(No Model.)

H. S. MUNSON.

PAPER BOX.

No. 602,664. Patented Apr. 19, 1898.

Fig. 1.

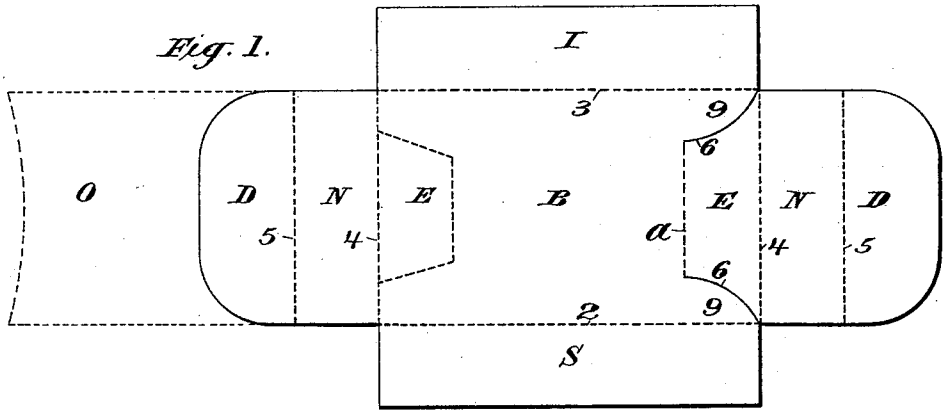


Fig. 2.

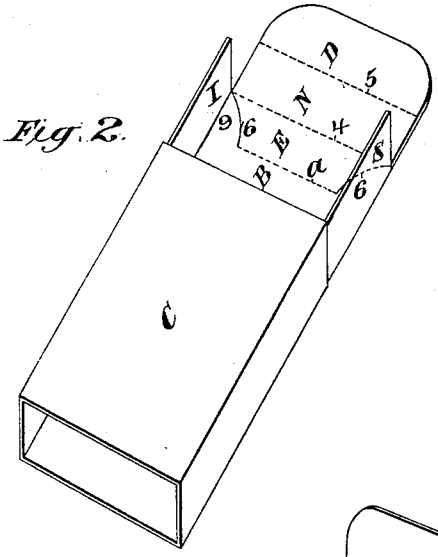


Fig. 3.

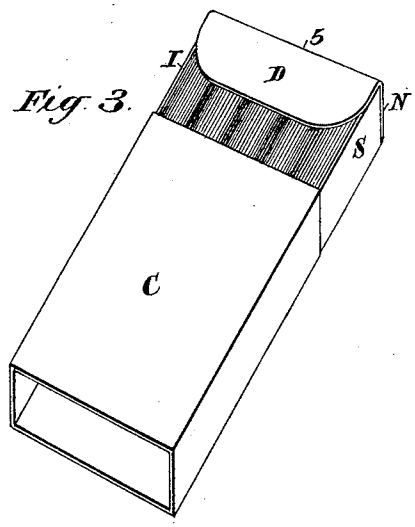


Fig. 4.

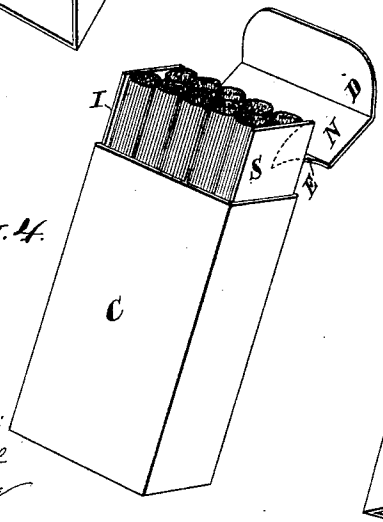
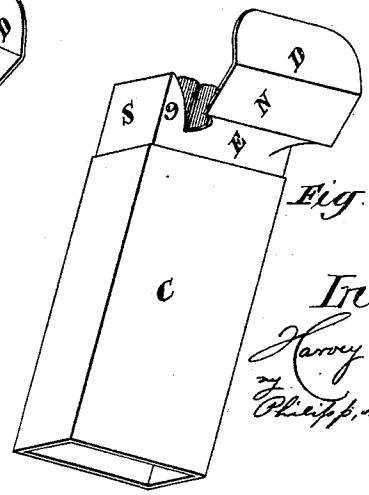


Fig. 5.



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UNITED STATES PATENT OFFICE.

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PAPER BOX.

SPECIFICATION forming part of Letters Patent No. 602,664, dated April 19, 1898.

Application filed March 23, 1897. Serial No. 628,864. (No model.)

To all whom it may concern:

Be it known that I, HARVEY S. MUNSON, a citizen of the United States, residing at New Haven, county of New Haven, and State of Connecticut, have invented certain new and useful Improvements in Paper Boxes, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

These improvements relate generally to paper boxes, and more especially to that class of them known as "slide-boxes," wherein a tubular cover, usually rectangular in cross-section, is provided with a tray-like container capable of sliding therein and which has its bottom extended to form end-closing flaps that are separated from the sides, so as to be capable not only of being bent upwardly and inwardly and have its end tucked into the cover to close the box, but may be projected from the inclosing tubular cover and have the main portion of its end moved aside or out of alinement with the cover, so as to expose the contents of the box, and thus enable a part or the whole of the same to be removed by one's fingers. This class of boxes is extensively used for containing a quantity of cigarettes, cheroots, and like articles requiring in their use to be removed from the box one at a time by being grasped between the fingers. As heretofore constructed, the movable part of the end has been separated from the sides of the container by cuts or incisions made on the line of folding or union between said sides and bottom, by which structure the extreme ends of the sides become free, being then a single ply of thin unsupported paper-box material readily movable by contact with the fingers and liable to be thus pressed against the contents of the box to its injury, or to be pushed outwardly, and thus be bent so as to obstruct the closing of the box. The especial object of this improvement is so constructing the tray-like container as to avoid this objectionable feature, although its bottom at the end is divided so that a considerable portion of it is movable with the end flap laterally away from the contents of the box to so expose them that a part or the whole may be grasped by one's fingers for ready removal. In my improved construction the lines separating this portion of the bottom are made wholly within the bottom, so that a stable structure of the whole is maintained, and the exposed ends of the sides instead of being unsupported are each united to the bottom by an intact line of fold, and a right-angular structure is thus formed of such great strength that the sides are capable of resisting any pressure due to ordinary manipulation in handling the contents of the box, whereby they might otherwise be thrown out of position to interfere with such manipulation or obstruct the closing of the box.

The drawings in illustration of this improvement show in Figure 1 a plan view of an outspread or flat blank composing a tray-like container provided with this invention. Fig. 2 is a perspective view of said blank bent on its fold-lines to give it the form of a tray and the latter partially entered into the rectangular box-cover. Fig. 3 is a similar view exhibiting the same when the tray has received its contents and is ready to be wholly entered into the cover to form a closed package. Figs. 4 and 5 are similar front and rear views, each representing the box with its filled tray protruded at one end a suitable distance to expose the contents for the removal thereof, with the bottom so severed or divided as to enable the end to be turned aside and the contents of the box to be grasped between the fingers.

In carrying this improvement into practice any of the usual and cheap box materials may be used. The cover C is a rectangular tubular structure formed in any way and capacitated to receive a container adapted to slide within it. This container is constructed out of box material, which necessarily is cheap in character and of a thin body and yet possesses sufficient stability to adapt it for use as a container for the articles to be packed by the tray-like form it is given for use. To enable it to be given the tray form, it is creased along the lines 2 3, so that its long border portions may be bent up at right angles to constitute longitudinal sides S I, and it is creased transversely on the lines 4 5 to enable its portions projecting from the bottom ply B to form ends N N, partially-detached body portions E E, and outer end flaps D D. When this structure is bent upon the creased lines 2 3, the upturned sides S I will

be formed so that the tray-like container may slide into the cover, as appears in Fig. 2, and when the projecting portions N N at the ends are bent upon the creased lines 4 the upturned parts N N will form ends for the tray, as in Fig. 3, and when the projecting parts are further bent on the creased lines 5 5 the outer end flaps D D will lie parallel with the bottom B, as in said figure, and the package may be closed by sliding the tray wholly within the cover.

In order that the contents may in part or whole be conveniently removed when the tray-like container is pushed outward at one end to expose its contents for that purpose, as in Fig. 3, and so that the closing-flap D, end N, and part of the bottom ply B may be bent away from the contents, as in Figs. 4 and 5, and so expose the contents as to enable it or part of it to be grasped by one's fingers and yet not weaken the stability of the end portions of the sides S I, the bottom B of the container has its body divided by inward cuts, severing it on the lines 6 6, whereby central flaps E, extending the free ends, are formed, and braces 9 9 are provided which maintain a connection between the bottom and the sides by the intact fold-line between the two, whereby the main or central part of the bottom B, considered widthwise, is detached so as to be bent outward, as shown in Figs. 4 and 5, to free the contents for seizure by the fingers, while the tray-like container has its sides maintained as an integral part of the bottom ply throughout the extent of said sides by the braces 9 and thus continues a stable structure capable of retaining its form and preventing inward or outward bending or twisting by ordinary contact with one's fingers during the act of removing the contents or a portion thereof, and which braces 9 also act to maintain the exposed ends of the sides in their proper right-angular relation to the bottom ply of the container when the contents are partially removed, at which time said protruded sides, if unsupported, as formerly, would be liable by slight contact to be twisted or bent outwardly, and thus enable the closing-flap D to move inside of them and unduly press upon and injure the contents, such as paper-incased cigarettes. The braced two-ply right-angular ends of these containers, however, afford a structure of such strength that they remain in position to afford the lateral edges of the closing-flap D a complete bearing against them, and are stable enough so that pressure may be applied to their outer vertical faces in the act of closing the end and thus preserve the contents from such injury.

The preferred form of the line of severance in the bottom ply is from the outer extremities of the folding-lines 2 3 or folding-line union of the bottom and sides to points far enough within the body of the bottom ply as not only to detach that part of the bottom between them and enable it to be bent on or near the line indicated at *a*, but leave the angular braces 9 9 possessed of their normal strength and capable of resisting rupture, distortion, or bending. The structure at the right-hand end of Fig. 1 is the preferred form, and the line *a* may be a scored line, or the bottom may remain intact at this point for the reason that the material will bend sufficiently for the purpose.

In some cases, as where the contents are adapted to be removed as a whole, such as cakes of soap, or consisting of parts wrapped to constitute a single whole, when the finger-gripping space may be greatly diminished, it is obvious that the lines of severance in the bottom may be related to the sides, as is shown in dotted lines at the left of Fig. 1, when the braces 9 will have their strength greatly increased. The duplication in dotted lines of the structure whereby a part of the body E is made capable of being bent outward with the ends when opened has been introduced to show that both ends may be alike. The full lines are to indicate a mere closure for that end, and the dotted-line prolongation of the end flap D is to indicate that the same may be extended to form a long flap O, which will overlie the contents as a protection to them when the tray makes its sliding movements. It is apparent that this end closure may be applied to other classes of paper boxes than those employing a tubular cover and a container sliding therein; but the preferred embodiment of this invention is in connection with such slide-boxes. If applied to but one end of the box, it is obvious that the opposite end may be closed in any other suitable manner.

What is claimed is—

1. An end closure for paper boxes consisting of a tubular body from one ply of which projects a flap capacitated to cover the entire end of the body and overlap upon the opposite side of the box, said flap being partially disconnected from said ply by inward cuts 6, 6, that provide the opposite side walls with braces 9, 9, formed from said ply and uniting the side walls and said ply at the ends of said sides while admitting the turning back of said flap and a portion of said ply to expose the contents of the box, substantially as described.

2. A container for slide-boxes, consisting of a flat blank creased on the fold-lines 2, 3 to provide the sides of a tray-like structure and upon the lines 4, 4 and 5, 5, to provide it with end flaps formed on the bottom ply and capacitated to cover the entire end of the body and overlap upon the opposite side of the box, and having its bottom ply divided on the lines 6, 6, at one or both ends to provide its opposite sides with braces 9, 9, uniting them to the bottom ply at the outer ends of said sides while permitting the turning back of the flap and a portion of the bottom ply to expose the contents of the box, substantially as described.

3. The combination with a tubular cover or

inclosure therefor, of a container capable of sliding therein and consisting of a bottom ply to which sides and ends are united by folding-lines and to which ends tucking-flaps are connected by folding-lines, and which bottom is divided by cuts that provide braces 9, 9 connecting the bottom and opposite sides at the outer ends of the latter and render free a considerable portion of the end portion of the bottom, whereby it is capable of being turned back with the ends and tucking-flaps, substantially as described.

4. A box consisting of the tubular cover C and a container having the bottom B, sides I, S, closing means for one end, and at the opposite end having end N free from the sides and carrying flap D, and portion E of the bottom connected to the end N and partially separated from the rest of the bottom by cuts 6, 6 forming braces 9, 9 for the ends of the sides I, S and permitting the bottom portion E with end N and flap D to be turned back to expose the contents of the box, substantially as described.

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

HARVEY S. MUNSON.

Witnesses:
S. WINTHAL,
J. J. KENNEDY.