closed position of the cover.

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