

(Model.)

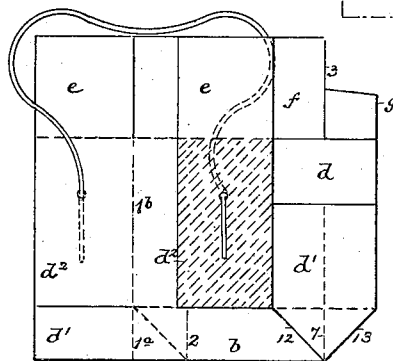
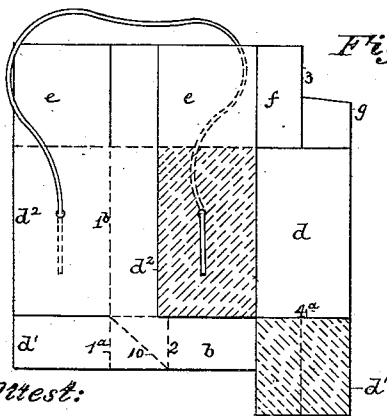
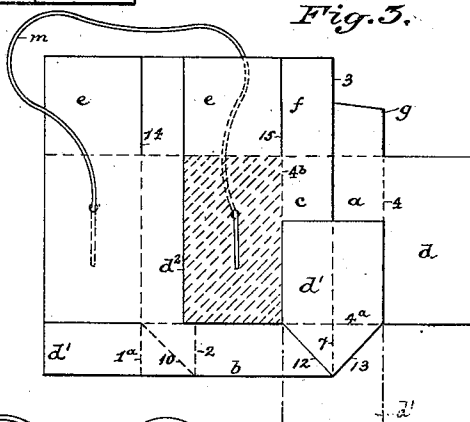
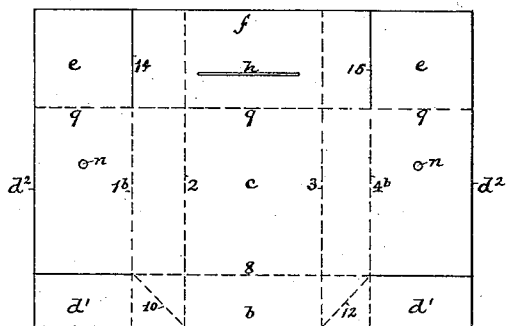
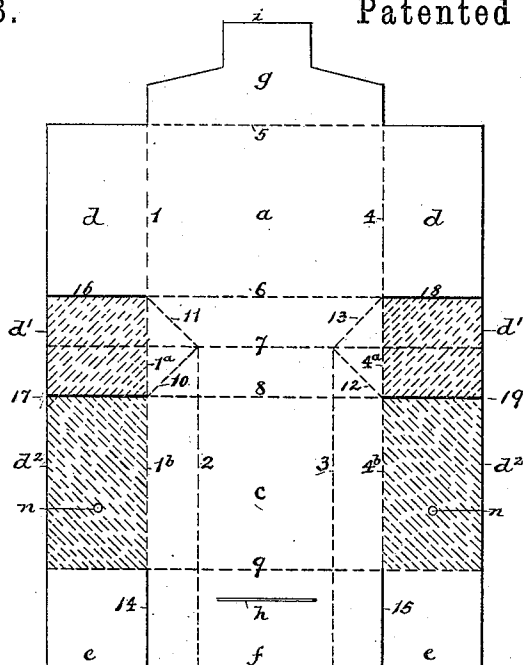
2 Sheets—Sheet 1.

G. O. BLOWERS.

PAPER BOX.

No. 356,093.

Patented Jan. 18, 1887.



Attest:

Andrew W. Steiger.
George B. Wilton.

Inventor:

George O. Blowers.
by Jacob Felbel,
Atty.

(Model.)

2 Sheets—Sheet 2.

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Fig. 6.

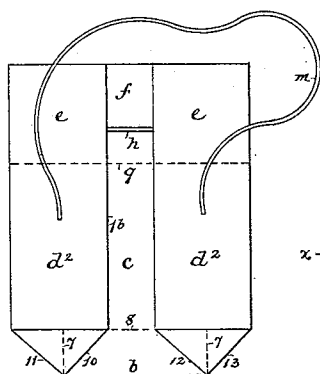


Fig. 7.

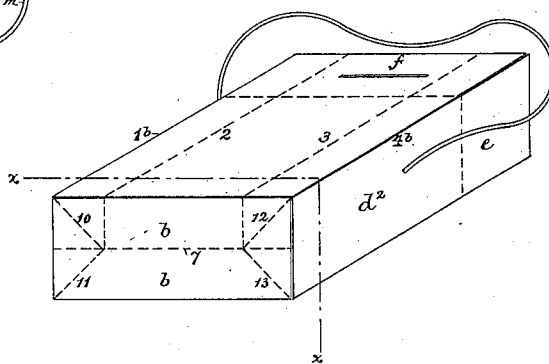


Fig. 8.

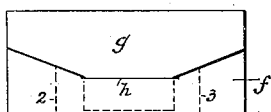
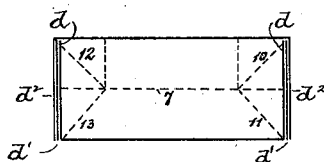


Fig. 9.



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UNITED STATES PATENT OFFICE.

GEORGE O. BLOWERS, OF CANAJOHARIE, NEW YORK, ASSIGNOR TO JAMES ARKELL, OF SAME PLACE.

PAPER BOX.

SPECIFICATION forming part of Letters Patent No. 356,093, dated January 18, 1887.

Application filed April 2, 1886. Serial No. 197,525. (Model.)

To all whom it may concern:

Be it known that I, GEORGE O. BLOWERS, a citizen of the United States, and a resident of Canajoharie, in the county of Montgomery and State of New York, have invented certain new and useful Improvements in Paper Boxes, of which the following is a specification.

My invention relates to paper boxes of the kind commonly designated "knockdown" or "collapsible" boxes. Previous to my invention boxes of this description have been made in a variety of ways; but in most all of them, so far as my knowledge extends, the construction has been such that the so-called "knockdown" box has consisted simply of a flattened tube with one end portion formed with flaps, tucks, or analogous devices adapted to be folded and interlocked together to close one end of the tube when distended or spread open in quadrangular form, and thus produce a box, and with the other end portion formed with similar devices adapted to be brought together and interlocked to serve as a cover or top to the box.

While the prior constructions of knockdown boxes have certain advantages over the more primitive "solid" or "made-up" boxes, (which usually have to be constructed over a block or former,) more especially in the particulars of cheapness of manufacture and economy of transportation and storage, they nevertheless possess objectionable features themselves which the solid boxes are free from.

It is the practice of box-manufacturers to deliver the knockdown boxes in the flattened tubular condition described, and for the consumer to open them out and form their bottoms as needed. This work requires a little time and dexterity in its performance, and during busy periods of trade the loss of this time and the required particularity of folding and interlocking are annoying incidents to the storekeeper. It will be understood, of course, that this formation of the bottoms of knockdown boxes has necessarily to be thoroughly accomplished, else the liability of the pulling apart of the flaps and the escape of the contents of the package.

My invention has for its main object the production of a knockdown box in reality—that

is to say, one adapted to be distended from a flattened condition—and present an actual box, with sides and bottom, ready to receive its intended contents; and my invention consists in certain features of construction which will be hereinafter more fully described, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a plan view of a blank cut, creased, and pasted, and adapted to be made up into a box embodying my invention. Fig. 2 is a plan view of the blank after having been doubled. Fig. 3 is a similar view after the first folding operation in forming one of the side seams of the box. Fig. 4 is a similar view after the second folding operation in forming said seam. Fig. 5 is a similar view after the third folding operation in forming said seam. Fig. 6 is an elevation of the finished box in a flattened condition. Fig. 7 is a perspective view of the box opened out for the reception of a commodity. Fig. 8 is a top view of the box after having been closed. Fig. 9 is a horizontal section taken at line *x x* of Fig. 7 and looking toward the bottom of the box.

In the various views the same part will be found designated by the same letter or number of reference.

A designates the blank as an entirety. It is cut or severed along the full lines, and scored, creased, or pierced at the dotted lines. The blank is of a length twice that of the intended box plus the bottom portion and closing-flaps. It is creased longitudinally on the lines 1, 1^a, 1^b, 2, 3, 4, 4^a, and 4^b, transversely on the lines 5, 6, 7, 8, and 9, and obliquely on the lines 10, 11, 12, and 13, and is cut or severed lengthwise on the lines 14 and 15, and crosswise on the lines 16, 17, 18, and 19. By thus creasing and cutting the blank portions or sections *a*, *b*, *c*, *d d*, *d' d'*, *d'' d''*, *ee*, *f*, and *g* are formed. In the completed box, *a* and *c* will form the broader sides, *b* the bottom, *d d*, *d' d'*, and *d'' d''* the narrower sides, and *ee*, *f*, and *g* the closing-flaps. Paste or other adhesive matter is preferably applied at the portions *d' d'*, for securing the parts together.

In order to make a box from a blank such as shown, I proceed as follows: First, I double

the blank by folding on the line 7 and bring it into the condition shown at Fig. 2, then fold on the line 3 and turn the part d^2 back onto the part c , turning also at the same time that portion of the side c lying between the lines 3 and 4 back onto itself. By reason of the presence of the diagonal creases 12 and 13, and by reason of the transverse cuts 18 and 19, extending inward as far as the line 4 4^a 4^b , when the detached hinged flap d^2 is turned back onto the part c , as just described, the short doubled detached portion d' , lying widthwise of the blank in Fig. 2, is spread open and drawn into the vertical position seen at Fig. 3, and a triangular-shaped fold is formed at its base. Preferably I should next turn back the portion d' on the line 4^a to the position shown by the dotted lines in Fig. 3, and as shown at Fig. 4, then fold on the line 4 the detached part d over and down onto the parts c and a , as shown at Fig. 4, then fold on the line 4^a the pasted part d' down onto the part d , as shown at Fig. 5, and then fold down on the line 4^b the pasted part d^2 and secure it to the flaps d and d' , as shown at Fig. 6; but after drawing the part d' into the vertical position shown at Fig. 3 it may, if desired, be left there and the part d folded upon it, instead of turning the part d' back and folding it upon the part d , as illustrated.

In the first-mentioned order of folding the flap d' in the finished box would come between the flaps d and d^2 , while in the last-mentioned order the flap d' would appear on the inside of the box, the flap d in the middle, and the flap d^2 on the outside.

Of course, the order of folding the detached flaps d , d' , and d^2 may be varied at pleasure, for it will be seen that any one of said flaps may be brought either to the inside, the middle, or the outside of the box, and, of course, the pasting of the flaps will be changed according to the order in which they are to be folded, as will be apparent without further explanation.

Having finished the folding and pasting of the flaps d , d' , and d^2 on one side of the blank, I then proceed to fold and paste those on the other side in like manner—that is to say, I turn back the parts d^2 and c on the line 2 and draw the detached part d' to a vertical position, then on the line 1^a turn back the pasted part d' , as illustrated at dotted lines at the right-hand side of Fig. 3, and as shown at Fig. 4, then on the line 1 fold down the detached flap d , then on the line 1^a turn down the pasted flap d' onto the flap d , and then on the line 1^b turn down the pasted flap d^2 upon the flaps d and d' . The box will then be complete and will be in the flattened condition illustrated at Fig. 6.

When it is desired to provide the box with a carrying string or tape, as m , I pass the ends of the same through holes or perforations n in the flaps d^2 to the inside pasted surfaces thereof, and confine said ends by adhesion between said flaps and those beneath them. This

is a very simple, expeditious, and efficient way of fastening the carrying-cord. In the flap f of the blank is cut a slot or opening, h , for the introduction of a tongue or tuck, i , formed integral with the flap g .

Upon opening the flattened structure (represented at Fig. 6) a box with four sides, a bottom, and closing flaps is presented. Such a box is represented at Fig. 7, and is in condition to be filled. After filling, the mouth end of the box may be closed by first turning down on the line 9 the flaps e e , then turning down on the line 9 the flap f upon the flaps e e , and then folding down on the line 5 the flap g upon the flap f , and inserting at the same time the tongue i through the slit or opening h , as shown at Fig. 8.

It will be seen that by my invention is provided a knockdown box that may be packed flat for shipment and storage, and that can be opened out by the consumer into condition for immediate use, without the necessity of first constructing its bottom, thus avoiding the loss of time and annoyances heretofore experienced; and the bottom of a box made according to my invention being solid and without interlocking flaps, it will be seen there is no liability of the escape of the contents of the box at that point, as is the case with knockdown boxes of previous constructions, the flaps of which, as explained, are liable to pull apart if not perfectly interlocked. In addition to the advantage of the ready-made bottom, my box possesses the further great advantage of being adapted to be perfectly opened from its flattened condition in almost an instant of time and without the introduction of the hand inside of the structure. It will also be observed that by my invention is provided a box that not only embodies the desirable features of both a knockdown box and a solid box, but possesses the capacity to be made more rapidly and economically than the last-mentioned kind of box, for, as will be understood, it may be made without a block or former, upon a flat or table surface by hand, or by means of machinery.

As there are a great variety of constructions of closing-flaps for paper boxes which may be used in connection with a box embodying my invention, instead of the flaps herein shown and described, I do not wish my claims to be understood as limited to any precise construction or form of closing-flaps.

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

1. A blank creased longitudinally, transversely, and obliquely on the lines 1, 1^a , 1^b , 2, 3, 4, 4^a , 4^b , 5, 6, 7, 8, 9, 10, 11, 12, and 13, and severed longitudinally and transversely on the lines 14, 15, 16, 17, 18, and 19, and adapted to be folded and pasted into a flattened paper box, substantially as shown and described.

2. A flattened paper box having a bottom portion, two pasted sides, and two unpasted sides, the said bottom portion and one of the said unpasted sides being creased in the man-

ner shown and described, and the said pasted sides being composed of the detached flaps d , d' , and d'' , as set forth.

3. A flattened paper box having a bottom
5 portion, two pasted sides, two unpasted sides, and separate closing-flaps, forming extensions of the sides, the bottom portion being creased longitudinally, diagonally, and transversely, as shown, and one of the unpasted sides being
10 creased longitudinally, as shown, whereby the structure is adapted to be opened out on the said crease lines into quadrilateral form, and to have its mouth end closed by the said closing-flaps, as set forth.

15 4. A flattened paper box having a bottom

portion, two pasted sides, two unpasted sides, and separate closing-flaps jointed to the said sides, the said bottom portion and one of the said unpasted sides being creased in the manner shown and described, and the said pasted
20 sides being composed of the detached flaps d , d' , and d'' , as set forth.

Signed at Canajoharie, in the county of Montgomery and State of New York, this 30th day of March, A. D. 1886.

GEO. O. BLOWERS.

Witnesses:

C. H. McKINSTRY,
CHAS. H. BLOWERS.