

(No Model.)

O. M. HAMILTON.

PAPER BOX.

No. 306,745.

Patented Oct. 21, 1884.

Fig. 1.

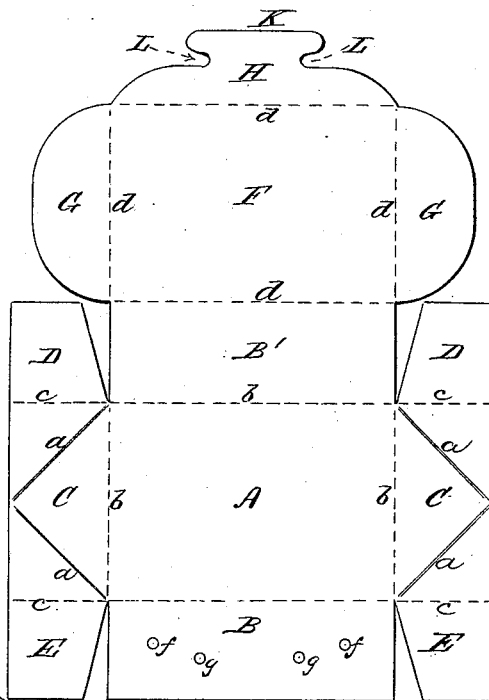


Fig. 2.

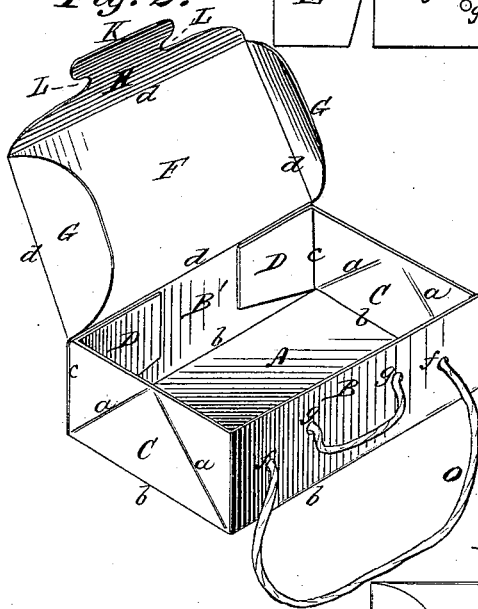


Fig. 4.

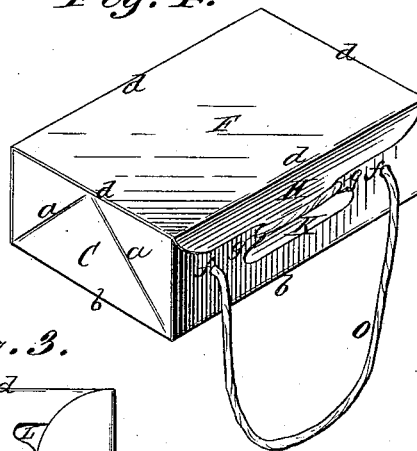
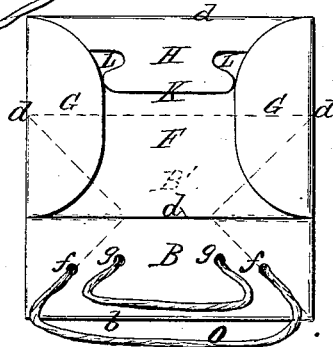


Fig. 3.



Witnesses:

Geo. W. Mather
J. M. Smith

Inventor.
Oliver M. Hamilton,
By his Attorney,
Walter S. Edwards

UNITED STATES PATENT OFFICE.

OLIVER M. HAMILTON, OF SPRINGFIELD, MASSACHUSETTS.

PAPER BOX.

SPECIFICATION forming part of Letters Patent No. 306,745, dated October 21, 1884.

Application filed June 26, 1884. (No model.)

To all whom it may concern:

Be it known that I, OLIVER M. HAMILTON, a citizen of the United States, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented a new and useful Improvement in Paper Boxes and in Means for Locking or Fastening the Same, of which the following is a specification.

My invention relates to improvements in the class of paper boxes commonly known as "knockdown" boxes, wherein the box is so constructed as to admit, when not in use, of its sides and other parts being laid flat into planes close to and parallel with that of its bottom, thus facilitating the storage and shipment of the same.

The object of my improvement is to provide a covered box parts of which shall contain the features of construction referred to, which box shall be cut or struck out of one piece of material, and shall be firm and strong when used as a box, and shall be provided with means whereby the cover or lid may be readily and securely fastened down when closed over the box, and the box conveniently handled or carried; and I also desire particularly to provide a box which may be easily changed from its knockdown to its complete shape, conveniently filled from the top, and quickly and securely fastened in such a way as to prevent same from collapsing under any circumstances. I attain these objects by means of the box shown on the accompanying drawings, in which—

Figure 1 is a plan view of the "form" of my covered box, showing its shape as it appears when cut or struck out of paper, straw-board, or other material composing it. Fig. 2 is a perspective view of said box ready for use as such, with its sides and ends bent up and united. Fig. 3 is a plan view of my box when folded or knocked down ready for packing and shipment; and Fig. 4 is a perspective view of said box, showing the cover closed and fastened by means of my device for securing the same.

I construct my box as follows:

Out of a single sheet of paper, straw-board, or other suitable material I cut or strike out in the usual well-known manner my whole

box and cover in one piece or blank, as shown in Fig. 1. That figure is intended to show what I regard as the essential feature of construction involved in the shaping of my box, and is not intended to limit my invention or any of its parts to the precise proportions therein shown, such proportions being of course variable according to the size and shape of box required.

The dotted lines in Fig. 1 indicate where the box-blank is to be bent to bring it into the shape desired for use; and, if required by reason of the weight or rigidity of the material, the form may be scored or creased in the usual well-known manner along each of said dotted lines, in order to facilitate bending the material into box shape.

The lines *a a* indicate creases or scores to be made in the material and extending obliquely across opposite ends of the box from corners in the lower edge thereof, as more fully shown in Fig. 2, the function of such creases *a a* being to enable the box to be knocked down flat, as hereinafter described.

A represents the bottom of the box; *CC*, its two ends; *B*, its front; *B'*, its back; *DD* and *EE*, projections from any two opposite sides of the box, cut as shown, so as to be readily bent and smoothly fitted against the inside of the other two sides of the box, where such projections are to be permanently secured by means of glue or any other retaining agency in the position shown in Fig. 2.

F represents the body or top of the box-cover; *G G*, projections from each side of such cover top, to be folded down at right angles to the plane of the top, and are so shaped as to admit of their entering the box when the lid or cover is shut down, whereby the tendency of the box to knock down at the creases *a a* is obviated when the same is empty or filled with light and easily-displaced contents.

H is a projection from the front of the top *F*, to be bent down against the outside of the front *B* when lid or cover *F* is closed, and said projection *H* is so shaped as to present a head, *K*, with a comparatively narrow neck, *L L*, the narrowest part of which is cut so as to fit exactly between the string-holes *g g* when lid is closed, as shown in Fig. 4.

ff are additional string-holes in the front B. Having cut the form of the box and scored or creased it, as described, the form is bent up along the dotted lines, so as to conform it to the shape shown in Fig. 2, and the projections D D and E E are permanently secured by glue or any other suitable agency, as aforesaid, to the inside of the back B' and front B, respectively, as described. A line, O, of any desired form or material, is next inserted or threaded through the holes *g g f f*, and its ends permanently united to each other on the inside of the box; or one or both of the ends of the line O may be fastened to the inside of the front of the box, the arrangement of the line relatively to the holes being such as to present two loops on the outside of the front of the box B, one of which loops extends from *g* to *g* and the other from *f* to *f*, while on the inside two loops may be presented, each extending from one of the holes *g* to one of the holes *f*. O thus becomes a line capable of being pulled through the holes to any desired extent without withdrawal.

I wish it understood that I merely prefer and do not limit myself to the making of the cover or lid F out of the same piece of material as the box itself, it being evident that such cover or lid might be made out of a separate piece of material and hinged or secured to the top of the back of the box in any of the numerous well-known ways without in any way modifying the functions which I claim for it. The box is now complete, and may be either knocked down for packing, or made use of as a box.

When knocked down for packing, the box assumes the shape shown in Fig. 3. The ends C C fold upon themselves along the scored or creased lines *a a*, thereby causing the front B and back B' to lie flat over the folded ends and in a plane substantially parallel to that of the bottom A, and the top of cover or lid F, being bent backward, lies flat against the outside of the back of the box B', while the cover projections G G and H readily bend inward and lie flat against the inside of such cover. Thus my box, when it is desired to pack it away, can be made to occupy a very limited space without any change or further arrangement of its parts than such folding of them as I have described. When it is desired to use the box as such, the reverse of the operation of knocking it down for packing away is performed—the ends C C are unfolded and pressed outward slightly, which serves to set the sides and creases sufficiently to hold up all the sides at right angles to the bottom. The contents of the box will also, of course, assist in keeping the sides raised, and the cover projections G G being forced down against the inside of the ends C C when the lid is closed, together with the projection H, when tied down, as hereinafter described, are sufficient to prevent the sides from folding inward, and thus serve to keep the box, when

empty, perfectly raised and in its proper box shape.

To lock or fasten the lid of the box it is only necessary to pull the line O so as to extend the loop between the holes *g g* sufficiently to enable the head K of projection H to pass between the loop and the outside of the box-front B, when, by pulling the loop of line O, which extends from hole *f* to hole *f*, the line may be drawn as tightly as desired against the neck L of said projection, and the cover or lid thus kept from opening until the line is released, while that portion of the line extending between the holes *f* becomes a convenient handle whereby the box may be readily carried, the weight of the box, when carried by such handle, operating to tighten the line, and thus more firmly secure the lid or cover from opening or the ends of the box from collapsing.

It is evident that the projection H, when tied down upon the box, as described, subserves the additional and highly-important function of absolutely preventing the box ends from folding inward and the box from losing its distended and proper shape, it being evident that the projection H, so fastened, renders it substantially impossible for the front of the box to approach the back, and thus allow the ends to fold.

What I claim as new, and desire to secure by Letters Patent, is—

1. A covered box whose bottom, ends, sides, and cover are in one piece of material, the sides and ends being bent up and permanently united, and both ends provided with creases or scores extending obliquely across them from corners in the lower edge of such ends, whereby the box may be knocked down flat, and the cover provided with projections at opposite ends thereof adapted to shut against inside of ends of box, and with a projection in front adapted to shut against outside of box-front and be there secured, by which projections the ends of the box are prevented from folding inward when the cover is closed, all as and for the purposes described.

2. The combination of a knockdown box with a cover or lid, F, fastened to one side of such box, and such cover provided with projections G G, adapted to close against the inside of opposite ends of box, and also provided with projection H, containing head K and neck L, adapted to be fastened to front of box by slip-line O, as and for the purposes described.

3. The within-described fastenings for the lids, covers, ends, or sides of knockdown boxes, consisting of a line threaded and running through perforations in the box, so as to present loops on the exterior thereof, one of which loops is adapted to engage with a suitably-shaped projection depending from the box cover or lid, and the other of which loops is adapted to be used in tightening the said engaging-loop.

4. The combination of the covered knock-
down box hereinbefore described with a cover-
fastening consisting of the line O, combined
with perforations *g g f f*, projection H, head
5 K, and neck L.

5. A covered knockdown box consisting of
bottom A, back B', front B, ends CC, provided
with folding scores or creases *a a* and projec-

tions D D E E, cover or lid F, provided with
projections G G and H, head K, and neck L, 10
line-holes *f f g g*, and line O, all substantially
as and for the purposes described.

OLIVER M. HAMILTON.

Witnesses:

GEO. LEONARD,

GEO. A. DENISON.