(No Model.)

W. H. ATKINSON.

METAL BOX.

No. 459,696. Patented Sept. 15, 1891.

Fig. 1.

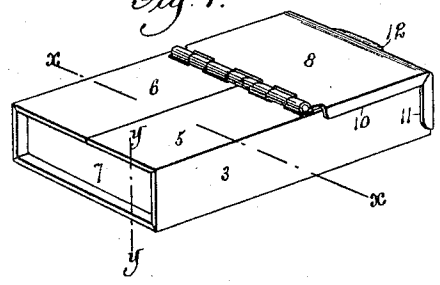


Fig. 2.

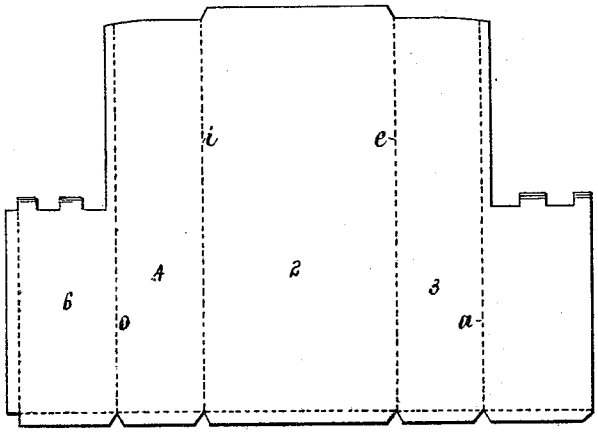


Fig. 4.

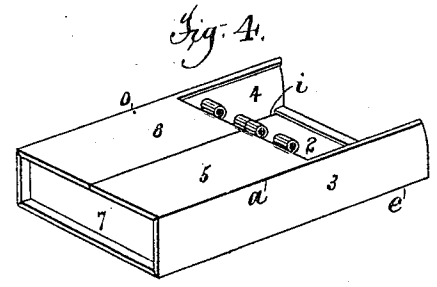


Fig. 3.

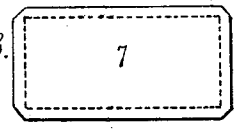


Fig. 6.

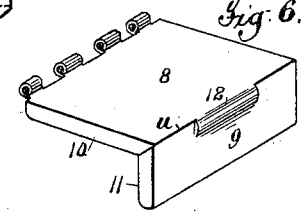


Fig. 5.

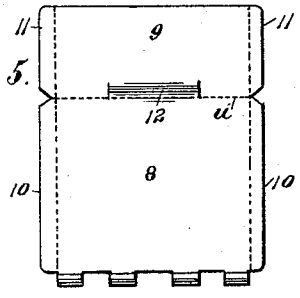


Fig. 7.

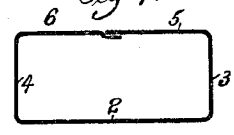
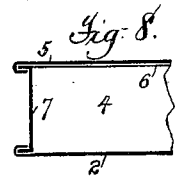


Fig. 8.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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METAL BOX.

SPECIFICATION forming part of Letters Patent No. 459,696, dated September 15, 1891.

Application filed May 8, 1889. Serial No. 310,029. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. ATKINSON, a citizen of the United States, residing at Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Metal Boxes, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

My improvement relates to that class of small packing-boxes chiefly used for packaging cigarettes, matches, and other articles that require in use to be removed separately from the box. Such boxes, in consequence of the low price at which the packaged article is sold, require to be furnished to the manufacturer of the goods to be packaged at a very low price, and hence must be produced very cheaply and yet possess the element of durability in a large degree. Much ingenuity has been exercised in producing such boxes, and as the base material must remain at about the same value, it follows that the cost of production will mainly depend upon the number of parts entering into the box and the conformation given them, whereby the number and kind of operations necessary to put them into box form are determined.

The invention is directed to simplifying both the parts and the mechanical manipulation of them; and it consists in the open-ended hinged covered box formed out of pieces shaped and united as will be more particularly hereinafter described in connection with the accompanying drawings, in which—

Figure 1 is a perspective view of the completed box. Fig. 2 is a view of the body-blank as cut from the sheet. Fig. 3 is a view of the bottom end blank. Fig. 4 is a view of body and end blanks when formed, shaped, and united as the body. Fig. 5 is a view of the cover-blank as cut from the sheet. Fig. 6 is a view of the same formed and shaped as the cover. Figs. 7 and 8 are details on lines *x y*.

This box is formed from tin or sheet metal of any kind suitable for the purpose. The blank out of which the box-body is to be formed is cut from the sheet metal in substantially the form shown in Fig. 2, its dimensions being such that it will provide the bottom section 2, the side sections 3 4, and the top sections 5 6. The blank is bent upon the lines *a*, *e*, *i*, and *o* to bring it into tubular form, which is secured by uniting the edges of its sections 5 6 by means of a lap-joint, as shown in Fig. 7. The end blank 7 has its edges turned at right angles on dotted lines, Fig. 3, to adapt it to close the rear end of the box, and it is held in place by its projecting edges being made to interlock with similar projections on the free edges of the bottom 2, sides 3 4, and top sections 5 6, formed by folding the blank on the dotted lines, Fig. 2, whereby lap-joints are formed. Thus formed, the box presents a tubular body for the reception of the articles to be contained in it, which articles will be supported throughout their entire length upon the bottom 2 and between the sides 3 4 in such manner that they may be readily removed from the extreme end or from the top, and in case the article is short it may be reached by inserting the fingers to the bottom end of the box. The cover of the box is formed from a blank that is bent upon the line *u* to provide a top portion 8 and an end portion 9, standing at right angles to each other. The edges have inward lips 10 11, and the end section may have a thumb-piece 12, formed by swaging, if desired. The front edges of the top sections 5 6 of the box and the rear edge of the top portion 8 of the cover are fashioned to form the ordinary hinge connection of loops through which a wire pintle passes. Thus constructed and attached, the cover is adapted to be swung up over and back upon the body-sections 5 6 to as completely expose the opening into the box as if no cover existed, and by a reverse movement this cover may be swung over the box end as in Fig. 1, to completely close the same and properly protect the contents.

It is of course preferable to make the bottom end 7 a detached piece; but it may be made integral with the body-blank and still retain most of the advantages of my improvement, although involving another operation, and hence as the most advantageous

construction is that which involves the least number of operations, the claim is to be considered as including a structure wherein for the purposes of evasion this end is formed as an integral part of the body-blank. It is also obvious that the line of union which unites the body-blank into tubular form may be longitudinally through the bottom section 2, or, in fact, upon any longitudinal line that may be selected, without departing from the invention.

It is to be observed that I am enabled to use a simple lap-seam to connect the edges of the body-blank, which is merely a union without much strength in consequence of the construction, whereby the hinge-joint centering the cover to the body forms a lock of great strength, thus adding to the simplicity of the structure in that the simplest form of seam is used.

What is claimed is—

1. The herein-described box, consisting of a body formed from a blank having the central portion 2, forming the bottom of the box, the two side portions 3 4, forming the sides of the box, and the side portions 5 6, of less length than portions 2 3 4, forming the top of the box, and end blank 7, said portions being united to constitute a tubular body having one end and a part of the top open, and a cover also formed from a blank constructed to be hinged to said body and shaped to close said open end and said partially-open top, said cover being provided with lips 10 11 to overlap the sides of the body when the cover is closed, substantially as described.

2. The herein-described box, consisting of a body formed from a blank having the central portion 2, forming the bottom of the box, the two side portions 3 4, forming the sides of the box, and the side portions 5 6, of less length than portions 2 3 4, forming the top of the box, and end blank 7, said portions being united by lapped joints to constitute a tubular body having one end and a part of the top open, and a cover also formed from a blank constructed to be hinged to said body and shaped to close said open end and said partially open top, substantially as described.

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

WILLIAM H. ATKINSON.

Witnesses:

T. H. PALMER,

G. M. BORST.