

C. MARTINSON.
MILK BOTTLE AND OTHER RECEPTACLE.
APPLICATION FILED JULY 17, 1908.

935,799.

Patented Oct. 5, 1909.

Fig. 1.

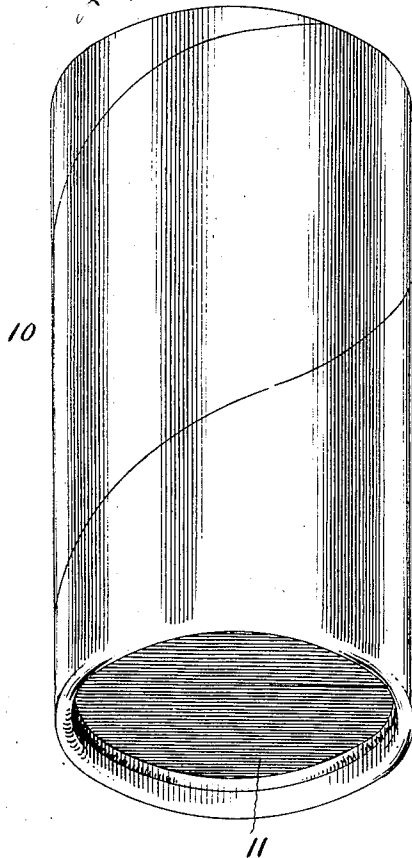


Fig. 2.

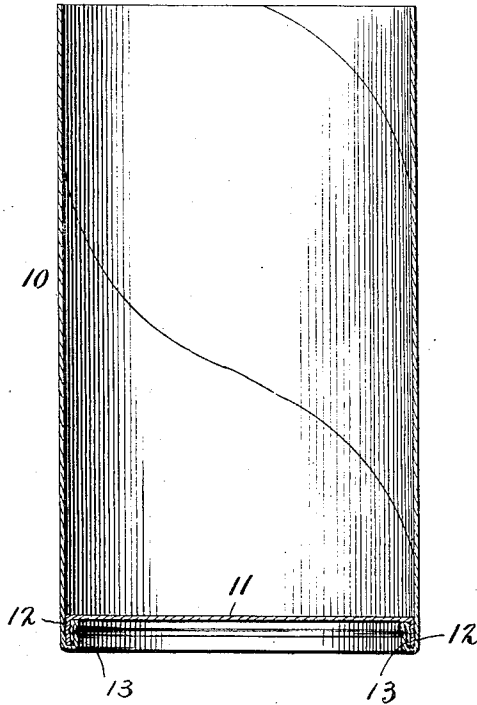
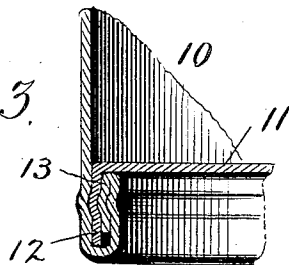


Fig. 3.



Inventor

Witnesses

John Klein
Raymond Hoover

Charles Martinson,
By *Chas. Williamson,*
Attorney

UNITED STATES PATENT OFFICE.

CHARLES MARTHINSON, OF WASHINGTON, DISTRICT OF COLUMBIA.

MILK-BOTTLE AND OTHER RECEPTACLE.

935,799.

Specification of Letters Patent.

Patented Oct. 5, 1909.

Application filed July 17, 1908. Serial No. 444,071.

To all whom it may concern:

Be it known that I, CHARLES MARTHINSON, of Washington, in the District of Columbia, have invented a certain new and useful Improvement in Milk-Bottles and other Receptacles, and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a paper milk bottle embodying my invention; Fig. 2 is a vertical section of the same; and, Fig. 3 is a detail section on a large scale of a portion of the bottom.

In the manufacture of milk bottles or other receptacles from paper, it has been difficult to attach the bottoms thereof to the bottle or receptacle as firmly or securely, and with as tight a joint as is required in a bottle or receptacle that is intended to hold liquids or finely powdered materials, and the object of my invention is to overcome this difficulty, and to produce a paper receptacle having its bottom secured with the required firmness, and with the necessary tight joint, and do this with the economy that is required in the manufacture of such articles, and to this end my invention consists in a paper receptacle, as far as the structure of the bottom or end portion thereof is concerned, substantially as hereinafter specified and claimed.

For the purpose of illustrating my invention, I have shown in the drawings a milk bottle, but it is to be understood that I do not limit myself to the employment of the invention in connection with milk bottles, since bottles or receptacles for holding liquid and powdered or other materials may be made in accordance with my invention.

The bottle 10, shown in the drawings is cylindrical or of tubular form, made of paper wound or wrapped upon a mandrel, to produce side walls of the required thickness, in which respect the bottle is of ordinary construction. The bottom 11 is of inverted cup form, that is to say, it consists of a circular or disk-like portion, having at its outer edge a downwardly projecting circumferential flange 12, whose external diameter is that of the internal diameter of the bottle. The end portion of the tube, which forms the body of the bottle, is folded or doubled upon itself at 13, and is then folded inward

and upward to overlap the bottom flange on its inner surface. The overlapping portions of the bottle body and flange are interlocked by the complementary annular ribs and grooves on the respective parts as clearly shown in Fig. 3, which ribs or grooves are formed by placing the bottle in a suitable die so as to support it on the outside in the plane in which the ribs and grooves lie, and then subjecting the inner side of the upturned portion of the end of the bottle body to the action of a suitable creasing or groove-forming tool. The upsetting of the paper to form the interlocking ribs and grooves not only results in the secure union produced by the interlocking members and produces a liquid and dust tight joint between the bottom and the bottle body, but results in giving to the paper a set that overcomes any tendency of the overlapping parts to return to their original position or spring open. The creasing may be carried to an extent to affect all the overlapping portions of bottle and bottom flange, as shown in Fig. 3, or to a less extent, providing it is carried far enough to produce such interlocking of the laps and set of the paper as to make a secure, tight, and permanently fixed joint. As shown in Fig. 3, the creasing affects all the plies or laps, and produces a rib or bead on the outside of the bottle, while in Figs. 1 and 2 the outside of the bottle is not affected but remains smooth. In some cases the creasing may be reversed, that is to say the creasing tool may be applied on the outside of the bottle, and the ribs pressed inward.

By my invention, I am able to produce an all paper bottle or receptacle with a strong, tight joint at the bottom, or other end closure, no metal or other fastening being required.

The union of the bottom to the receptacle body that is produced in accordance with my invention, as thus far described, is entirely sufficient in the case of milk bottles or other receptacles, whose time of use is short, but it may be desirable in some instances where a comparatively longer use is to be made of the receptacle to apply glue or other adhesive to the overlapping surfaces.

My invention is applicable to securing tops or closures, as well as bottoms to receptacles.

The disk 11 may be flat or slightly dished

with the convex side inward to give greater strength or stiffness under the weight of the receptacle contents.

Having thus described my invention what I claim is—

5 A bottle or other receptacle made of paper having an end with an outwardly extending flange confined between the outer wall of the receptacle, and an inwardly turned flange
10 doubled and overlapping itself, with its overlapping portions in contact, the body or main portion of said end engaging the edge

of said doubled flange where it is turned and situated inside the end flange and supporting said end, overlapping parts of end flange and inwardly turned portion of the receptacle being creased to form an interlocking rib and groove. 15

In testimony that I claim the foregoing I have hereunto set my hand.

CHARLES MARTINSON.

Witnesses:

CHAS. J. WILLIAMSON,
J. RAYMOND HOOVER.