A. S. NICO.

SEALED RECEPTACLE.

APPLICATION FILED APR. 26, 1916.

1,310,288. Patented July 15, 1919.

Fig. 1.

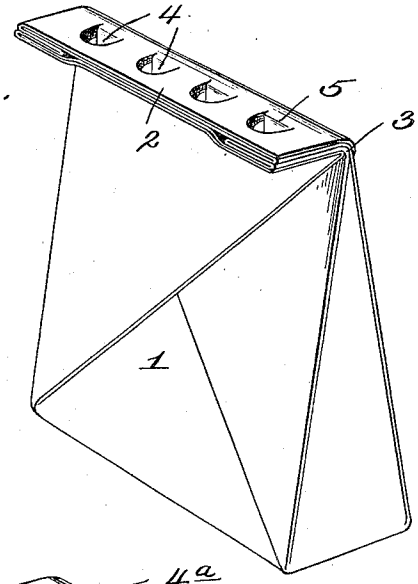


Fig. 2.

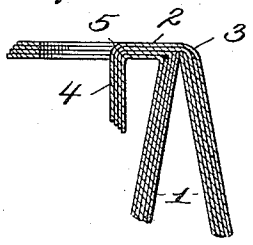


Fig. 3.

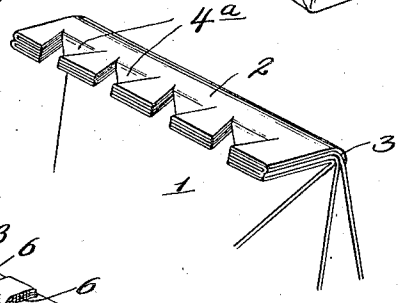


Fig. 5.

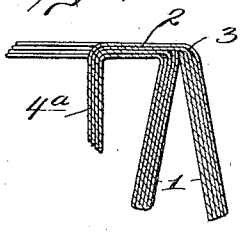


Fig. 4.

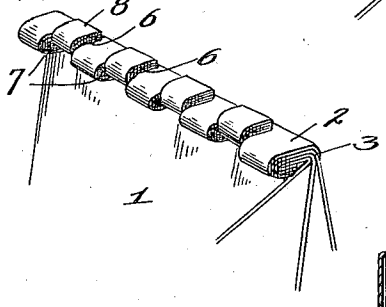


Fig. 6.

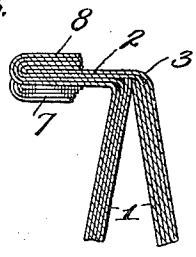
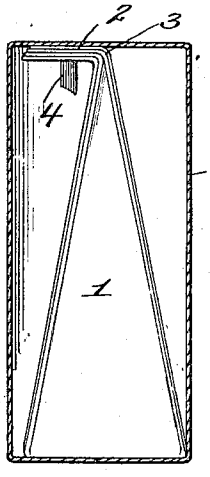


Fig. 7.



Witnesses:
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UNITED STATES PATENT OFFICE.

ANDREW S. NICO, OF LE ROY, NEW YORK, ASSIGNOR TO THE GENESEE PURE FOOD COMPANY, OF LE ROY, NEW YORK, A CORPORATION OF NEW YORK.

SEALED RECEPTACLE.

1,310,288. Specification of Letters Patent. Patented July 15, 1919.

Application filed April 26, 1916. Serial No. 93,681.

To all whom it may concern:

Be it known that I, ANDREW S. NICO, a citizen of the United States, residing at Le Roy, in the county of Genesee and State of New York, have invented new and useful Improvements in Sealed Receptacles, of which the following is a specification.

My present invention relates to improvements in paper receptacles, and more especially to those adapted to provide a moisture-proof seal or inclosure for the contents thereof. The primary object of the invention is to provide a novel and improved closure for sealing and securing the mouth or opening of the receptacle whereby the contents thereof will be effectually retained therein and moisture will be excluded, the securing means for the closure, according to the present invention, being formed preferably by bending or interlocking portions of the paper or material composing the receptacle.

To these and other ends, the invention consists in certain improvements, and combinations and arrangements of parts, all as will be hereinafter more fully described, the novel features being pointed out particularly in the claims at the end of the specification.

In the accompanying drawings:

Figure 1 is a perspective view of a bag or receptacle provided with a sealing closure made in accordance with one embodiment of the invention.

Fig. 2 represents a section taken transversely through the sealing closure showing the seal and the securing means for maintaining the seal.

Figs. 3 and 4 are perspective views of two other embodiments of sealing closures made in accordance with the present invention.

Figs. 5 and 6 represent transverse sections through the sealing closures shown, respectively, in Figs. 3 and 4, and

Fig. 7 is a diagrammatic view showing the position of one of the receptacles within a shipping carton.

Similar parts are designated by the same reference characters in the several views.

The present invention provides sealing closures which are applicable generally to paper receptacles where it is desirable or necessary to seal or protect the contents from moisture. The invention is particularly applicable to receptacles made in the form of a bag and composed of moisture-proof paper or similar material which is folded in a manner to provide a suitable space for the contents and to bring all of the free edges of the paper or material together, the margins of the paper or material being then formed so as to seal the contents from moisture and to retain the contents within the receptacle, and these margins of the paper or material are also formed so as to maintain the seal. A receptacle of this general type is shown and described fully in Letters Patent, No. 1,101,430, granted June 23, 1914 to Otis E. Glidden and myself. The receptacle shown in the present instance is of the same type as that shown and described in said patent, but the present invention provides a sealed closure which differs from that shown in said patent and which possesses certain advantages thereover. It is to be understood that while certain embodiments of the invention are shown in the drawings and will be hereinafter described in detail, equivalent constructions are contemplated and will be included within the scope of the claims.

In the present instance, 1 designates the body of the bag or receptacle, it being made up from a blank in the manner shown and described in said prior patent, that is to say, the blank is so folded as to form a space for the contents, and the portions of the blank are brought together at the mouth of the bag or receptacle. These portions of the blank which are brought together at the mouth of the receptacle are designated 2. The receptacle may be made of paper of any suitable kind, but it is preferable to make it of a paper which is impervious to moisture, a paper coated or treated with paraffin or a so-called "waxed" paper being preferable. To facilitate handling of the paper in the machines which make up the receptacles, it is preferable to employ a paper which is waxed on the side thereof which is within the receptacle when the same is made up, and when the portions 2 of the blank are brought together at the mouth of the receptacle, the waxed surfaces of these portions will engage or face one another.

After the contents have been introduced into the receptacle, the portions 2 of the blank are brought together and then bent sharply along a line extending across the mouth of the receptacle, as indicated by the line 3 in the drawing. This bending or

creasing causes the lapped or engaging portions 2 of the receptacle to stand at an angle, preferably about a right angle, to the vertical dimension of the receptacle, and the sharp bend and compression exerted at the corner thus formed causes the engaging and waxed-covered surfaces to conform precisely to one another and to form a seal which will exclude moisture from the receptacle and will prevent leakage of the contents, especially where the contents are in the form of a powder.

The present invention provides means formed by portions of the material composing the lapped portions 2 for retaining or securing these portions in proper engagement and for maintaining the seal formed at the angular corner 3. In one embodiment of the invention, as shown in Figs. 1 and 2, a suitable number of substantially semicircular tongues 4 are punched from the laterally turned portions 2, these tongues being bent along the lines 5 so as to extend angularly to the plane of the laterally bent portions 2, the bending of the tongues 4 at an angle to the plane of the portions 2 forming corners between these tongues and the portions 2, which corners act in effect as interlocks, and these interlocks effectually retain the seal formed at the corner or along the line 3. The seal is preferably made by first compressing the portions 2 while they stand vertically at the top of the receptacle, then bending these portions 2 laterally and exerting a compression along the line 3 to form a relatively sharp bend which will produce an effective seal, and finally punching the tongues 4 from the laterally bent portions 2 while those portions rest upon a suitable die having openings to accommodate the punches and the tongues.

In the construction shown in Figs. 3 and 5, the bag may be made in the same manner as that described in connection with the construction shown in Figs. 1 and 2. The seal in this latter instance is formed by the bend along the line 3, as in the preceding instance, the marginal portions of the blank are brought together at the mouth of the bag and are lapped, as in the preceding instance, and securing tongues are punched from these laterally bent lapped portions 2. In this latter instance, however, these tongues, designated 4^a, are of a substantially dovetail form, and the perforations formed by the punching of the tongues extend to the margins of the laterally bent and lapped portions 2.

In the construction shown in Figs. 4 and 6, the bag may be formed as hereinbefore described, the seal being made along the bend or corner 3, as in the preceding instance, but the securing or interlocking portions or tongues for maintaining the seal are produced by slitting the laterally bent lapped portions 2 along the lines 6, thus forming a series of tongues 7 and 8 spaced longitudinally along the margin of the lapped portions 2. These tongues are bent alternately so as to overlap opposite sides of the portions 2, the tongues 7 being turned down so as to lap the under side of the portions 2, while the alternate tongues 8 are turned up and bent to engage the upper side of the portions 2. These alternating and reversely bent tongues act to effectively maintain the seal along the corner or angle 3.

Receptacles of this character are preferably packed in cartons of such size that the top of the carton when closed will engage the angularly or laterally bent portions 2, thereby maintaining these portions at the properly bent angle during transportation. Fig. 7 is a diagrammatic view showing one of the receptacles in its carton 9.

To open the receptacle for the removal of the contents thereof, it is only necessary to bend back the tongues to the plane of the lapped portions 2 forming the mouth of the receptacle, whereupon the lapped portions 2 may be readily separated to open the mouth of the bag.

Receptacles sealed in accordance with the present invention possess the advantages, first, that the sealing operation may be performed rapidly and easily by automatic machinery and, second, that the seal at the sealing corner or bend is effectually maintained by a mechanical locking effect. The use of glue or paste is unnecessary and, moreover, would not be effective when wax-coated or impregnated paper is used, and the use of heat is unnecessary.

I claim as my invention:—

1. A receptacle having its material at the mouth thereof lapped and bent laterally at approximately a right angle to form a relatively sharp sealing corner, a portion of said lapped material extending laterally from said corner, and means punched from the lapped material and serving as a lock to prevent relative slipping of the layers of such lapped material.

2. A receptacle having the material at the mouth thereof lapped and bent at an angle to form a seal at such angle, and tongues struck from the material forming the receptacle and at a sharp angle to the lapped portions thereof, said tongues extending transversely of said lapped portions and operative to prevent relative shifting of the lapped portions in the direction of the plane thereof and to thereby maintain the seal at said angle.

3. A receptacle having the material at the mouth thereof lapped and bent laterally at an angle to form a sealing corner, and tongues struck from the lapped portions and bent at a sharp angle relatively to said

lapped material of the receptacle to maintain the seal at such angle.

4. A paper receptacle having the material at the mouth thereof lapped and bent laterally at a relatively sharp angle to form a sealing corner, layers of the laterally-bent lapped portions of the material having an incision therethrough, edges of the layers of material adjacent to said incision being deflected out of the planes of the respective layers into interengaging relation with adjacent layers to thus maintain the seal at the sealing corner.

5. A receptacle having the material at the mouth thereof lapped and bent laterally, forming a sealing corner, and locking tongues struck from said lapped laterally bent portion of the material and bent perpendicularly at a sharp angle toward the bottom of the receptacle.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ANDREW S. NICO.

Witnesses:
J. G. GILFILLAN,
T. A. WILSON.