(No Model.)

A. L. ELLIS.

KNOCKDOWN BOX OR PACKAGE.

No. 385,451. Patented July 3, 1888.

Fig 1

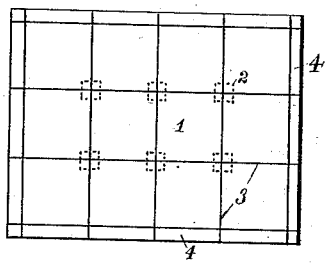


Fig 2

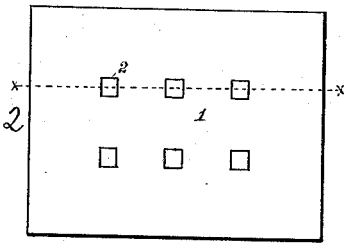


Fig 3

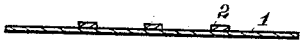


Fig 4

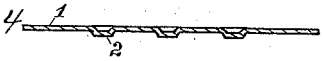


Fig 5

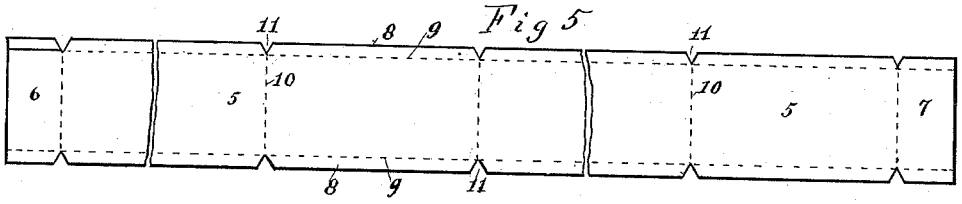
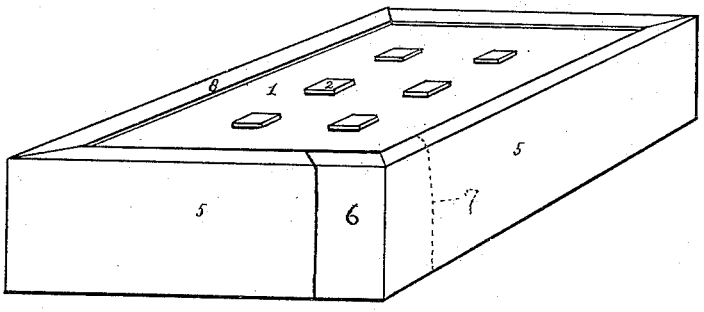


Fig 6



WITNESSES:
A. L. Gray.
G. Carson.

INVENTOR,
Adelbert L. Ellis.
BY Wm. W. & Dermott.
his
ATTORNEY.

UNITED STATES PATENT OFFICE.

ADELBERT L. ELLIS, OF PONCHO SPRINGS, ASSIGNOR OF ONE-HALF TO HARVEY W. FORMAN, OF DENVER, COLORADO.

KNOCKDOWN BOX OR PACKAGE.

SPECIFICATION forming part of Letters Patent No. 385,451, dated July 3, 1888.

Application filed January 11, 1888. Serial No. 260,429. (No model.)

To all whom it may concern:

Be it known that I, ADELBERT L. ELLIS, a citizen of the United States, residing at Poncho Springs, in the county of Chaffee and State of Colorado, have invented a new and useful Knockdown Box or Package and Method of Forming the Same, of which the following is a specification.

My invention relates to an improved blank for knockdown boxes and the improved box formed from such blank, and its objects are to furnish such a blank and resultant box simple and cheap in construction, easily put together and used, retaining its contents safely and securely for shipment and sale, yet so put together that the opening of the box or package to get at its contents, after its parts have once been assembled together and secured in place, results in the practical destruction of the box, prohibiting its repacking or further use; to which ends the invention consists in the features more particularly hereinafter described and claimed.

The ordinary type of box, and even of "knockdown box," hitherto used has consisted of a body and a cover, the body consisting of a base and sides attached thereto for retaining the contents. Such body was first filled with the material or articles designed to be contained therein, and the top or cover then placed upon or secured to the body.

In using my improved blank for putting up a package or forming a packed and closed box, a bottom piece without sides is first used, and upon it is placed the material or the articles which the finished package is to contain. Upon such material or article is then placed the top piece, also without sides, and the sides are then placed thereabout and secured to the top and bottom. These sides are formed of one continuous strip, either integral or formed of pieces joined together to form a strip long enough to surround the entire package. This strip has wings or extensions at its top and bottom adapted to be folded over and down upon the top and bottom of the package. Such strip is then passed around the proposed package, forming the sides thereof, and with its ends meeting, joining, or overlapping. The top and bottom wings or extensions thereof referred to are then folded over and secured upon the top and bottom pieces of the package, respectively, and are secured thereto by a proper paste or mucilage. Proper labels or any desired or suitable covering or coverings may then be pasted over the joints or crevices of the package or over the entire package, or over any desired part thereof. As is readily seen, this forms a package in which neither top nor bottom, or, in fact, any part thereof, can be removed without destroying a portion of the sides or other inclosing-walls, so that the package cannot be readily reconstructed and used again. This construction of the blank and the box and a finished package therefrom will be more readily understood by reference to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top view of the base or bottom of the box, with a cellular structure placed thereon; Fig. 2, an exterior plan view of a top or bottom piece preferably used; Fig. 3, a section on line *x x*, Fig. 2; Fig. 4, a modification of the device shown in Figs. 2 and 3; Fig. 5, a plan view of the strip used for the sides and ends of the box or package, and Fig. 6 a perspective view of the package or box packed and put together.

In the figures the reference-numeral 1 indicates a piece used either for the top or bottom, the base, or the cover of the box or package, the same form and construction being used for each. Such top or bottom piece is a plain parallelogram when the package is intended to be rectangular, or it may be of any contour to correspond with the shape intended for the finished box or package. Such piece has upon its outer side lugs or projections 2, arranged at spaces, points, or intervals hereinafter described. These may be pieces affixed to the body 1, as shown in Fig. 3, or they may be formed integral therewith, as shown in Fig. 4, by embossing or striking up or out of the cardboard or straw or paste board used such projections from the body thereof by means of dies or rolls. A bottom piece so constructed is laid down with its plain surface uppermost. Upon it is laid the material or articles to be

inclosed. For the better security thereof such should be contained in a cellular structure, which affords to each unit of the materials or articles its own separate nest or cell. So there is placed upon this base 1 the cellular structure 3, of the ordinary and well known form and construction. This cellular structure itself is somewhat smaller than the proposed box or package, the cell-walls extending beyond the walls of the outer tiers of cells, so as to leave a space, 4, between the cells and the ends and sides of the finished package. This structure being filled with the articles intended to be inclosed in the box or package, a piece, 1, is placed thereon for the top, the projections 2 being on the exterior thereof. The sides and ends are then formed of the strip 5, which may be a unitary piece, integral throughout its whole length, or which may be formed of two or more pieces united together. At proper intervals, to enable it to be folded around the top and bottom, it has transverse folding-creases 10. Upon its top and and bottom edges are the extensions or wings 8, along whose interior lines is the crease 9, to enable the wings to be folded down upon the pieces 1. Being passed around the package, its ends 6 7 may either overlap or meet, they being shown in Fig. 6 as overlapping. Though the ends 6 7 of the blank shown in Fig. 5 are long enough for overlapping, the excess may be cut off and the ends simply meet. The extensions or wings 8 are then folded down, over, and upon, and secured to the top and bottom by any suitable mucilage or cement. For further security a band of paper may be pasted entirely around the sides and ends, and the joints and corners covered thereby, and suitable coverings may be pasted upon the top and bottom.

The functions of the projections 2 are to prevent any two packages coming directly in contact upon the body of the top or bottom, to prevent any other packages being laid directly thereon, and prevent any jar or concussion being transmitted to the contents of the package. They are consequently located at points registering with the intersections of the cell-walls of the structure 3, by which they are firmly supported and to which they transmit the force of any weight or the effect of any jar or blow, the cell-walls then transmitting the same to the opposite side around and without injury to the contents of the cells. Along the outer walls of the outer tiers of cells these functions are performed by the wings or extensions 8, which lie, when in position, over such outer walls. Consequently the projections 4 are only used at points corresponding to the inner intersections of the cell-walls, as shown in Fig. 2. The annular ledge formed by the wings 8 and the projections 2 also cooperate in supporting the bottom and in keeping it from sagging. In Fig. 6 the parts thus constructed are shown assembled into a complete package. It is seen that a cheap simple package and one easily put together is the result—one which reliably retains and secures its contents, but which must practically be destroyed in order to get at its contents, preventing its repacking and reuse, which affords security both to the packer of goods in such packages and to the consumer—that the goods are the product of the packer whose name appears on the package, and that they were packed as the label or legend on the package purports. In addition, in their unassembled state the blanks occupy but small space, so that the blanks for a large number of packages or boxes may be packed in small bulk, so insuring economy in transportation while in that state. While this blank and the resultant box are especially adapted for use as an egg-package, the use thereof is not limited thereto; but they will be found equally applicable to many other kinds of goods, especially such as are of delicate structure or comparatively frangible, or which it is desired to form into packages with each article in its own cell or nest.

Having thus described my invention, what I claim is—

1. A box in its knockdown condition, consisting of the following elements: sideless rectangular top and bottom pieces, each having projections, as described, upon one of its faces, and a strip for forming the sides and ends, having side wings or extensions creased and adapted to be folded over upon the top and bottom pieces, substantially as set forth.

2. The combination, in a knockdown box, of sideless top and bottom pieces having projections upon their exterior faces, and a strip forming the sides and ends, having wings or extensions folded over upon and secured to the top and bottom pieces, substantially as set forth.

3. The combination, in a knockdown box, of sideless top and bottom pieces, having projections upon their exterior faces, an interposed cellular structure, and a strip forming the sides and ends, having wings or extensions folded over upon and secured to the top and bottom pieces, substantially as set forth.

In testimony whereof I have hereunto subscribed my name, in the presence of two witnesses, on this 10th day of December, 1887.

ADELBERT L. ELLIS.

Witnesses:
Z. F. WILBER,
B. L. POLLOCK.