A. L. WEIS.

OPEN END CONTAINER.

APPLICATION FILED DEC. 26, 1917.

**1,394,590.** **Patented Oct. 25, 1921.**

2 SHEETS—SHEET 1.

Fig. 1

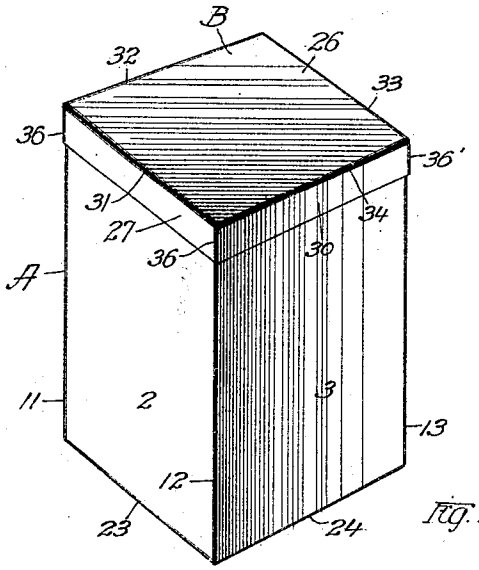



Fig. 2.

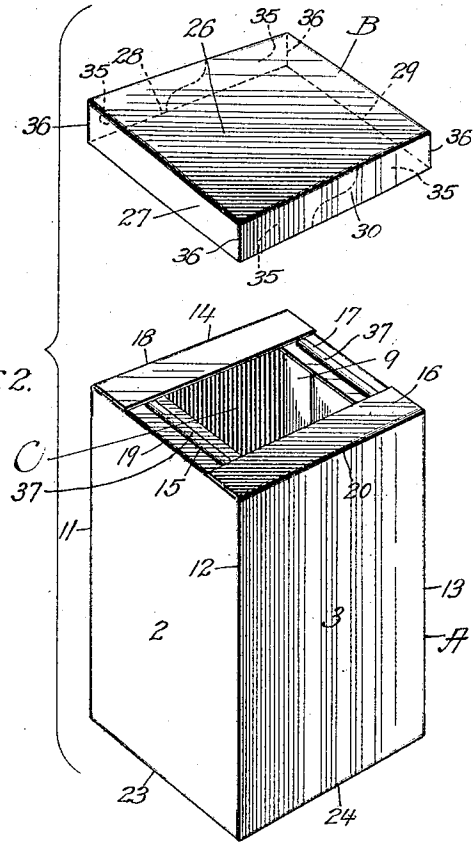



Fig. 3.

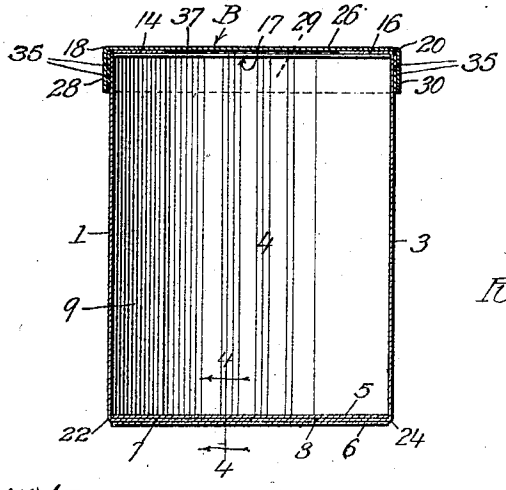
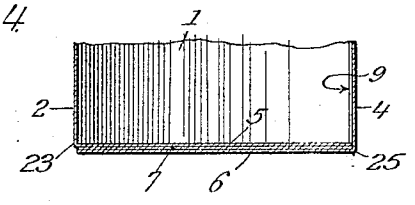



Fig. 4




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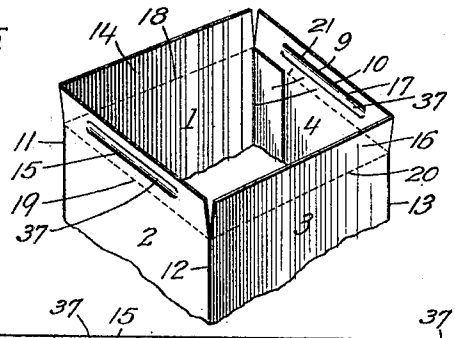
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2 SHEETS—SHEET 2.

Fig. 5.



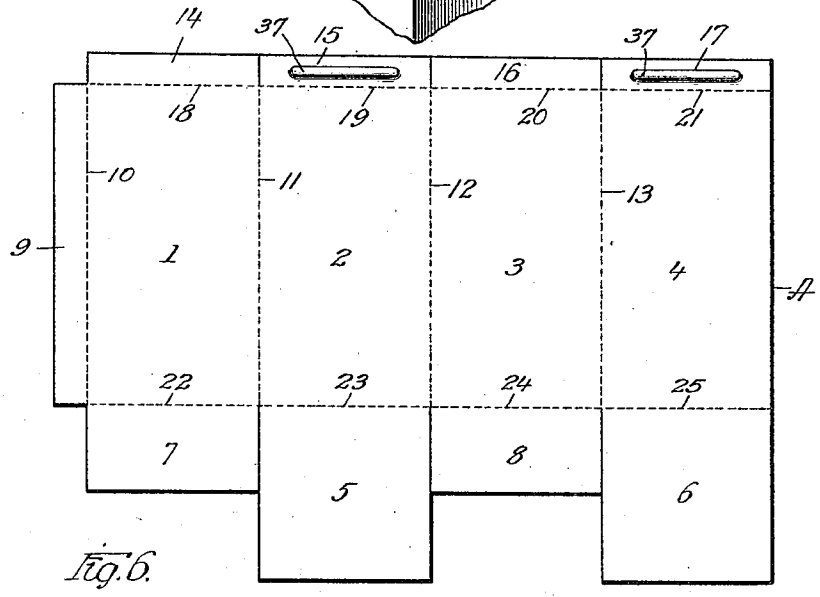
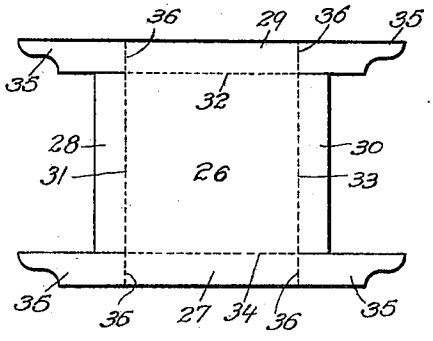




Fig. 6.

Fig. 7.




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# UNITED STATES PATENT OFFICE.

ANDREW L. WEIS, OF MONROE, MICHIGAN, ASSIGNOR TO THE WEIS FIBRE CONTAINER CORPORATION, OF MONROE, MICHIGAN, A CORPORATION OF SOUTH DAKOTA.

## OPEN-END CONTAINER.

1,394,590. Specification of Letters Patent. Patented Oct. 25, 1921.

Application filed December 26, 1917. Serial No. 208,952.

*To all whom it may concern:*

Be it known that I, ANDREW L. WEIS, a citizen of the United States of America, and resident of Monroe, county of Monroe, and State of Michigan, have invented a certain new and useful Improvement in Open-End Containers, of which the following is a specification.

This invention relates to containers of the kind which are made of paper or other fibrous sheet material, and more particularly to those which are made from blanks which, when folded, form a square or rectangular container having a top and bottom and four sides.

Generally stated, the object of the invention is to provide an improved method of construction whereby a container of this general character is provided with a closed bottom and an open top or upper end, so that the opening is fully as large as the end or top of the container, but having flaps which will fold upon each other and overlap in a manner to stiffen the container and maintain the shape thereof, and whereby the container is closed by a cap which fits over the open end or top thereof, as distinguished from fiber containers of this general class which have heretofore been made with a closed top or upper end having only a restricted opening therein for the introduction and removal of the contents of the container, such as liquids or granular materials, and whereby a container of this kind may be employed for holding cigars or other commodities which could not be inserted through a small or restricted opening, but which can be easily and satisfactorily crowded into the container through the open end provided by the new construction.

It is also an object to provide certain details and features of construction tending to increase the general efficiency and desirability of an open end fiber container of this particular character.

To the foregoing and other useful ends, the invention consists in matters hereinafter set forth and claimed.

In the accompanying drawings:—

Figure 1 is a perspective of a fiber container embodying the principles of the invention, showing the same sealed by the cap at the top thereof.

Fig. 2 is a perspective of said container with the cap removed.

Fig. 3 is a vertical section of said container.

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

Fig. 5 is a perspective of the upper end of said container, showing the flaps extending upward and ready to be folded downward upon the top of the contents of the container, after the latter is filled.

Fig. 6 is a plan view of the blank from which the container is made.

Fig. 7 is a plan of the blank from which the sealed cap of the container is made.

As thus illustrated, the blank A is made from paper or fiber or any other suitable sheet material, and comprises four body or side wall sections 1, 2, 3 and 4, two long flaps 5 and 6 for the bottom, and two short flaps 7 and 8 for the bottom. The blank is also provided with an end strip or flap 9 which laps upon the inner surface of the section 4 when the blank is folded along the score lines 10, 11, 12 and 13 in the process of forming the container. At its other edge, the blank is formed with four short flaps 14, 15, 16 and 17, which are in the form of straight rectangular strips having square corners, but flexibly connected with the body sections or side walls by score lines 18, 19, 20 and 21 so that these flaps can be folded over upon each other. Also, it will be seen, the flaps 5, 6, 7 and 8 are flexibly connected to the lower ends of the side wall sections 1, 2, 3 and 4 by score lines 22, 23, 24 and 25, so that these long and short flaps can be folded upon each other to form the bottom of the container. Any suitable method can be employed for folding these bottom flaps, as, for example, by first folding the flaps 7 and 8 toward each other, so that they will occupy the same horizontal plane at the bottom of the container, and by then folding the long flaps 5 and 6 upon each other and upon the short flaps, it being understood that the flaps are glued or otherwise suitably connected together to form the three-ply bottom for the container. The flap or strip 9 is also glued to the inner surface of the side wall section 4, in any suitable or desired manner. When the container is finished, the flaps 14, 15, 16 and 17 stand upright at the top of the container (see Fig. 5), so that cigars or any other commodity can be crowded downward into the container and after which the said flaps will

then be folded upon each other to stiffen the container and keep it square or rectangular at the top thereof, (see Fig 2), and thus strengthen the container which is practically wide open at the top or upper end thereof.

The cap B (see Fig. 2) is square or rectangular and composed of a top wall 26 and four side walls 27, 28, 29 and 30 which fit down tightly upon the sides of the container. The blank from which the cap is made (see Fig. 7) is preferably of the same material from which the container itself is made, or any suitable sheet material, and is formed with score lines 31, 32, 33 and 34, outlining the rectangular top wall 26 of the cap. It will also be seen that the ends of the side walls 28 and 30 are square, and are flush with the score lines 32 and 34, whereas the ends of the side walls 27 and 29 are beveled or oblique, being formed with end portions 35 which are flexibly connected to the ends of these side walls by short score lines 36 which extend in straight continuation of the two score lines 31 and 33, whereby the walls 27 and 29 are provided with flexible end flaps. These end flaps 35, when the blank for the cap is folded, are glued or otherwise secured to the inner surfaces of the walls 28 and 30, so that a square or rectangular cap is provided which will fit down tightly over the top or upon upper end of the container, after the flaps 14, 15, 16 and 17 thereof are folded downward upon each other. It will be seen that the ends of the flaps 35 are caused to fit together endwise, whereby their end edges not only shut tightly, but also overlap so that in effect a splice-joint is provided which stiffens the walls. Also, this makes the cap tight-fitting all around, and keeps the air out. As previously stated, the flaps with which the mouth or open upper end of the container is provided, when folded flatwise, (see Fig. 2) serve to stiffen the upper end of the container, and in this way they will also help to maintain the shape of the cap, so that the entire container when filled and sealed will be strong and rigid and capable of resisting ordinary compression strains which might tend to make it collapse if it were not thus strengthened and held rigidly in shape at both top and bottom. The B can be secured in place in any suitable or desired manner, by glue or paraffin, if such is desirable or necessary, and with the entire container coated inside and out with paraffin, in the usual and well-known manner, the contents of the container will be hermetically sealed when the cap is in place.

With the foregoing construction, it will be seen that the flaps 14, 15, 16 and 17, which are of uniform length and width, only overlap each other at the corners of the container, so that a rectangular opening C is provided between the inner edges of these flaps when folded. In this way, said flaps 14, 15, 16 and 17 combine to form a sort of stiffening flange around the inside of the upper open end of the container, for the purpose of preventing distortion of the container, as previously described. If desired, the flaps 15 and 17 may be provided with creases 37 extending lengthwise thereof, which form raised ribs or ridges on their upper surfaces, and which form channels on their under surfaces, when the flaps are folded over upon the contents of the container. These creases or upwardly pressed portions may be formed in the blank, by any suitable means, (see Fig. 6), and are of a length to extend from the inner edge of the flap 14 to the inner edge of the flap 16 (see Fig. 2), and are of a height to raise the tops of the underlying flaps to the level of the overlying flaps, thereby to seal the space between the bottom surface of the top wall 26 of the cap and the top surfaces of the flaps 15 and 17 when the cap is in place. In other words, the ridges 37 firmly engage the under surface of the top wall 26 of the cap, and thus serve to prevent entrance of air or moisture into the container.

It will be understood, of course, that the container can be made either with or without the coating of paraffin, and that for some purposes it will not be necessary to hermetically seal the cap, and that the containers can be made and used either with or without the paraffin or other similar sealing means, depending upon the character of the article or commodity to be inclosed therein.

What I claim as my invention is:—

1. A container constructed from sheet material and provided with wide walls and a closed integral bottom, and having four separate and inwardly folding flaps for the upper edges of the side walls, two of which flaps overlap the other two flaps at the corners of the container to form a stiffening flange around the inside of the four sides of the top of the container, but with a rectangular opening between the inner edges of said flaps when folded at the top of the container, the two overlying flaps being adapted to release the two underlying flaps, and means to close the top of the container and hold the two upper flaps upon the two lower flaps, said closing means comprising a rectangular cap having a top wall and side walls adapted to fit tightly over the top of the container, and means on the underlying flaps to raise their tops to the level of the overlying flaps, so that the cap will rest tightly on all of the flaps.

2. A rectangular container having a closed bottom and an open top, and a cap for the top of the container, all of the inner surface of the cap being smooth and flush everywhere, so that the cap will tightly seal the container, said cap having a top wall,

two opposite side walls, two opposite rectangular side walls, and two opposite side walls having inside flaps which are secured to said rectangular side walls in position to insure said flush inner surfaces, said container having flaps provided with flat surfaces to engage the under side of said top wall of the cap, and said container having other flaps provided with ribs to engage the under side of said top wall of the cap, as specified.

3. In the construction of a fiber container, a blank therefor comprising rectangular side wall sections (1, 2, 3, 4) to form the upright walls of the container, two long and two short bottom flaps (5, 6, 7, 8) foldable upon each other to form the bottom wall of the container, a flap (9) to connect the two ends of the blank together, and top flaps (14, 15, 16, 17) of uniform size and folded so that two opposite flaps are on top and the other two below to form a stiffening flange around the inside of the four sides of the top of the container, two of said flaps (15 and 17) having longitudinal ridges (37) on the upper surface thereof, for the purpose specified.

4. In the construction of a fiber container, a single blank from which the entire container is formed, comprising four side wall sections having their lower ends provided with overlapping flaps to form the bottom wall of the container and having their upper ends provided with short flaps two of which are folded down upon the other two flaps at the four upper corners of the container, so that two opposite flaps are in a plane above the other two opposite flaps at the top of the container, with space forming a rectangular opening between the inner edges of said short flaps, when thus folded at the top of the container, thereby to form a stiffening flange for the four upper edges of the side wall section, the lower flaps of the top having ridges extending between the inner edges of the upper flaps, and a cap having a top wall to rest upon said upper flaps and said ridges of the lower flaps.

5. In a box, the combination of two parallel lower flaps at the top of the box, two parallel upper flaps resting on the two lower flaps at the four upper corners of the box, so that a rectangular opening is formed between the four edges of said flaps, and a cover having a top wall to rest flatwise upon said upper flaps, in combination with means on said lower flaps to engage said top wall of the cover for the purpose specified.

Signed by me at Monroe, Monroe county, Michigan, this 19th day of December, 1917.

ANDREW L. WEIS.