J. R. VAN WORMER.
FOLDED BLANK BOX.
APPLICATION FILED DEC. 15, 1914.

1,157,462.

2 SHEETS-SHEET 1.

Fig. 1.

Fig. 2.

Fig. 3.

Inventor
John R. Van Wormer

Witneses
Ed. Frueh
Z. J. Steckel.

By James H. Steckel & Co.

Attorneys
UNITED STATES PATENT OFFICE.

JOHN R. VAN WORMER, OF TOLEDO, OHIO, ASSIGNOR TO J. R. VAN WORMER AND CO., OF TOLEDO, OHIO.

FOLDED-BLANK BOX.


To all whom it may concern:

Be it known that I, JOHN R. VAN WORMER, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented new and useful improvements in Folded-Blank Boxes, of which the following is a specification.

My present invention pertains to boxes of the folded blank type; and it contemplates the provision of a neat and strong box formed of a single piece of paper or other suitable material and capable of being fabricated by hand or machinery; and one that is constructed in such manner that when its closure is opened a sanitary spout is formed from which the contents can be conveniently poured, and, at the same time, the box is absolutely unfitted for subsequent use as a hermetically sealed package. In the use of the box provided with a spout as stated the substance poured from the box is effectually prevented from contacting with the outside of the box which manifestly contributes greatly to the sanitary character of the box.

The invention also contemplates the provision of a blank for the box, stated, the said blank being adapted to be exquisitely formed by machinery.

With the foregoing in mind, the invention will be fully understood from the following description and claims when the same are read in connection with the drawings, accompanying and forming part of this specification, in which:

Figure 1 is a plan of my novel blank. Fig. 2 is a detail transverse section of the same, taken on the line 2—2 of Fig. 1 and showing one of the scores or shallow channels. Fig. 3 is a detail section taken on the line 3—3 of Fig. 1 and showing one of the indentures or shallow pockets in the closure portions of the blank. Fig. 4 is a perspective showing the box closed and sealed. Fig. 5 is a view showing the box with a part of the closure removed and the adjacent box portion shaped to form a spout. Fig. 6 is a plan of the same. Fig. 7 is an enlarged transverse section taken on the line 7—7 of Fig. 4 and showing the several layers of the closure.

Similar numerals of reference designate corresponding parts in all of the views of the drawings.

The blank, Fig. 1, comprises side-wall portions 1, 2, 3 and 4 and a flap 5, separated by creases 6, 7, 8 and 9; bottom-wall portions 10, 11, 12 and 13, separated by slits 14, 15 and 16 from each other and divided from the portions 1, 2, 3 and 4, respectively, by creases 17, 18, 19 and 20; top-wall portions 21, 22, 23, 24 and 25, separated by creases 26, 27, 28 and 29 from each other and by creases 30, 31, 32, 33 and 34 from the side wall portions 1, 2, 3, 4 and 5, respectively; closure portions 35, 36, 37, 38 and 39, separated from each other by creases 40, 41, 42 and 43; and closure portions 44, 45 and 46, separated from each other by creases 47 and 48. It will also be noticed that the top-wall portions 21 and 23 are provided with scores or creases 47a and 48a, respectively, each of which describes an obtuse angle with its apex at the top; that the closure portions 35 and 37 are provided with creases 49 and 50 which extend from the apices of the creases 47a and 48a, and are also provided throughout their area with indentures or shallow pockets 51; that the closure portions 36 and 45 are provided with a vertical-central weakened line 52; that the closure portion 35 is provided with a vertical-central weakened line 53; that a horizontal weakened line 54 extends between the lower ends of the weakened lines 52 and 53 and rests between the top wall portions 22, 23 and 24, on the one hand, and the closure portions 36, 37 and 38, on the other; that a horizontal slit 55 is formed in the blank between the closure portions 35 and 44; and that a slit 56 is formed between the closure portions 37 and 46. The slits 55 and 56 do not extend to the outer ends of the closure portions 44 and 46, this provision being made in order to prevent the formation of projections which would tend to interfere with the handling of the blank in a machine for making the box. It is to be understood, however, that it is proposed in the operation of sealing the box to extend the slits 55 and 56 to the outer ends of the portions 44 and 46 by breaking the uncut portions by hand.

In the formation of the box from the blank described, the bottom-wall portions are bent inwardly at right angles to the side-wall portions, and the side-wall portions, the top-wall portions, and the closure portions are arranged to form a rectangular receptacle, and all are retained in the relative arrangement shown in Figs. 4 to 6 by water-proof glue or other adhesive, suit-
ably applied, or other suitable means. I would also have it here understood that the box may be so formed of the blank described by machinery as well as by hand.

After the box is filled with milk or other substance, the top-wall portions and the closure portions are bent inwardly as shown in Fig. 4, and the before mentioned portions at the outer ends of the slits 55 and 56, are broken by hand, this to permit of the portions 44 and 46 being arranged against the side of the other upstanding closure portions, Fig. 4, with a view to preventing the weight of the contents of the box from pulling the sealed portions apart when the sealed portions are used as a handle.

It is to be understood that the sealed portion—i.e., the closure portions are sealed by paraffin or other suitable substance; also, that when so sealed a portion of the paraffin will occupy the indentures or pockets 51 and assist in holding the portions 35 and 37 against the portions to which they are opposed. It is further to be understood that all of the box may be and preferably is coated with paraffin or otherwise rendered liquid-proof.

By virtue of the provision of the weakened lines 52, 54 and 56, it will be observed that the hermetically sealed box may be opened by removing one half of the upstanding closure portion. Manifestly this can be expeditiously and easily accomplished by hand and without the assistance of any implement. Then the remaining top wall portions can be shaped to form a spout such as shown in Figs. 5 and 6, and it will be readily appreciated that the said spout permits of the contents of the box being conveniently poured therefrom, and this without liability of any of the contents contacting with the exterior of the box which is an important advantage for sanitary reasons.

The removal of the portion mentioned of the upstanding closure is additionally important because it absolutely unfit the box for repeated use as a sealed package, and from this it follows that the box can be used but once, and that the ultimate consumer is assured of the contents being as represented.

Having described my invention, what I claim and desire to secure by Letters-Patent, is:

1. A box blank having side-wall portions, bottom-wall portions, top-wall portions, and closure portions; the closure portions being constructed and arranged to be opposed to each other and to project from the top-wall portions, and an end part of said closure portions being divided from the top-wall portions and the remainder of the closure portions by a horizontal weakened line and weakened lines extending from the ends of the horizontal weakened line.

2. A box blank having side-wall portions, bottom-wall portions, top-wall portions, closure portions constructed and arranged to be opposed to each other and to project from the top-wall portions, and closure portions arranged at the opposite sides of the first-named closure portions, with reference to the top-wall portions, and constructed and arranged to be opposed to or lapped against the first-named closure portions; an end part of said closure portions being divided from the top-wall portions and the remainder of the closure portions by a horizontal weakened line and weakened lines extending upwardly from the ends of the horizontal weakened line.

3. A box comprising a top-wall portion, and a closure portion projecting from the top portion; said closure portion having an end part connected by a weakened line with the top portion and connected by another weakened line with the remainder of the closure portion.

4. A box comprising a top-wall portion, and a closure portion projecting from the top portion; said closure portion having an end part connected by a weakened line with the top portion and connected by another weakened line with the remainder of the closure portion, and the said top portion being constructed and arranged to be shaped into a spout subsequently to the removal of said end part of the closure portion.

5. A box comprising a top portion, and a closure portion projecting from the top portion and including a section that is joined to the top portion and the remainder of the projecting closure portion by a weak connection.

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

JOHN R. VAN WORMER.

Witnesses:

JOSEPH A. LANE,

JOSEPH A. EGER.