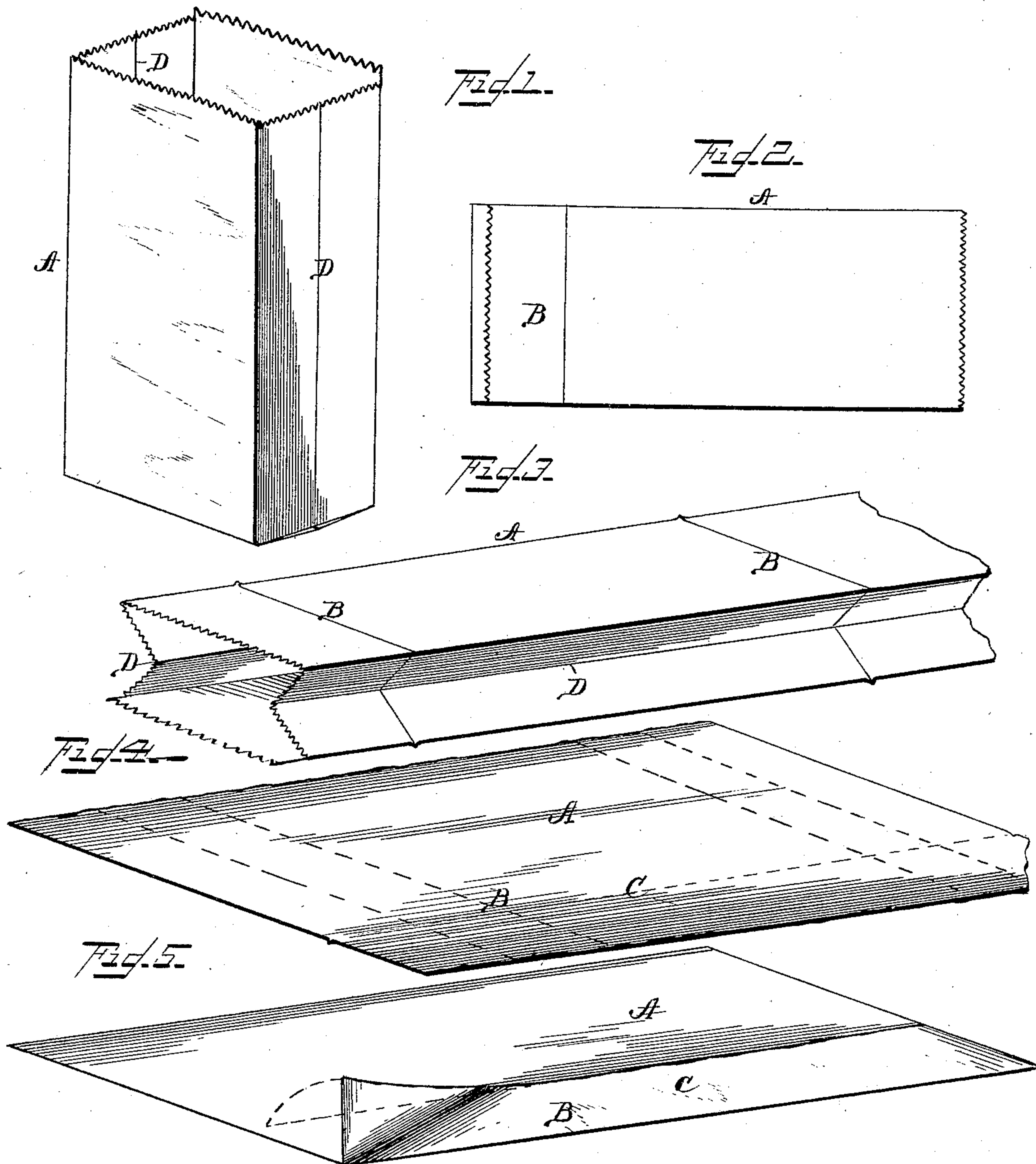


(No Model.)

A. E. OSBORN.
PROCESS OF MAKING PAPER BAGS.

No. 405,590.

Patented June 18, 1889.



WITNESSES

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UNITED STATES PATENT OFFICE.

ALBERT E. OSBORN, OF BROOKLYN, NEW YORK.

PROCESS OF MAKING PAPER BAGS.

SPECIFICATION forming part of Letters Patent No. 405,590, dated June 18, 1889.

Application filed March 23, 1889. Serial No. 304,415. (No model.)

To all whom it may concern:

Be it known that I, ALBERT E. OSBORN, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Methods of Manufacturing Paper Bags; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to the manufacture of that class of paper bags which are known to the trade as "square bags," an example of which may be found described in the Letters Patent of the United States to L. C. Crowell, No. 123,811, bearing date of February 20, 1872. These bags are provided with inwardly-projecting lateral folds, one on each side, and in some cases also with two transverse creases, one on each side near to and parallel with the bottom, so that in filling the bag it will of itself assume a square or rectangular shape; and my improvement consists, broadly, in forming these transverse bottom creases in the continuous strip or web of paper from which the bags are made before the said strip or web is formed into a tube, substantially as will be hereinafter more fully described and claimed.

Reference being had to the accompanying drawings, Figure 1 is a perspective view of a paper bag manufactured according to my improved method, showing the same open and ready for use. Fig. 2 is a side view of the bag flat, as furnished in bundles or packages to the trade. Fig. 3 is a perspective view of a portion of the paper tube from which sections of suitable length are cut to form the bags, showing the transverse creases, which are made before the tube is formed. Fig. 4 is a similar view of a portion of the flat paper web or blank before the same is formed into the tube illustrated in Fig. 3, showing in dotted lines the transverse fold or crease which, after the blank has been made into a tube, forms the transverse creases in the latter; and Fig. 5 is a perspective view of a portion of the flat paper web or blank illustrating the manner of forming the said trans-

verse creases by folding or doubling the web or continuous blank upon itself transversely or crosswise at equidistant points.

Like letters of reference denote corresponding parts in the several figures.

My improved method of manufacture consists, essentially, of three successive steps, as follows: The first step consists in creasing, folding, or doubling the flat paper strip or web A, by means of suitable machinery, transversely, as shown in Fig. 5, thereby forming a crease B the entire width of the paper web, the creases thus formed being equidistant from one another. The next step is to form the flat strip or web, after thus creased transversely, into a tube by lapping and pasting the edges together in the well-known way, and providing said tubes with inward lateral folds on each side, as shown at D D, Fig. 3. The third and last step consists in cutting the tube transversely into proper lengths, so as to leave a projecting lip at the bottom end, after which the bottom part with its projecting lip is pasted and folded to form the finished bag, substantially as described in Crowell's patent, No. 123,811, of February 20, 1872, hereinbefore referred to.

In this class of bags as hereinbefore manufactured by machinery the transverse creases are generally made after the web or blank has been formed into a tube, so that the creases on opposite sides of the bag fold the same way, and it follows that in opening the bag the crease on one side has to be refolded in the opposite (or inward) direction before the bag will assume its proper shape; but by my improved method of forming transverse creases in the flat web or blank before this is formed into a tube, by overlapping and pasting the sides together, it will be seen that the creases B on opposite sides of the bag will fold in opposite directions—i. e., both inwardly or toward each other—so that the bag will assume its proper rectangular shape at once and of itself as soon as opened, besides which the bags will pack better in a flat shape, so as to form neat and compact bundles.

Having thus described my improvement, I do not claim a paper bag provided with lateral inwardly-projecting folds and with trans-

verse creases near the bottom, so that it will assume a square or rectangular shape when filled; but

What I claim as new, and desire to secure
5 by Letters Patent of the United States, is—

The hereinbefore-described method of manufacturing paper bags, which consists in, first, creasing the flat paper blank crosswise or transversely from side to side at distances
10 equal to the desired length of the bag; secondly, forming this creased blank or web into a tube, and, thirdly, severing this tube into

sections of proper length, each containing one of the transverse creases, and forming the bags by closing the ends of said sections in the
15 usual manner, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

ALBERT E. OSBORN.

Witnesses:

FRANK W. WILSON,
B. J. RICHARDSON.