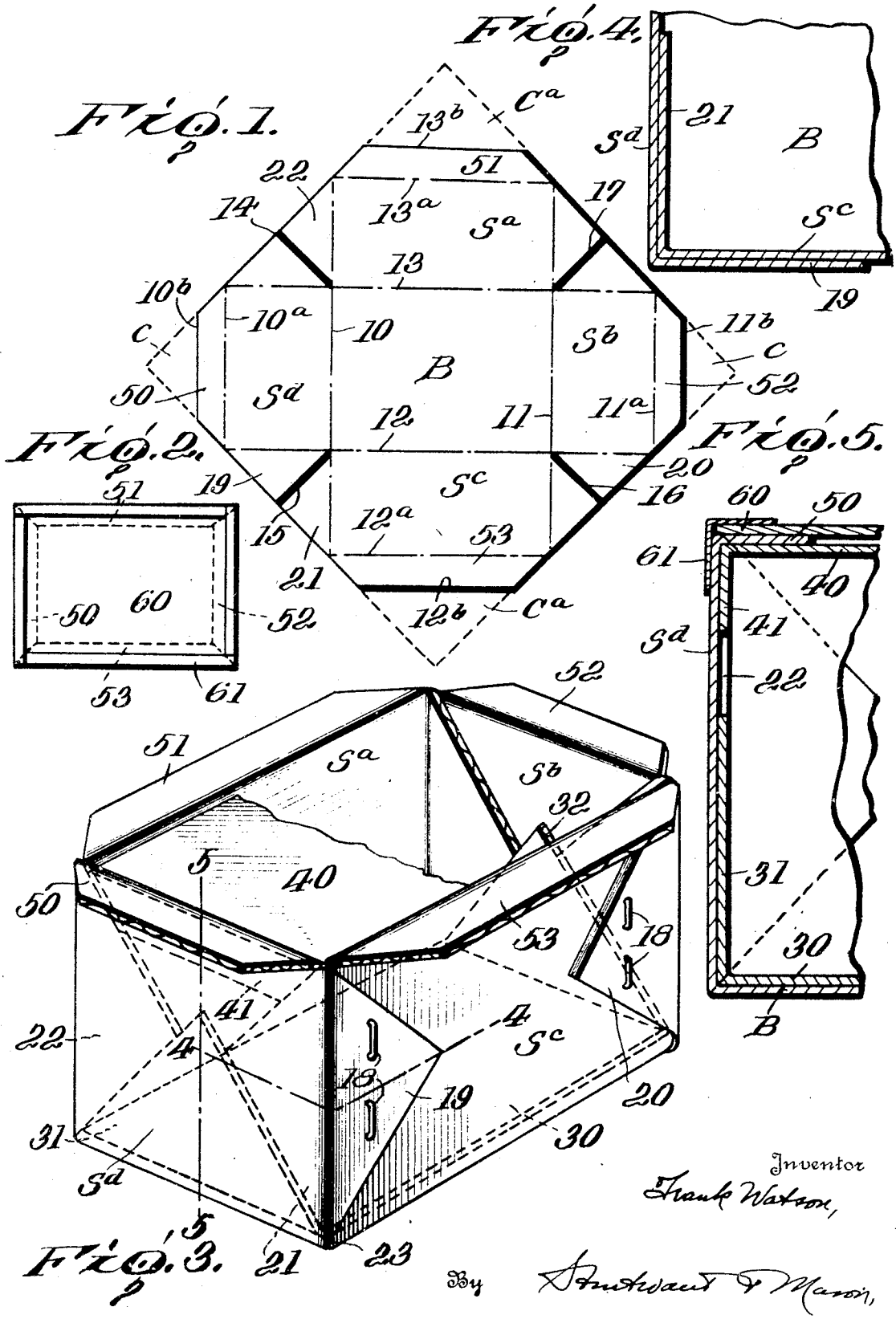
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CANNED GOODS CONTAINER

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FRANK WATSON, OF BALTIMORE, MARYLAND, ASSIGNOR TO THE LAFAYETTE COMPANY, INC., OF BALTIMORE, MARYLAND, A CORPORATION OF MARYLAND

CANNED GOODS CONTAINER

Application filed September 20, 1927. Serial No. 220,733.

This invention relates to improvements in fibre containers, and more particularly to shipping containers which are to be sealed when filled.

It has heretofore been proposed to construct such containers in many ways: and to form them both of solid fibre and corrugated fibre, and to make them from blanks of various forms. The present invention proposes certain improvements in such containers, of the general type shown in the copending application Ser. No. 115,621 filed by Herbert R. Stubbs and myself on June 12, 1926, in which a blank is scored for fold lines obliquely to the edges of the blank sheet, so that the bottom and sides are formed integrally together and the sides have flaps adjacent the corners of the original blank which are folded over to form all or a portion of the top.

The present container is strong, light and cheaply made: it particularly has reinforced corners which make these portions not only of equal strength but of greater strength than the sides of the container in their resistance to superimposed loads: and it is possible to close the container tightly, even to exclusion of air, by the use of a single strip of sealing paper or like material.

The container is adapted for packing all types of material, either in bulk, in individual separate containers, or in such form that it must be protected against crushing. For example, the present container may be employed for packing bulk cereals: for packing hats etc. or canned goods: or for packing crackers: it being understood that these are merely illustrative of the many and wide uses of the article.

In the accompanying drawings:

Figure 1 is a plan view of the blank from which the body of the container is formed.

Fig. 2 is a view on the same scale, showing a plan of the top of the container when closed.

Fig. 3 is a perspective view on a larger scale, with the cover proper removed: but illustrating the relationship of the several parts of the body and fillers.

Fig. 4 is a detail section substantially on the line 4—4 indicated in Fig. 3.

Fig. 5 is a further section substantially on line 5—5 of Fig. 3.

In this illustrated form, the container is shown as formed of five parts: but it will be understood that one or more of these parts may be dispensed with for a particular purpose. These parts comprise (1) in the illustrated form an originally square blank which has been cut and scored, (2) a bottom filler, (3) a top filler, (4) a cover and (5) a paper sealing tape.

On the accompanying drawings, the blank in Fig. 1 is illustrated as being originally a square sheet of solid fibre or corrugated material, and is traversed by scoring lines which form fold lines during the assembly of the container. These scoring lines are run obliquely to the edges of the sheet, and are arranged in two groups at right angles one to another.

The scoring lines 10, 11 and 12, 13 intersect each other to provide a rectangular bottom B: while the scoring lines 10*a*, 11*a* and 12*a*, 13*a* are respectively parallel to the lines 10—13, and are spaced therefrom by a distance substantially equal to the depth of the container to be made. It will be noted that in the illustrated form these inner lines intersect the outer lines at the edge of the blank.

The corners C, C and C*a*, C*a* are cut away at 10*b*, 11*b* and 12*b*, 13*b*, which are respectively parallel to the lines 10, 11 and 12, 13, and spaced therefrom preferably at equal respective distances. Along each side of the original blank is formed a gash 14, 15, 16, and 17, which extends from the edge of the blank inward to the adjacent junction of the inner scoring lines 10, 11, 12 and 13. In the illustrated form, these gashes are at right angles to the respective edges, and since the several scoring lines are illustrated as being at 45° to the edges; between the respective scoring lines and the respective gashes are triangles having each 45° angles.

This blank is folded to form the body as in Fig. 3, which, by folding of the sides S*a*, S*b*, S*c* and S*d* defines the base B as shown in Fig. 3, the tabs of two of the sides S*d* and S*b* being turned outside of the sides S*a* and S*c*, while the tabs of the sides S*a* and S*c* are turned

about the inside of the sides S*b* and S*c*; these tabs are folded down into contact and parallelism with the respective adjacent sides, and are secured thereto by suitable means such as gluing or stapling, illustrated in Fig. 3 by the staples 18, it being understood that it is preferred to employ both means, and that cementing is used particularly where it is desired to obtain an air-tight closure.

From Fig. 3 it will be noted that by the aforesaid folding of the blank to form the body of the box, and the securing of the triangular tabs such as 19, 20 of the blank to Fig. 1 to the outside of the side wall S*c* and the securing of the triangular tabs such as 21, 22 to the inside of the wall S*d*, the vertical edges of the wall are closed and sealed against admission of air. The body thus assembled appears substantially as shown in Fig. 3.

A bottom filler member 31 which is substantially of the area of the bottom of the container and is provided with the upturned triangular flaps 31, 32, and is preferably of fibrous material having a sufficient resiliency upon folding to tend to regain its plane condition, is then forced down into the container, until it is close against the bottom, and the respective flaps 31, 33 move and are held by their own resiliency against the side walls S*d* and S*b*; and by virtue of the upward inclination of the lower edges of the flaps such as 21 and 22, this filler member completes the double walls of the container at S*d* and S*b*, it being preferred to have the apex of the flaps 31, 32 extend above the mid-height of the container.

A top filler comprising a body 40 having a downturned trapezoidal flap 41 at each end is provided. After the container has been filled, the downwardly extended ends or flanges 41 are pushed down inside of the container until their inclined ends rest against and are supported by the inclined upper edges of the tabs such as 21, 22, and the top filler is thereby prevented from further downward movement.

The trapezoidal cover flaps 50, 51, 52, 53 defined between the edges of the blank and the scoring and cutting lines 10*a* and 10*b*, etc., are then folded over onto the top filler 40, and may be sealed in position on this filler. It will be noted that the ends of these trapezoidal cover flaps, representing the sides of the original blank, abut against each other in such folded position, and mutually stiffen each other and support the top of the container against diagonal crushing: and this effect is independent of but may be increased by the cementing to the top filler 40.

It is then preferred to place a cover member 60, which is a simple rectangular sheet (Fig. 2), over the inturned cover flaps 50, 51, 52, 53, to effect a tight closure of the container. This cover member may be cemented to the flaps 50, 51, 52, 53: but it is preferred to hold it in position and at the same time establish a very tight seal by gluing a paper tape 61 around the four edges of the top, overlapping both the cover member 60 and the respective sides S*a*, S*b*, S*c*, S*d* of the container. It is found that this arrangement provides a very satisfactory closure for employment with crackers or other articles from which moist air must be excluded.

When the present container is to be employed for packing such articles as hats or the like, in which it is necessary to prevent crushing by superimposed weights, the top and bottom fillers may be omitted and the closure perfected by other means: and then the containers may be stacked without danger of crushing, since the overlapping relationship of the flaps 19, 20, etc., at the corners makes the box very strong and rigid against superimposed loads: while the abutting relationship of the flaps 50, 51, etc., prevents warping or twisting under diagonal pressures. It will be particularly noted that the overlapping relationship, inside and out, of the respective tabs, greatly strengthens the side walls against even direct pressures.

When the containers are used for canned goods or the like, top and bottom fillers are usually provided, and it will particularly be noted that the projecting rims at the tops and bottoms of cans at the periphery of the bottom row will rest against plane walls throughout, i. e., against the straight sides S*a* and S*c*, and against the triangular upturned flanges 31, 32 of the bottom filler and the inturned tabs 21, 22, etc., fastened inside of the sides S*b* and S*d*. The upper row of cans will likewise have their projecting bottom flanges resting against plane surfaces, while the upper projecting flanges will rest against the sides S*a* and S*c*, and against the downwardly turned flanges 41 of the top filler 40. In this way, the cans may be securely held and prevented from any movement into unfilled pockets at the sides of the container.

When the container is used for holding crackers, for example, the doubled walls add greatly to its strength, and particularly the provision of the double top and bottom walls permits stacking the containers to a considerable height without the use of racks or shelving to separate them.

It is apparent that the container is not limited to any specific, nor even to the form of execution shown, but that it may be modified in many ways within the scope of the appended claims.

What is claimed as new is:

1. In a fibre container a body formed with a bottom and side walls, each side wall having a tab overlapping and reinforcing the adjacent side wall, the tabs of two opposite side walls being inside the respective adjacent side walls, said tabs having their upper edges in-

clined downward toward the center of the respective side, and a closure member to close the top of the body, said closure member having downturned flanges parallel to opposite side walls of the body with inclined edges to rest upon the inturned tabs so that the closure member is supported independently of the contents of the container.

2. A fibre container as in claim 1, in which the closure member is of fibre material whose inherent resilience forces the said flanges outward against the side walls of the body.

3. A fibre container as in claim 1, in which flaps are provided on the tops of the side walls to fold down onto the closure member, and means to secure the flaps and member together to maintain the container sealed.

4. In a fibre container, an open body formed from an originally square blank of thick self-supporting material having fold lines thereon extending diagonally to the edges, said fold lines being in groups at right angles to each other to define an oblong rectangular bottom and rectangular integral side walls at the edges of the bottom, said side walls having tabs thereon formed by gashes extending inward from the edges of the blank to the corners of the bottom, said tabs being substantially identical in size, the tabs of two opposite side walls extending in parallelism with and being secured to the inner faces of the other side walls to strengthen the same, the remaining tabs being fastened to the outer faces of said first side walls to strengthen the same, said first tabs being spaced apart and having their lower edges inclining upwardly, and a filler having a bottom resting on the body bottom and having upwardly extending end flanges with inclined edges, said flanges fitting against the said other side walls and filling the gap between said tabs to above the mid-height of the container.

5. In a fibre container, a body formed from a blank comprising an originally square sheet of fibre material having fold lines thereon extending diagonally to the edges, said fold lines being in groups at right angles to each other to define a rectangular bottom and rectangular integral sides at the edges of the bottom, the corners of the blank being cut away to provide trapezoidal cover flaps, a top filler in said body, said cover flaps being folded over onto said top filler in a single plane with the individual flaps abutting at their edges one against another, and a cover sheet of substantially the size of the top of the container located on said cover flaps and secured thereto, said cover flaps holding said cover sheet spaced from said top filler.

6. A fibre container, a body formed from a blank comprising an originally square sheet of fibre material having fold lines thereon extending diagonally to the edges, said fold lines being in groups at right angles to each other to define a rectangular bottom and rectangular integral sides at the edges of the bottom, the corners of the blank being cut away to provide trapezoidal cover flaps, a top filler in said body, said cover flaps being folded over onto said top filler in a single plane with the individual flaps abutting at their edges one against another, a cover sheet of substantially the size of the top of the container located on said cover flaps and secured thereto, said cover flaps holding said cover sheet, and a paper strip cemented to said cover sheet at its edges and having a downwardly folded portion cemented to the side walls of the container whereby to provide a substantially airtight top closure.

In testimony whereof, I affix my signature.

FRANK WATSON.