J. B. HEISER.

SELF LOCKING PAPER CARTON.

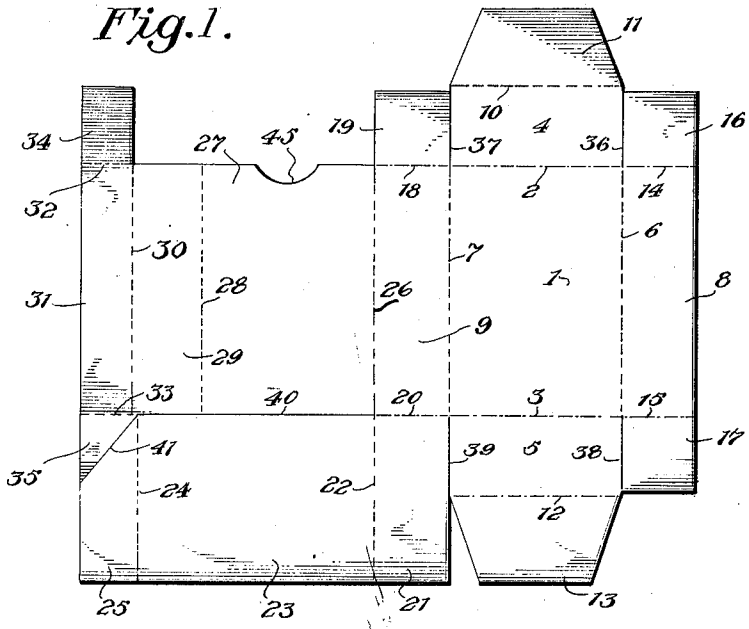
APPLICATION FILED MAR. 25, 1919.

1,339,334.

Patented May 4, 1920.

2 SHEETS—SHEET 1.

Fig. 1.



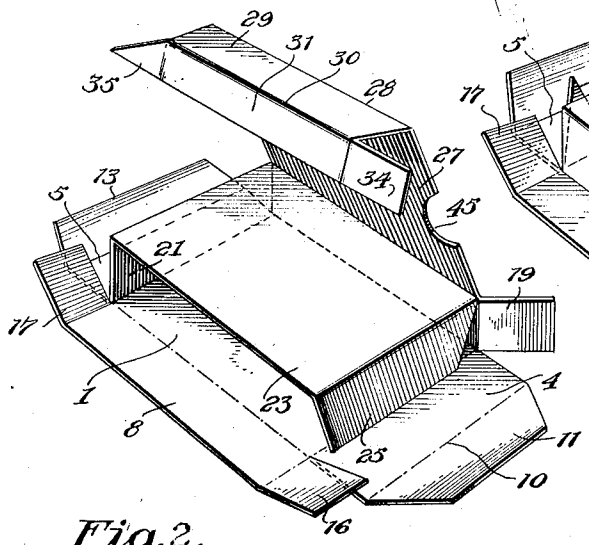


Fig. 2.

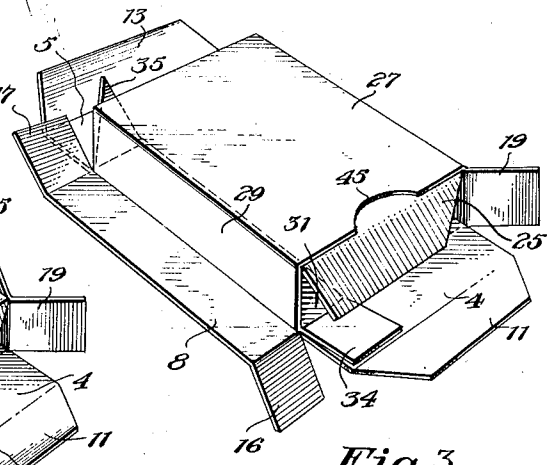


Fig. 3.

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2 SHEETS—SHEET 2.

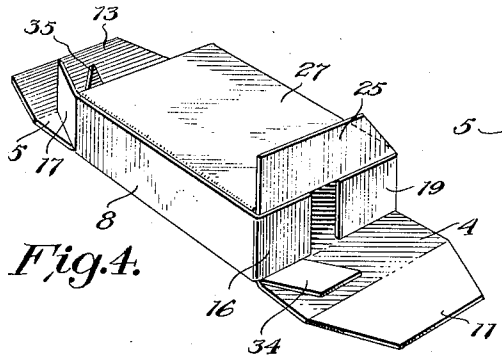


Fig.4.

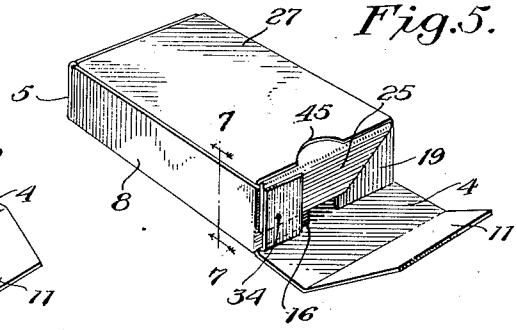


Fig.5.

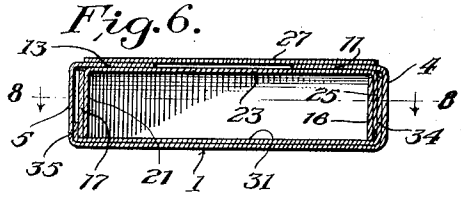


Fig.6.

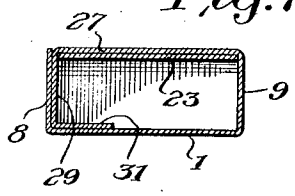


Fig.7.

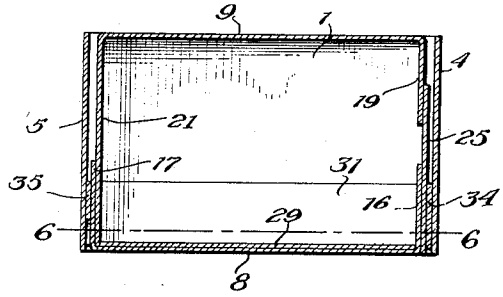


Fig.8.

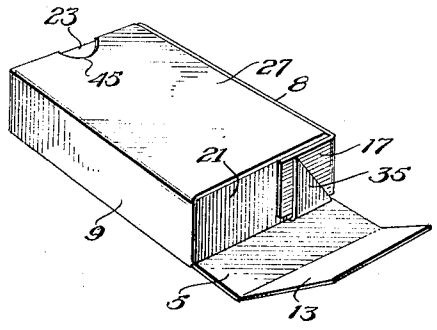


Fig.9.

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UNITED STATES PATENT OFFICE.

JOSEPH B. HEISER, OF WILLIAMSPORT, PENNSYLVANIA.

SELF-LOCKING PAPER CARTON.

1,339,334. Specification of Letters Patent. Patented May 4, 1920.

Application filed March 25, 1919. Serial No. 284,938.

To all whom it may concern:

Be it known that I, JOSEPH B. HEISER, a citizen of the United States, residing at Williamsport, in the county of Lycoming and State of Pennsylvania, have invented certain new and useful Improvements in Self-Locking Paper Cartons; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to self-locking folding paper cartons and has for its object to provide a carton of this character which will be simple in construction, comparatively inexpensive to manufacture and more efficient in use than those heretofore proposed.

With these and other objects in view the invention consists in the novel details of construction and combinations of parts more fully hereinafter disclosed and particularly pointed out in the claims.

Referring to the accompanying drawings forming part of this specification in which like numerals designate like parts in all the views:—

Figure 1 is a plan view of the blank from which the carton is made;

Fig. 2 is a perspective view showing the first step in folding the blank illustrated in Fig. 1 to form the carton;

Figs. 3, 4 and 5 are views similar to Fig. 2, illustrating succeeding steps in the folding of the box;

Fig. 6 is a longitudinal vertical sectional view of the carton completely folded taken on the line 6—6 of Fig. 8;

Fig. 7 is a transverse vertical sectional view of the completed carton, taken on the line 7—7 of Fig. 5;

Fig. 8 is a horizontal sectional view taken on the line 8—8 of Fig. 6; and

Fig. 9 is a perspective view illustrating one of the self locking features of the box.

1 indicates a bottom member, having joined thereto through the medium of the scored lines 2 and 3 the end members 4 and 5 respectively, and through the medium of the scored lines 6 and 7, the side members 8 and 9 respectively. The end member 4 is scored as at 10 to provide a tongue 11, while the end member 5 is scored as at 12 to provide a tongue 13. The side member 8 is scored as at 14 and 15 providing the flaps 16 and 17, and the side member 9 is scored as at 18 to form the flap 19, as will be clear from Fig. 1 of the drawings.

The side member 9 is also scored as at 20 providing an interior bracing end member 21, to which is joined, as by scored line 22, the reinforcing top member 23, which in turn is scored as at 24 to form a second bracing end member 25. The side member 9 has further connected to it, as by the scored line 26, the outer top member 27, to which is joined as by the scored line 28, a bracing or reinforcing side member 29, which in turn is scored as at 30 to provide a flap 31, which is scored as at 32 and 33 to form the ears 34 and 35.

The flaps 16 and 19 are completely severed from the end member 4 along the lines 36 and 37 respectively, while the flap 17 and the member 21 are severed from the end member 5 along the lines 38 and 39 respectively. In like manner the reinforcing top member 23 is severed from the exterior top member 27 and the reinforcing side member 29 as by the cut 40, and the ear 35 is severed from the end member 25 along the line 41, as will be clear from the drawings.

The manner of folding the blank shown in Fig. 1 to form the finished carton will be clear from Figs. 2 to 9 of the drawings, but may be briefly set forth as follows:

The member 23 is first bent upwardly along the scored line 22 until it is substantially at right angles to the member 21, which member is then folded along the line 20 until it is substantially at right angles to the side member 9. The said side member 9 is now folded along the line 7 to form substantially a right angle with the bottom member 1, and when the members 29 and 31 have been bent along the lines 28 and 30 respectively, the parts will be substantially in the positions illustrated in Fig. 2.

The top member 27 is now folded along the line 26, and the member 31 tucked under the reinforcing end members 21 and 25, as shown in Fig. 3. The side member 8 is then folded up against the reinforcing side member 29, along the line 6, and the flaps 16 and 19 folded along the lines 14 and 18 respectively, as shown in Fig. 4. The flap 17 is next folded along the line 15, against the reinforcing end member 21 and the tab 35 folded along the line 33, against the flap 17, as shown in Fig. 9. The end member 5 is now bent along the line 3, and the tongue 13 bent along the line 12 and tucked in be-

tween the outer top member 27 and the reinforcing top member 23, as shown in Figs. 5 and 6. The reinforcing end member 25 is now bent down along the line 24 from the position shown in Fig. 4 to that shown in Fig. 5, and the flap 34 bent upwardly along the line 32, as shown in said figure, after which the end member 4 may be bent along the line 2 and the tongue 11 bent along the line 12 and inserted between the top members 23 and 27, as shown in Fig. 6, thus completing the box.

A notch 45 may be provided in the member 27 to accommodate the finger for the purpose of facilitating the withdrawal of the tongue 13 when it is desired to remove the contents of the box.

A carton made in accordance with the above disclosure is not only self-locking *i. e.*, it requires no glue or other adhesive to hold it in place after it is set up, but owing to the various reinforcing members, such for example as the members 21, 23, 25, 29, etc., I find it sufficiently rigid to withstand all ordinary handling without breaking down. Further, the use of the said members 21, 23, 25, 29, etc., entirely closes all cracks, which taken in conjunction with the absence of all adhesives renders the box particularly adaptable for holding powdered or granular substances, such as foodstuffs and the like.

It is obvious that those skilled in the art may vary the details of construction, as well as the arrangement of parts without departing from the spirit of the invention and therefore I do not wish to be limited to the above disclosure, except as may be required by the claims.

What I claim is:—

1. In a self locking paper box the combination of a bottom member; a plurality of side members integral with said bottom member; a plurality of end members also integral with said bottom member; an outer top member integral with one of said side members; a reinforcing side member integral with said top member; a flap having an ear at each end integral with said reinforcing side member; a reinforcing end member also integral with one of said side members; and a reinforcing inner top member provided with a second reinforcing end member and integral with said first mentioned reinforcing end member, substantially as described.

2. In a self locking paper box the combination of a bottom member; a plurality of side members, each provided with a flap, integral with said bottom member; an outer top member integral with one of said side members; a reinforcing side member integral with said top member; a flap having an ear at each end, integral with said reinforcing side member; a reinforcing end member also integral with one of said side members; a reinforcing inner top member provided with a second reinforcing end member and integral with said first mentioned reinforcing end member; and a plurality of outer end members integral with said bottom member, adapted to coact with said ears and said side member flaps, and each provided with a tongue adapted to coact with said inner and outer top members and with said ears and flaps to lock the parts, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses.

JOSEPH B. HEISER.

Witnesses:
HARRY S. KNIGHT,
H. W. ROMBACH.