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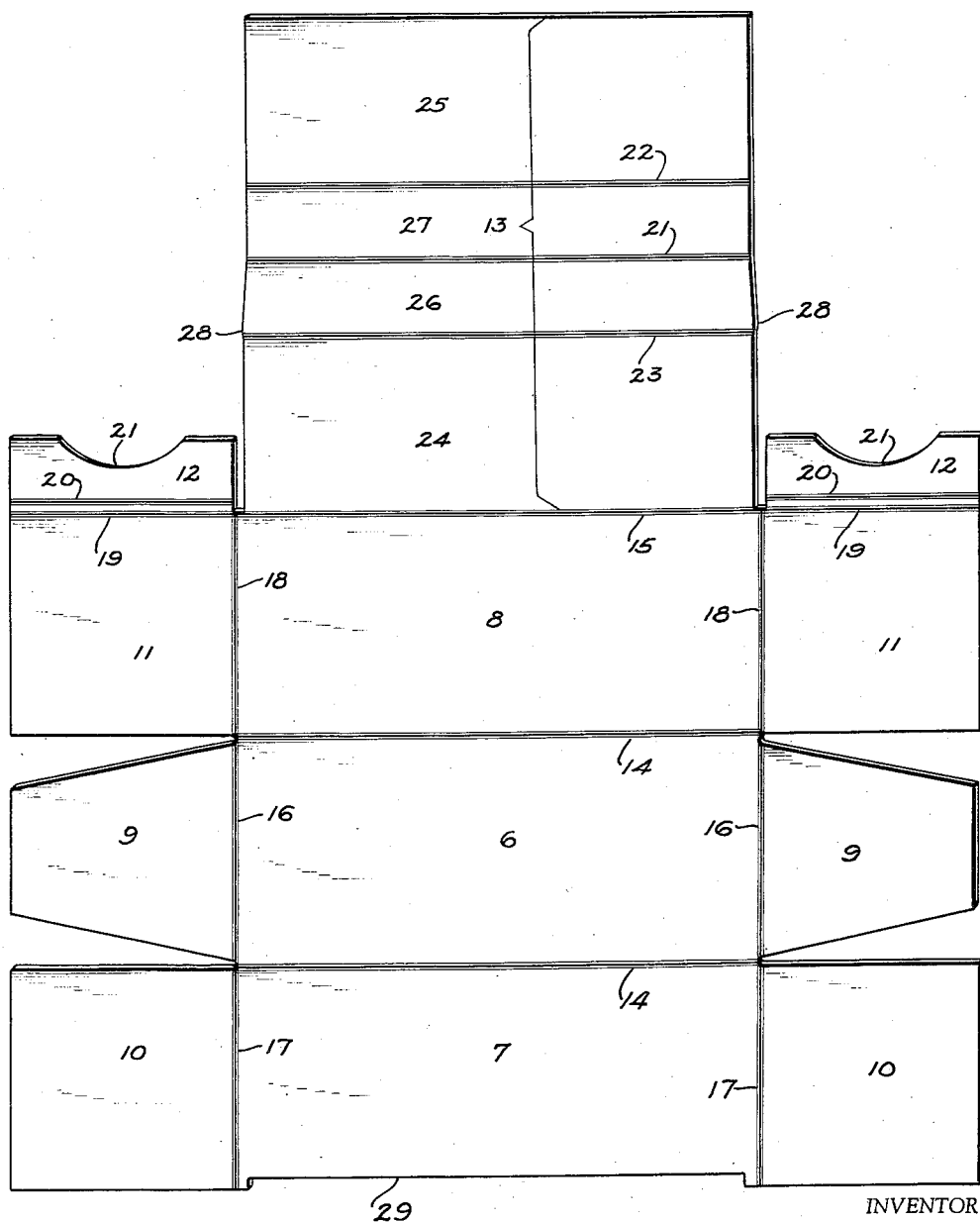
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DISPENSING CARTON FOR ROLLED SHEET MATERIAL

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3 Sheets-Sheet 1

Fig. 1



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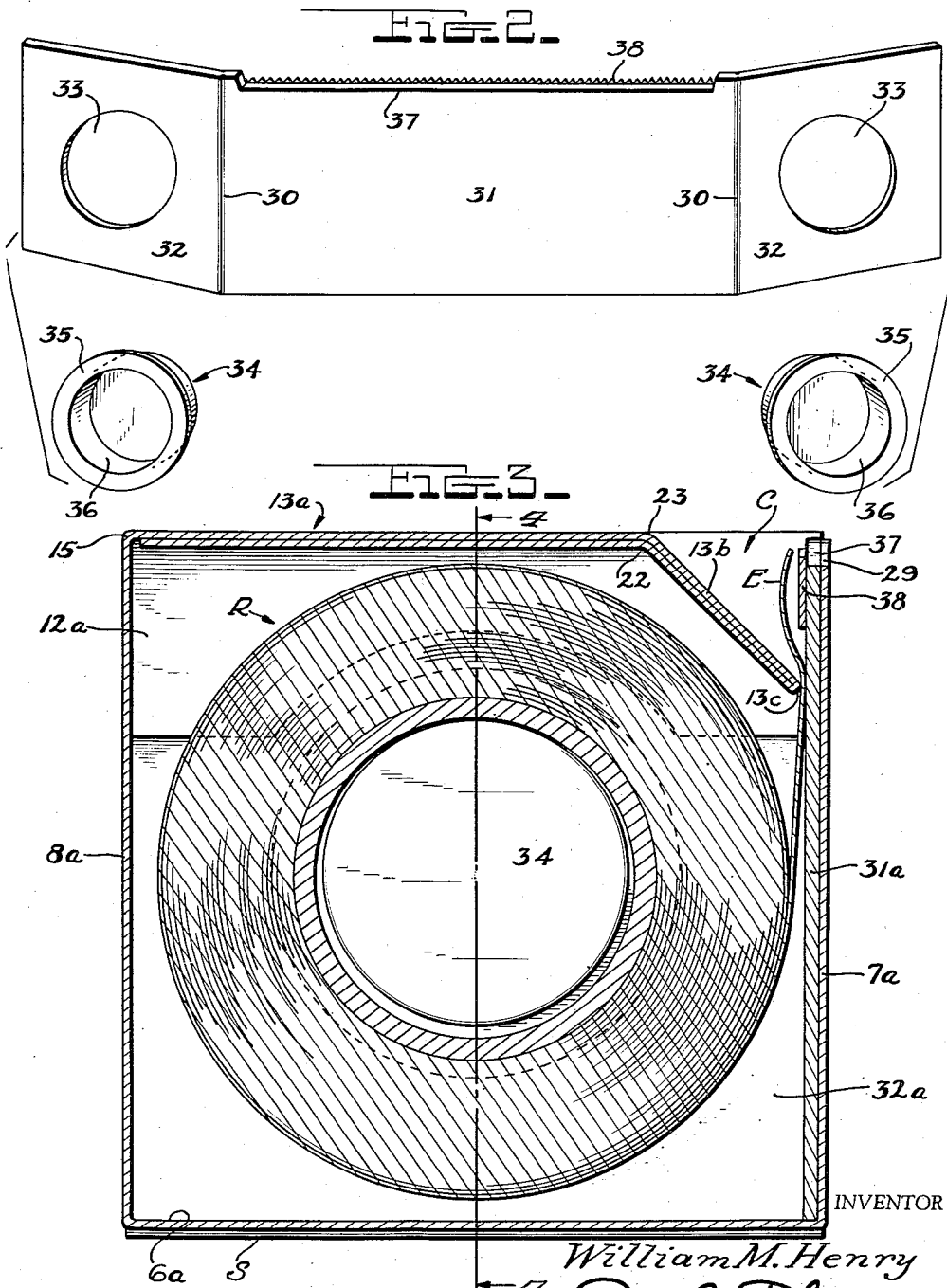
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1

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DISPENSING CARTON FOR ROLLED SHEET MATERIAL

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5 Claims. (Cl. 206—58)

The present invention relates broadly to containers, and in its specific phases to a carton for rolled sheet material, said carton being adapted to support said rolled material from its ends and to facilitate dispensing same while thus supported.

Small rolls containing a few feet of waxed paper, transparent plastic, metal foil and the like, for home use, have long been available in small dispensing cartons upon the bottoms of which the rolls rest. The home and commercial consumption of such rolled sheet materials has so increased that it has become advisable to market them in much larger rolls. However, if such large rolls are laid on their side upon the bottoms of cartons or other horizontal supports, pressure-sealing of the convolutions of the wound materials, particularly of the plastic and wax types, frequently occurs due to the weight of the rolls, and even without pressure-sealing, friction between the side of the roll and the bottom of the carton has a somewhat similar effect in preventing unrolling without difficulty, and frequently results in tearing the rolled material. Therefore, although much less convenient, it has heretofore been customary to place the large or "jumbo" rolls upon end. It was a recognition of this problem and the lack of any completely satisfactory solution to same which led to the conception and development of the present invention.

Accordingly among the objects of the present invention is the provision of a new and improved dispensing carton which makes it possible to satisfactorily market the larger rolls of sheet material in horizontal position, while eliminating side friction on the roll and with no danger of the convolutions thereof becoming pressure-sealed together, thus greatly facilitating unrolling and tearing off of such material as required.

In attaining the desired end, it becomes imperative to provide bearing stubs at the ends of the carton upon which to support the relatively large and heavy roll free from friction on the carton bottom. In so doing, a further object of the invention has been to provide a novel end construction for the carton adequately strong to carry the required load, without the necessity of manufacturing the entire carton from very thick and stiff material. To attain this end, a carton has been provided having plurality end walls, the plies of which are of the same thickness as the carton bottom, front wall, and back wall, and novel end-reinforcing members have been provided and which are substantially coextensive with said plurality end walls and which members carry the bearing stubs.

A further object has been to provide the outer plies of the carton end walls with novel flaps which are folded inwardly over the upper edges of the other plies and are then folded downwardly and secured against the inner sides of the end-reinforcing members to aid in rigidly securing said end walls and said end-reinforcing members together.

Another object has been to provide each bearing stub in the form of a cup or sleeve which, for instance, may be formed from plastic or stamped metal, and which has

2

an annular peripheral flange at one end of its side wall, the cup or sleeve being snugly inserted into a suitable opening in the corresponding end-reinforcing member and having its flange confined between this member and the carton end wall.

Still another object has been to provide a novel front-reinforcing member for the carton, the ends of this member being integral with the front edges of the end-reinforcing members, thus anchoring and bracing the latter against warping while stiffening the whole carton.

Yet another object has been to utilize the front-reinforcing member as a support for the usual serrated blade commonly used to facilitate tearing of the sheet material when unrolled to any required extent.

A still further object has been to provide a novel cover joined to the top of the carton back wall and having a forwardly declined front edge portion which is biased toward the inner side of the carton front wall below its upper edge to frictionally grip the sheet material as it is withdrawn between the front edge of said forwardly declined cover portion and said front wall, thus holding the material in convenient readiness for the next unrolling operation.

Yet another object has been to dispose the forwardly declined portion of the cover at a widely obtuse angle to the major portion of said cover, to thereby provide for holding and supporting the sheet material against the front wall of the carton with greater pressure than if a less obtuse angle were employed. This construction also permits the forwardly declined cover portion and the adjacent portion of the carton front wall to coact in forming a carton top channel adequately large to receive a person's fingers, thus facilitating gripping of the free end of the rolled material for withdrawal.

A still further object has been to provide a novel twoply construction for the cover to increase its stiffness and resilience, and thereby exert greater holding pressure against the free end of the rolled material so as to avoid accidental rerolling of same after a strip of the rolled stock has been torn off.

Yet another object has been to provide a simple, and relatively inexpensive container construction permitting rapid and easy manufacture from two blanks and two bearing stub members.

Still further objects and advantages of the invention will appear as the description proceeds.

To the accomplishment of the foregoing and related ends, the invention, then, consists of the container means hereinafter fully described and particularly pointed out in the claims, the annexed drawings and the following description setting forth in detail certain means for carrying out the invention, such disclosed means illustrating, however, but one of various ways in which the principle of the invention may be used.

In the annexed drawings:

Figure 1 is a perspective view of the blank from which the carton bottom, front and back walls, end walls and cover are formed.

Figure 2 is a perspective view showing the blank from which the end and front reinforcing members are formed, and the two bearing stubs or cups.

Figure 3 is a vertical transverse section through the carton and a roll of sheet material therein, taken on line 3—3 of Figure 4, looking in the direction of the arrows.

Figure 4 is a vertical longitudinal section, partly in elevation, taken on line 4—4 of Figure 3, looking in the direction of the arrows.

Figure 5 is a horizontal longitudinal section, partly in elevation, taken on line 5—5 of Figure 4, looking in the direction of the arrows.

Preferences in the carton structure have been disclosed in the drawings, and will be rather specifically described,

but it is to be understood that variations within the spirit and scope of the invention may well be made.

The blank of Figure 1 will first be described. This blank is formed from cardboard and comprises a bottom-forming portion 6, a front wall-forming portion 7, a back wall-forming portion 8, end wall-forming portions 9, 10, and 11, flap portions 12 on the edge of portions 11, and a cover-forming portion generally denoted at 13.

The bottom-forming portion 6 is joined along score lines 14 to the front and back wall-forming portions 7 and 8, and the latter is joined along a score line 15 to the cover-forming portion 13. The end wall-forming portions 9 are joined at score lines 16 to the bottom-forming portion 6, and the end wall-forming portions 10 and 11 are similarly joined at 17 and 18 to the front and back-forming portions 7 and 8, respectively.

The four end wall-forming portions 10 and 11 are about square while the other two portions 9 may be outwardly tapered, as shown, if desired. The flap portions 12 are joined on score lines 19, aligned with the score line 15, to the end wall-forming portions 11. These flap portions 12 have score lines 20 near and parallel with the score lines 19. The free longitudinal edges of the flap portions 12 have notches 21.

The cover-forming portion 13 is of substantially square form and is divided by score lines 21, 22, and 23 into two major portions 24 and 25 and two minor portions 26 and 27. When the portions 25 and 27 are jointly folded on the score line 21 against the two portions 24 and 26 respectively, and glued thereto, a two-ply cover is formed and this cover is then bent along the lines 22, 23 to provide it with a forwardly declined front edge portion as later explained. The cover is to be snugly fitted between the carton end walls and the blank may have the formations 28 to aid accomplishing this.

The free longitudinal edge of the front wall-forming portion 7 is preferably formed with a shallow notch 29 extending substantially throughout its length for a purpose to appear.

In Figure 2, a second blank is shown, said blank being formed from much heavier cardboard, corrugated fiber board, chip board or the like for strength and stiffness. This blank is divided by score lines 30 into an elongated major portion 31 and two substantially square end portions 32. In the completed carton structure, the portion 31 provides a front reinforcing wall and the two end portions 32 form end reinforcing walls. Each of these portions 32 is formed with a circular substantially central opening 33, and two cylindrical bearing stubs 34 are provided for snug reception in these two openings to rotatably mount the roll R by being received in the usual core tube T thereof. Each bearing stub 34 may be in the form of a stamped sheet metal cup having an annular flange 35 at the free edge of its side wall 36.

One longitudinal edge of the blank portion 31 of Figure 2 is formed with a shallow elongated notch 37, and a serrated metal strip 38 is suitably secured to said portion 31 with its teeth projecting into said notch 37.

To construct the carton of Figures 3, 4, and 5 from the blanks of Figures 1 and 2, and the bearing stubs 34 of Figure 2, said blank of Figure 1 is first folded on the line 21 and glued to form a two-ply carton cover 13a, and the blank is then laid on a flat support. The blank of Figure 2 is folded on the lines 30 to form three integral reinforcing walls—a front wall 31a formed by the portion 31 and two end walls 32a formed by the portions 32. The stubs 34 are inserted through the openings 33 and into the ends of the core tube T of the roll R. The assembled roll and reinforcing walls are then placed upon the bottom-forming portion 6 of Figure 1 and the free end E of the sheet material is pulled up above the wall 31a. Then the portions 9 are upwardly folded against and glued to the end-reinforcing walls 32a to form inner end wall plies 9a.

The front portion 7 is now upwardly folded and glued to the front reinforcing wall 31a to form a front wall 7a and the portions 10 are folded rearwardly and glued to the plies 9a to form intermediate end wall plies 10a. Then, the portion 8 is upwardly folded to form a back wall 8a and the portions 11 are folded forwardly and glued to the plies 10a to form outer end wall plies 11a. The flap portions 12 are now folded inwardly and downwardly at 12a and glued to the inner sides of the end reinforcing walls 32a to consolidate and strengthen the end walls.

The two-ply cover 13a is now forwardly folded on line 15 and bent on the lines 22, 23 to provide it with a forwardly declined front portion 13b (Figure 3). The cover is then inserted snugly between downturned flaps 12a, with the front edge 13c, of the portion 13b disposed against the free end E of the sheet material and frictionally holding said free end against the reinforcing portion 31a on the inner face of front wall 7a.

Due to the construction described, a carton is provided having three-ply end walls solidly reinforced by the end reinforcing walls 32a, and having its front wall reinforced by the wall portion 31a which latter wall effectively braces said walls 32a. The carton will thus well support and protect the heavy roll R even when handled extremely roughly and the rolled material may be easily and conveniently withdrawn by unrolling, as required.

The forwardly declined cover portion 13b is at a widely obtuse angle to the major portion of the cover, and by the inherent resiliency of the material from which the carton is constructed, said portion 13b is forcibly biased toward the front wall 7a. Thus, it firmly holds the free end E of the rolled material against accidental dropping back into the carton. Moreover, the cover portion 13b contacts with the upper portion of the front wall 7a in providing an open top channel C of sufficient width and depth to readily receive a person's fingers when the material end E is to be grasped for withdrawal. After pulling out the required amount of material it is easily torn off along the serrated tear strip 38 which is sufficiently exposed by the above described notches 29 and 37, which notches register in the completed carton, as shown in Figure 3. During such tearing there is no danger of bending the strip 38 due to its solid support on the upper edge of front reinforcing wall 31a.

Rubber strips S are preferably cemented to the carton bottom 6a to prevent it from sliding while the sheet material is being pulled from the carton.

From the foregoing, it will be seen that novel and advantageous provisions have been disclosed in connection with the roll stock dispensing carton for attaining the desired ends. However attention is again invited to the possibility of making variations within the spirit and scope of the invention as claimed.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the carton and combinations herein disclosed, provided the means stated by any of the following claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention:

1. In a carton having a bottom, front and back walls, and end walls; two relatively stiff end-reinforcing walls lying against the inner sides of said end walls respectively, said end-reinforcing walls being substantially coextensive with said end walls and each having a substantially central circular opening, cylindrical roll-supporting stubs extending snugly through these openings, said stubs having anchoring flanges at their outer ends confined between said end walls and said end-reinforcing walls, and flap means extending from the top of said end walls and folded over the inside of said end-reinforcing walls, for positively anchoring said end-reinforcing walls against falling out of said carton.

5

2. A structure as set forth in claim 1; together with a front reinforcing wall lying against the inner side of said front wall and substantially coextensive therewith, the ends of said front reinforcing wall being integrally joined to said end reinforcing walls.

3. A structure as set forth in claim 1; together with a front reinforcing wall lying against the inner side of said front wall and substantially coextensive therewith, the ends of said front reinforcing wall being integrally joined to said end reinforcing walls, and a serrated blade secured to said front reinforcing wall and extending along the upper edge thereof, for use in tearing sheet material unwound from the stub-supported roll.

4. In a carton, a bottom, front and back walls joined to said bottom, three-ply end walls the plies of which are joined to said bottom wall, front wall, and back wall respectively, two relatively stiff end-reinforcing walls lying against the inner sides of said three-ply end walls respectively, said end-reinforcing walls being substantially coextensive with said end walls, two flaps integral with the upper edges of the outermost plies of said end walls respectively, said flaps being folded inwardly over the upper edges of the other plies of said end walls and over the upper edges of said end-reinforcing walls, said flaps being downwardly folded against the inner sides of said end-reinforcing walls, said flaps, said end wall plies and said end-reinforcing walls being secured in assembled relation, and inwardly projecting cylindrical roll-supporting stubs carried by said end-reinforcing walls, said end-reinforcing walls having substantially central openings through which said stubs extend, said stubs having anchoring flanges at their outer ends, said flanges being larger than said openings and confined between said end-reinforcing walls and said end walls, together with a front reinforcing wall lying against the inner side of said front wall and substantially coextensive therewith, the ends of said front reinforcing wall being integrally joined to said end-reinforcing walls.

5. In a carton, a bottom, front and back walls joined to said bottom, three-ply end walls the plies of which are joined to said bottom wall, front wall, and back wall re-

6

spectively, two relatively stiff end-reinforcing walls lying against the inner sides of said three-ply end walls respectively, said end-reinforcing walls being substantially coextensive with said end walls, two flaps integral with the upper edges of the outermost plies of said end walls respectively, said flaps being folded inwardly over the upper edges of the other plies of said end walls and over the upper edges of said end-reinforcing walls, said flaps being downwardly folded against the inner sides of said end-reinforcing walls, said flaps, said end wall plies and said end-reinforcing walls being secured in assembled relation, and inwardly projecting cylindrical roll-supporting stubs carried by said end-reinforcing walls, said end-reinforcing walls having substantially central openings through which said stubs extend, said stubs having anchoring flanges at their outer ends, said flanges being larger than said openings and confined between said end-reinforcing walls and said end walls, together with a front reinforcing wall lying against the inner side of said front wall and substantially coextensive therewith, the ends of said front reinforcing wall being integrally joined to said end-reinforcing walls, and a serrated blade secured to said front reinforcing wall and extending along the upper edge thereof for use in tearing sheet material unwound from the stub-supported roll.

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