No. 712,434. Patented Oct. 28, 1902.

W. FISKE.

BOX.

(Application filed Jan. 8, 1902.)

(No Model.) 2 Sheets—Sheet 1.

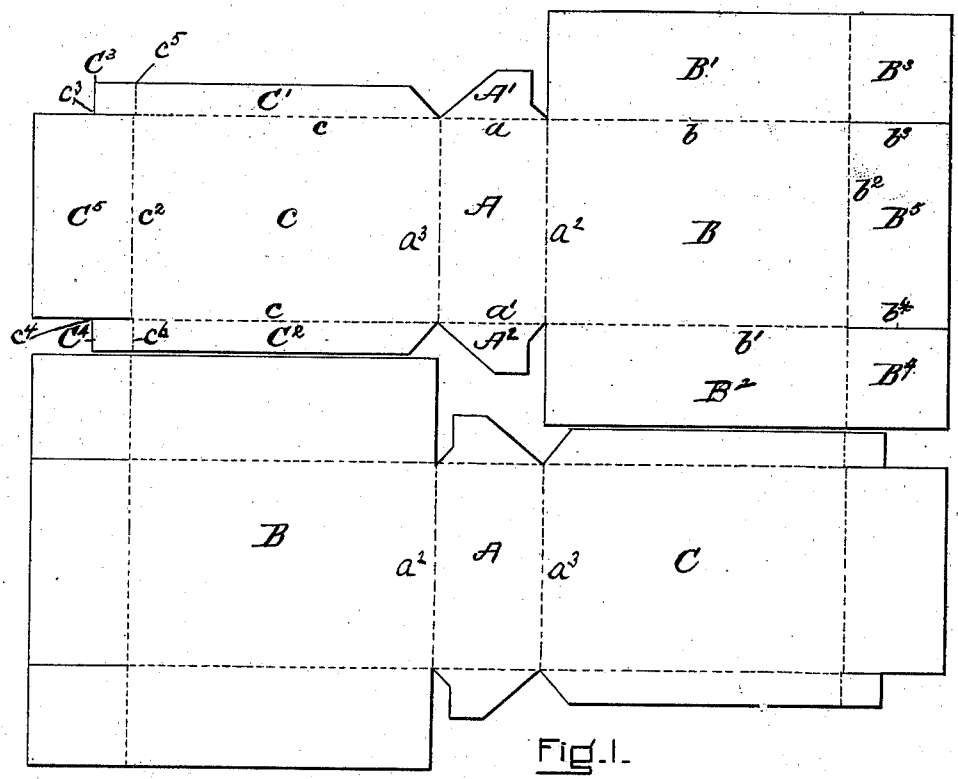


Fig. 1.

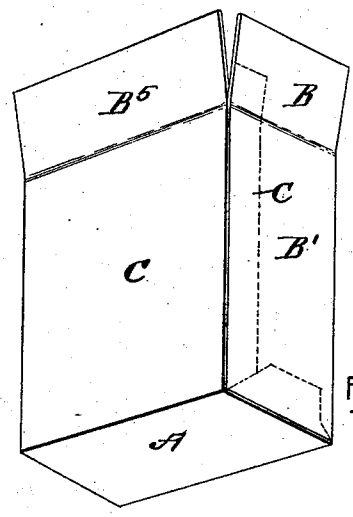


Fig. 2.

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

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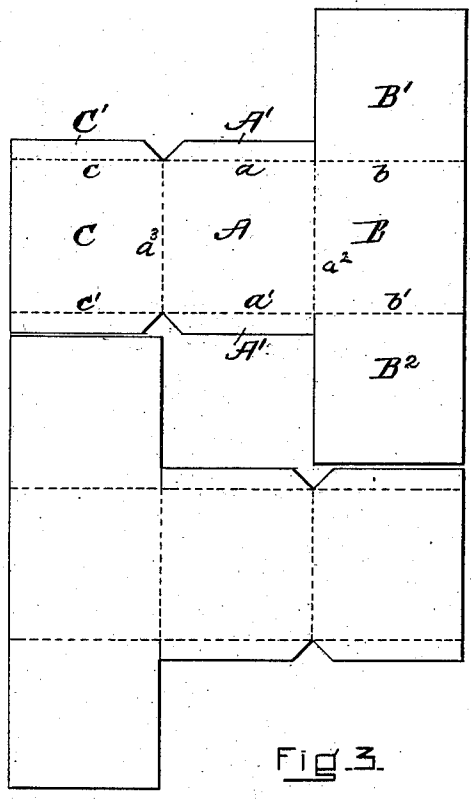


Fig. 3.

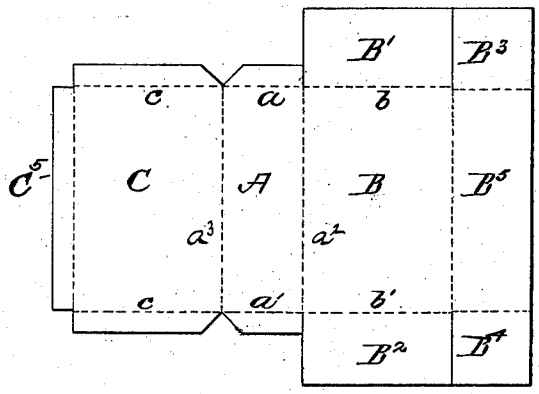


Fig. 4.

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

UNITED STATES PATENT OFFICE.

WILSON FISKE, OF MEDFORD, MASSACHUSETTS, ASSIGNOR TO THE AMERICAN TYPE FOUNDERS' COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

BOX.

SPECIFICATION forming part of Letters Patent No. 712,434, dated October 28, 1902.

Application filed January 8, 1902. Serial No. 88,863. (No model.)

To all whom it may concern:

Be it known that I, WILSON FISKE, of Medford, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Boxes, of which the following is a specification.

In the sale of granulated and pulverized substances like the various grain preparations, cereals, sugar, and the like, it is desirable that the substance be put up in a practically-seamless box, the edges or corners of which shall be so protected as to afford the least possible liability to leakage. A convenient form of box for this purpose is that shown in the drawings—namely, an oblong box the bottom of which is rectangular and all the sides of which are made by the turning in of portions integral with that bottom.

My invention relates to a box of such character, which is made from a single blank and comprises in itself not only a box portion, but preferably, also, flaps by which its open mouth may be securely closed. It will be evident, however, that if the flaps are omitted from the box two of these boxes may be used, one as a box proper and the other as a cover, the one telescoping into the top of the other.

The shape and construction of my box are such that blanks for making it may be cut with but little waste, and the general shape of the blank and of the box into which it is to be made are such as to readily lend themselves to treatment by machinery by means of which the box can be made at very little expense.

My invention will be understood by reference to the drawings, in which its preferred form is shown.

Figure 1 shows two blanks laid side by side, so arranged as to indicate the economy with which the blanks may be cut from a single strip. Fig. 2 shows in perspective a box made from my blank. Figs. 3 and 4 show other forms of blanks embodying my invention.

The box (of which a portion is hidden, the hidden portion being similar in all respects to the parts shown) has a bottom A, sides B C, ends B′ C′, and flaps B^3 B^4 B^5 C^3 C^4 C^5, adapted to be turned in to close the mouth of the box. In its general character the blank from which the box shown is formed consists, in its preferred form, of a middle portion A, which is to form the bottom of the box, a wide extension in one direction to form one of the sides B and the ends of the box, and a smaller extension to form the opposite sides C and the flanges to which the ends of the box are to be secured. This blank is scored from end to end by parallel lines b a c and b' a' c', substantially continuous, so that those portions of the blank which lie outside of the scored lines may be folded upon those scored lines, the lines determining the width of the box. I prefer that the lines b b' shall be slightly farther apart than the lines c c' in order to allow for the thickness of the material in the folding of the ends, as described below. The bottom A of the box is set off from the sides by means of the scored lines a^2 a^3. Scored lines b^2 c^2 determine the height of the sides of the box. The scored line b sets off from the side B that portion of the extension which is to form the end B′ of the box and the scored line b' sets off the corresponding portion B^2. The scored line c sets off from the side C the flange C′ and the scored line c' sets off the flange C^2. The lines a a' set off the ears A′ A^2 from the bottom A.

Where the box is complete in itself—that is, is not to be used with a telescope duplicate—the lines b b' are continued above the line b^2 by slits b^3 b^4, thus separating the extremities B^3 B^4 of the ends B′ B^2 from the extension B^5 of the side piece B. In the same way the scored lines c c' are extended by slits c^3 c^4, forming ears C^3 C^4, projecting from the flanges C′ C^2. For convenience in the ultimate closing of the box after it has been filled these ears C^3 C^4 may be made shorter than the extension C^5 of the side of the box. The score-lines c^5 c^6, which set off these ears C^3 C^4 from the flanges C′ C^2, are offset slightly from the scored line c^2 to provide for the thickness of the material in folding in these ears and the extension C^5 in closing the box. As intimated above, when this box is used as one member of a telescope box both the ears C^3 C^4 and the extension C^5 and the parts B^3, B^4, and B^5 are omitted. The important feature

of this blank is the narrow portions C' C^2, which when the box is shaped serve merely as flanges sufficiently wide to protect the edge which carries the scored line *c c'* and also to provide means against which the ends B' B^2 of the box may be stuck in making the box. It will be seen that under these circumstances the ends of the box are made of practically a single thickness of material, and an amount of stock equal in length to the height of the box and in width to the difference between the width of the flanges and the width of the ends is saved, it being possible, as is indicated in Fig. 1, to cut the blanks end to end, as there shown, so that the waste is reduced to a minimum. In making the box from this blank the ears A' A^2 are first turned at right angles to the bottom A. The side C is then turned at right angles to the bottom A and the flanges C' C^2 are then turned at right angles to the side C. The side B, with its end pieces B' B^2 is then turned at right angles to the bottom A, and gum having been first applied to the proper portions of the ends B' B^2 the ends B' B^2 are then turned at right angles to the side B, and the gummed portions come in contact with the outside of the flanges C' C^2 and the ears A' A^2, after which the parts are pressed together, so as to insure the adhering of the gum. One great advantage of this form of box when made from this form of blank is that it lends itself very readily to construction by machinery, the bottom A being clamped against a former, around which the parts C B may be folded in the order above described, after which the box having been submitted to pressure is withdrawn from the former and is then ready for use. I have referred to this blank as being "gummed" to form a box for the reason that that is the simplest way of permanently closing the edges. It is desirable that in boxes used for cereals and other like materials means shall be provided to absolutely close the bottom of the box, and therefore I have shown projections from the bottom which are turned in to prevent leakage therefrom in such cases. It will be understood, however, by those skilled in the art that there may be variations of this blank from the exact form shown in the drawings which shall come within the limits of my invention, for my invention relates especially to the closing of the ends of the box and the construction of the blank, whereby the greatest economy in the construction of the box may be attained. My invention therefore consists, broadly, of a blank comprising three sections arranged in line, the middle section forming the bottom of the box and the two other sections forming the sides thereof, said blank having lateral projections located on each side thereof to form the ends of the box, and narrower lateral projections, one located on each side of the blank, adapted to form attaching-strips, by means of which the ends are fastened in place. The box made from this blank is therefore of substantially one thickness of material, except where narrow attaching-surfaces overlap the end pieces, and is the most economical now known to me, for the blank can be cut with but little waste and the box when made contains no superfluous material. It is also evident that the blank to form a box of the general character above described need not be shaped or proportioned as shown in the drawings. The portion termed the "bottom" may be made larger in proportion to the total length of the box, and, in fact, may be finally used as a side or end of the box. So, also, the closing-flaps, which are shown of substantially the same height, may be of different heights. One flap—for example, the flap C^5—may be only wide enough to serve as a top flange, to which the wider flap B^5 may be attached. These differences of proportion have no relation to my invention, which, as I now believe, lies in the general character of the blank and a box as above described and not in these details.

I have used the term "score-line," as blanks are often scored to allow them to be easily bent; but this may be done by creasing or damping or with some kinds of stock without any preliminary process, in which latter case what I have termed "score-lines" become imaginary lines on which the blank is to be bent in making up the box.

What I claim as my invention is—

1. A box-blank comprising three sections, the middle section adapted to form the bottom of the box, the other two sections being adapted to be folded at right angles thereto to form the sides of the box, said blank being provided with two lateral projections, one located on each side of the blank to form end pieces for the box, and also being provided with two narrow attaching-strips, one located on each side of the blank and each projecting from one of said side sections, said attaching-strips being adapted to engage and close adjacent surfaces of the box when made up, whereby a box may be formed from said blank of a substantially single thickness of material, as described.

2. A box-blank comprising three sections, the middle section adapted to form the bottom of the box, the other two sections being adapted to be folded at right angles thereto to form the sides of the box, said bottom section being provided with projections adapted to be folded at right angles thereto to form ears to engage with the end pieces, said blank also being provided with two lateral projections, one located on each side of the blank to form end pieces, and two narrower projections, one located on each side of the blank each projecting from a side section, said attaching-strips being adapted to engage adjacent surfaces of the box when made up and form gumming-strips therefor, whereby a box may be formed of a substantially single thickness of material, as described.

3. The one-piece rectangular box above de-

scribed made of pasteboard or the like, having a bottom provided with two projections therefrom, two sides integral with said bottom, two ends and two gumming-strips, said ends being integral with said sides, and each gumming-strip being immediately integral with one of said side sections and disposed to close the free edge of one of said ends against its adjacent side and thus close the edges of the box, whereby a rectangular box will be formed with a solid bottom and of substantially one thickness of material throughout, as described.

4. The one-piece box above described made of a single piece of pasteboard or the like, and comprising a bottom, two side sections, two end sections, each integral with one of said side sections and closing one end of the box, and two narrow attaching-strips, each being integral with one of said side sections and each attaching the otherwise free edge of an end section to the opposing edge of a side section, whereby said box is made of a substantially single thickness of material except along its closed edges, as described.

In testimony whereof I hereunto set my name this 31st day of December, 1901.

WILSON FISKE.

Witnesses:
GEORGE O. G. COALE,
M. E. FLAHERTY.