

June 24, 1930.

O. B. BERTON

1,765,964

LATCH FOR PAPER BOXES

Original Filed June 30, 1926

Fig. 1.

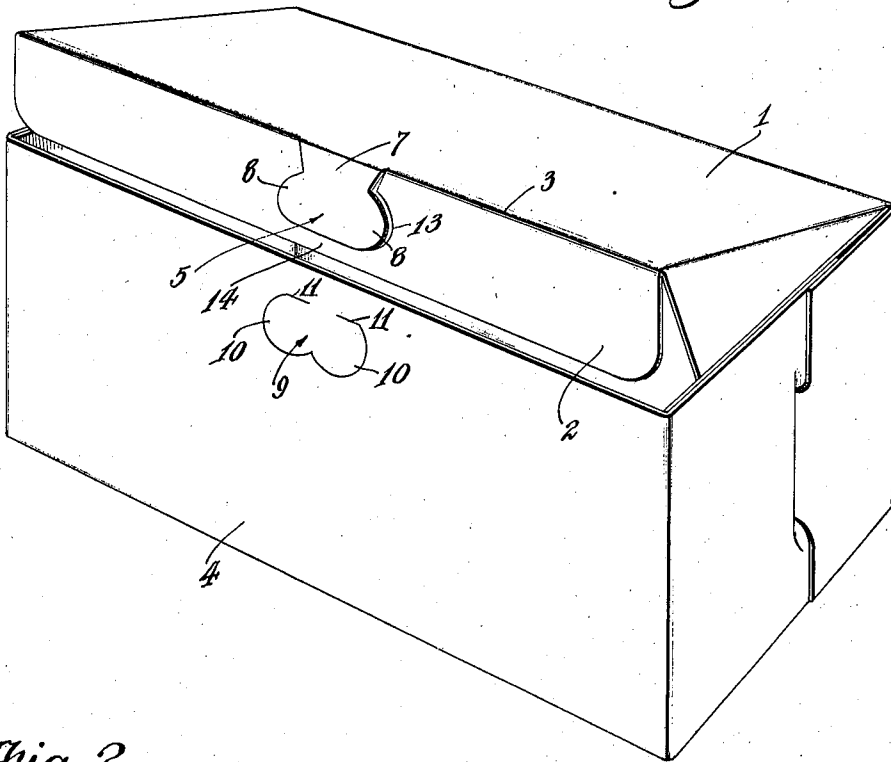


Fig. 2.

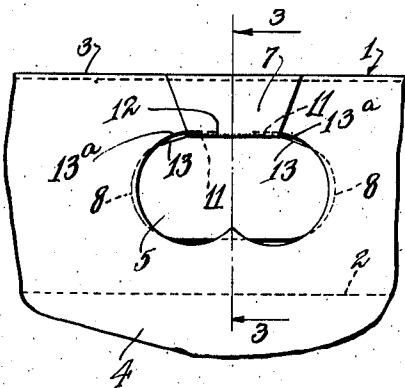


Fig. 3.

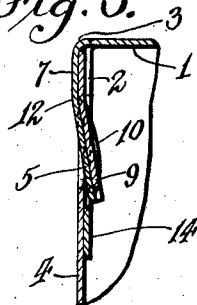
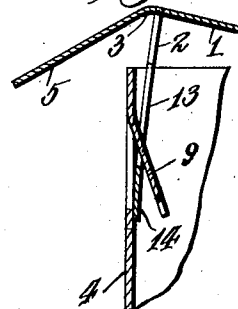


Fig. 4.



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LATCH FOR PAPER BOXES

Continuation of application Serial No. 119,527, filed June 30, 1926. This application filed October 8, 1928.
Serial No. 311,011.

This invention relates to small boxes such as are made of light cardboard for carrying edibles. The general object of the invention is to provide simple means for enabling a box of this kind to be latched or locked closed, so as to avoid the necessity for tying it in a closed condition with cord or tape.

The invention is particularly applicable to the type of box in which the cover is provided with a front flap received in the space immediately back or in front of the forward wall. The invention contemplates a correlated construction for the flap and the forward wall of the box, which will permit an interlock or latch to be readily produced between the same, and which will operate to hold the cover closed.

The present application is a continuation of applicant's pending application Serial Number 119,527, filed June 30, 1926.

Further objects of the invention will appear hereinafter.

The invention consists in the novel parts and combination of parts to be described hereinafter, all of which contribute to produce an efficient latch for paper boxes.

A preferred embodiment of the invention is described in the following specification, while the broad scope of the invention is pointed out in the appended claims.

While the invention is applicable to a cardboard box constructed in any manner, in the present specification I have illustrated the improvement as applied to a common type of "knock-down" or folding box. Boxes of this type are carried in stock in a flat condition but are creased so that they can readily be folded up into box form when desired.

In the drawing:

Figure 1 is a perspective of a box embodying my invention.

Figure 2 is a front elevation of the upper portion of the forward wall of the box in the vicinity of the latch.

Figure 3 is a vertical section taken about on the line 3—3 of Fig. 2. This view shows the parts of the box in the relation which they have when the box is in its locked condition.

Figure 4 is a view similar to Fig. 3 but showing a secondary locking position which keeps the box from coming open in case the first latching or locking position should fail.

In practicing my invention, I provide the cover of the box with a tuck or flap which is in a position to become juxtaposed on an adjacent wall of the box, and this tuck has a tongue cut in its material which is adapted to be pushed inwardly, that is to say, the adjacent wall of the box is constructed so as to permit the tongue to be forced backwardly through the wall of the box so as to latch or lock the tongue in the opening. In other words, in alignment with the tongue formed in the tuck, I provide a somewhat similar tongue the outline of which is formed by an incision passing completely through the wall of the box and this latter tongue is adapted to be pushed inwardly by pressure exerted upon the tongue of the tuck, thereby forcing the latching tongue through the opening formed by the displacement of the tongue in the wall. The operation of forcing back the tongue of the wall can be performed at the same time as the displacement of the tongue in the tuck. Hence, the cover of the box can be latched or locked in place merely by exerting pressure at this point on the box.

In order to accomplish this in a box of the type illustrated in Fig. 1, the box is formed with a cover 1 having a tuck or flap 2 which hangs down from its forward edge 3. When the cover is closed, this flap 2 is juxtaposed over the upper edge of the front wall 4 of the box. This flap is disposed back of the wall.

In applying the invention to such a box, I cut the material of the tuck so as to form a tongue 5, that is to say, the lower portion of the tongue 5 is relatively wide and the upper portion is formed with a relatively narrow neck 7, the said neck 7 being located between two rounded lobes 8 which form the ends of the body of the tongue.

It should be understood that the tongue is merely cut in the flap when the box is manufactured, but it is not pressed out of alignment with the plane of the tuck until the

box is put in use. A somewhat similar tongue 9 is formed in the material of the front wall 4 of the box, in a position to align with the tongue 5 when the tuck 2 is in position. This tongue 9 is elongated horizontally and formed with two end lobes 10. This tongue, however, has no neck, but at their upper sides the lobes 10 terminate in incisions 11 through the material (see Fig. 1). The tongue 5 is slightly larger than the tongue 9.

When the cover 1 of the box has been closed, if it is desired to latch the same closed, it is simply necessary to slip the tuck into the box with the tongue 5 overlying the front wall 4 at its upper edge; and then to press with one's thumb upon the tongue 5. This will swing the lower edge of the tongue 5 inwardly and the material of the tongue will "break" or crease slightly at about the location of the horizontal line 12 (see Fig. 3), which is about in line with the incisions 11.

The incisions 13 extend in toward the vertical axis of the tongue 5.

As the tongue 5 is forced inwardly, it will engage the tongue 9 and break it out of the plane of the wall 4 so as to force it back into the interior of the box, thereby displacing it from the opening in which it lay. The tongue 5 will in this way be made to project inwardly beyond the plane of the tuck 2, interlocking itself into the opening formed in the tuck and thereby locking or latching the cover in its closed position.

By reason of the incisions 11 the lobes 10 can be projected back very readily by pressure on the lobes 8, so that the edges 13 of the latch 5 will catch under the edges 13^a of the opening formed by displacing tongue 9.

A secondary locking position for the box is illustrated in Figure 4 in which the tongue 5 is represented as having become pulled out of latching position. If this should occur, the cover 1 is prevented from rising by the tongue 9 that projects rearwardly through the opening 13 left by the displacement of the tongue 5. In other words, the bar 14 of the material of the tuck below the tongue 5 will be caught under the inwardly inclined tongue 9.

What I claim is:

1. A box of this kind described, having a forward wall and having a cover with a tuck juxtaposed back of the said forward wall when the cover is in its closed position, said tuck having a tongue cut in the material thereof projecting toward the free edge of the tuck, said tongue having its greatest width toward its free end, and a tongue formed in the material of the said front wall having its free edge disposed downward and located so that when the tuck is superposed on the front wall, the said second named tongue will lie in juxtaposition with the first

named tongue, said tongue in the said wall having substantially the same shape and size as the first named tongue adjacent its free end, said tongues being capable of being forced rearwardly together into the interior of the box so as to lock the tongue of the tuck into the opening formed by displacement of the tongue in the wall.

2. A box of the kind described having a front wall and having a cover with a tuck juxtaposed behind the said front wall with the cover in its closed position, said front wall having a horizontally elongated tongue cut in the material thereof attached at its upper edge to the wall and having a lobe projecting substantially horizontally at each end, said tuck having a tongue cut in the material thereof horizontally elongated at its ends so as to present two lobes corresponding to the first named lobes and received on the outer side of the said front wall so as to overlie the same when the box is in its closed position, said last named tongue further having an upper portion extending upwardly from said lobes and attached to the tuck at the upper edge of said tuck, said tongues, when the box is in its closed position, superposed upon each other and extending in the same direction from their attached ends and being capable of being forced inwardly together toward the interior of the box with the tongue of the front wall inclining inwardly and downwardly to lock the second named tongue in the opening produced by the displacement of the first named tongue.

3. A box of the kind described, having a forward wall and having a cover with a tuck juxtaposed back of the said front wall when the cover is in its closed position, said tuck having a tongue cut in the material thereof extending down from the upper edge of the said tuck toward the free edges of the tuck and having its greatest width toward its free end, and a tongue formed in the material of the said front wall projecting downwardly so as to project in the same direction as the first named tongue and located so that when the tuck is superposed on the front wall, the second named tongue will lie in juxtaposition with the first named tongue, said tongues being capable of being forced rearwardly together toward the interior of the box so as to lock the tongue of the tuck into the opening formed by displacement of the tongue in the wall.

4. A box of the kind described having a front wall and having a cover with a tuck juxtaposed behind the said front wall with the cover in its closed position, said front wall having a horizontally elongated tongue cut in the material thereof connecting at its upper edge to the material of the front wall and having a lobe projecting substantially horizontally at each end, said tuck having a

tongue cut in the material thereof connecting at its upper edge to the material of the tuck, said tongue being horizontally elongated at its lower end and having two lobes corresponding to the first named lobes and lying on the outer side of the said front wall so as to overlie the same when the box is in its closed position, said last named tongue further having an upper portion extending upwardly from said lobes to the upper edge of said tuck, said tongues when the box is in its closed position, being capable of being forced inwardly together toward the interior of the box to lock the second named tongue in the opening produced by the displacement of the first named tongue.

5. A box of the kind described having a forward wall with a tongue formed in the material thereof below the upper edge of the wall, the upper edge of the said tongue being attached integrally to the material of the wall so that the tongue can be forced inwardly, bending at its upper edge, said tongue having laterally projecting lobes at its ends, said box having a cover with a tuck integral therewith and extending down from the forward edge of the cover, said tuck having an integral tongue formed therein connecting at its upper edge to the cover at its forward edge so as to coincide with the connecting edge of the tuck and cover, said last named tongue being of reduced width toward its lower end and having laterally projecting lobes at its lower end.

Signed at Los Angeles, Calif., this 1st day of October, 1928.

ORVAL B. BERTON.