J. Arkell, B & A. Smith.

Paper Bags.

No. 47370. Patented Apr. 25. 1865.

Fig. 5.

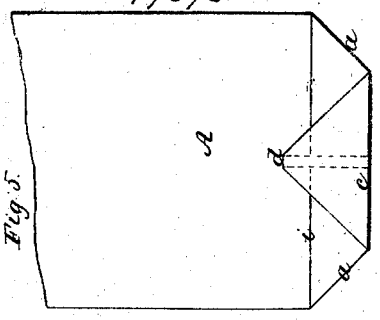


Fig. 8

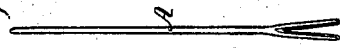


Fig. 4.

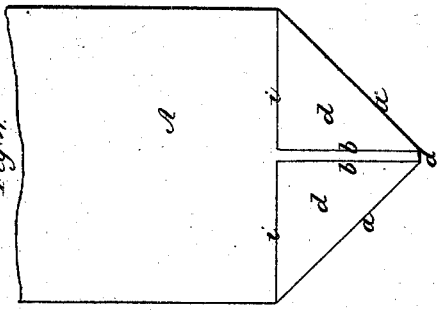


Fig. 7.

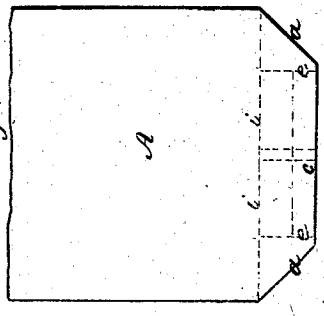


Fig. 6.

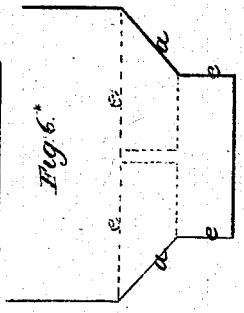


Fig. 3

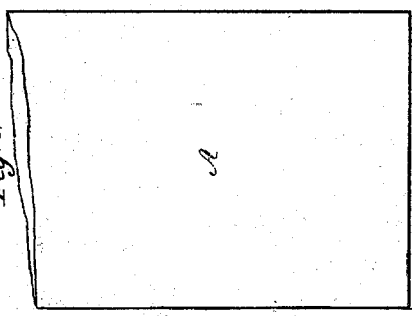


Fig. 6.

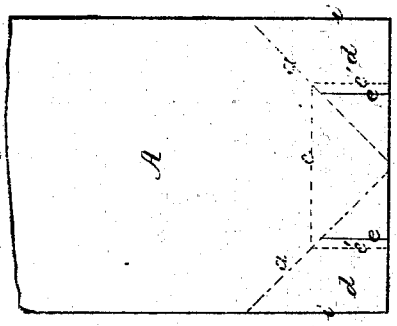


Fig. 1.

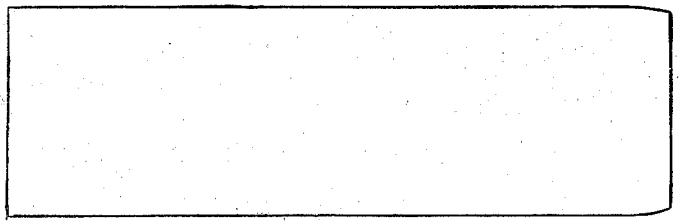
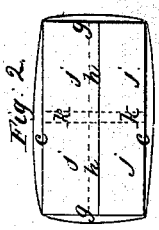


Fig. 2.



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UNITED STATES PATENT OFFICE.

BENJAMIN SMITH, ADAM SMITH, AND JAMES ARKELL, OF CANAJOHARIE, NEW YORK.

IMPROVEMENT IN PAPER BAGS.

Specification forming part of Letters Patent No. **47,376**, dated April 25, 1865.

To all whom it may concern:

Be it known that we, BENJAMIN SMITH, ADAM SMITH, and JAMES ARKELL, of Canajoharie, in the county of Montgomery and State of New York, have invented new and useful Improvements in Paper Bags; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to manufacture the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side view of a bag distended, as when filled. Fig. 2 is a bottom view of the same. Figs. 3, 4, 5, 6, and 6*, represent the lower portion of the bag in different stages of the manufacture. Fig. 7 is a side view of the lower portion of the empty bag folded flat for transportation or the market. Fig. 8 is an edge view of the same.

Similar letters of reference indicate like parts.

This invention consists in a novel mode of producing the bottom of a paper bag, whereby it is made double, and, when the bag is distended, it is caused to present a square or quadrangular form.

To make the bag, we first take a piece of paper of quadrangular form of the requisite length and width, and fold it to produce a longitudinal lap, either close to the fold or along any other portion of one side, paste the lap, press it, and allow it to dry. A tube, A, of the width of the lap is thus formed. This tube is then laid flat and its two lower corners turned in at angles of forty-five degrees to the sides, as shown at *a a* in Fig. 4, till the bottom edges, *b b*, meet, or nearly meet. The lower part is then folded over, as shown at C in Fig. 5, to make the point *d* lap over the turned-in portions *i i* of the side edges. The bottom is then unfolded, when it presents the creased appearance shown in Fig. 6, in which the creases are represented by dotted lines, those formed in the tube by the folds *a* and *c* being indicated by similar letters, and those formed in the turned-in corner-pieces *d d* in making the fold *c* being indicated by the letters *c' c'*. Two vertical cuts, *e e*, are then made from the bottom in or a little inside of the creases *c' c'*, up to the diagonal creases *a a*. The portions of the corner-pieces *d d* outside of the cuts *e e* are then turned in vertically from horizontal lines between the points where the said cuts meet the creases *a a* to produce the two creases *g g* to meet the creases *c c*, and so form the square bottom, as shown in Fig. 2, when the folding and pasting are completed. The said portions *d d* are then drawn out again and tucked in as far as the portions of the lines *a a*, above the cuts *e e*, as shown in dotted outline in Fig. 6*, and the two portions *f f*, one on each side of the tube between the cuts *e e*, are then, one after the other, turned outward and back over the tube, and their inner sides (now turned outward) pasted, and each, after having been pasted, is turned in between the portions *d d*. The said portions *f f* are thus pasted to each other and to the portions *d d*, and these portions produce the quadrangular bottom when the bag is distended by filling.

If in the first folding of the corner-pieces *d d* the edges *b b* be brought close together, and the fold *c* be made at a distance from the point *d* equal to the distance from *c* to *i i*, the whole of the quadrangular bottom of the bag will be composed of four thicknesses of paper.

We are aware that it is common to crease paper to form guides for folding in various ways. We therefore claim no novelty in this idea; but,

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

As a new article of manufacture, a quadrangular paper bag with a double bottom produced by folding and pasting in the particular manner herein described.

BENJAMIN SMITH.
ADAM SMITH.
JAMES ARKELL.

Witnesses:
M. NEAHR,
G. A. UTMAN.