

(No Model.)

F. E. PORTER.  
PAPER BAG.

No. 421,191.

Patented Feb. 11, 1890.

Fig. 1.

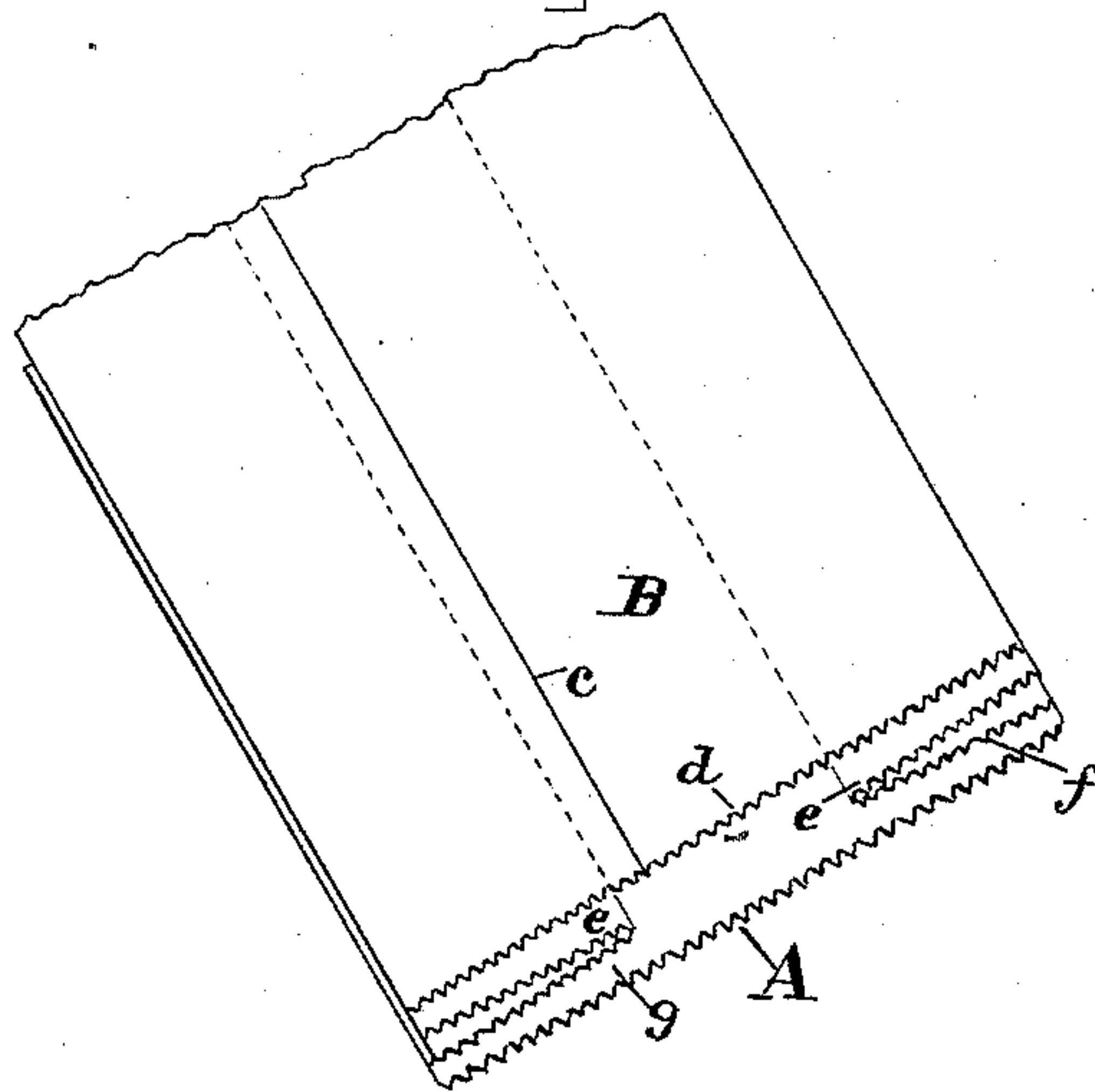


Fig. 2.

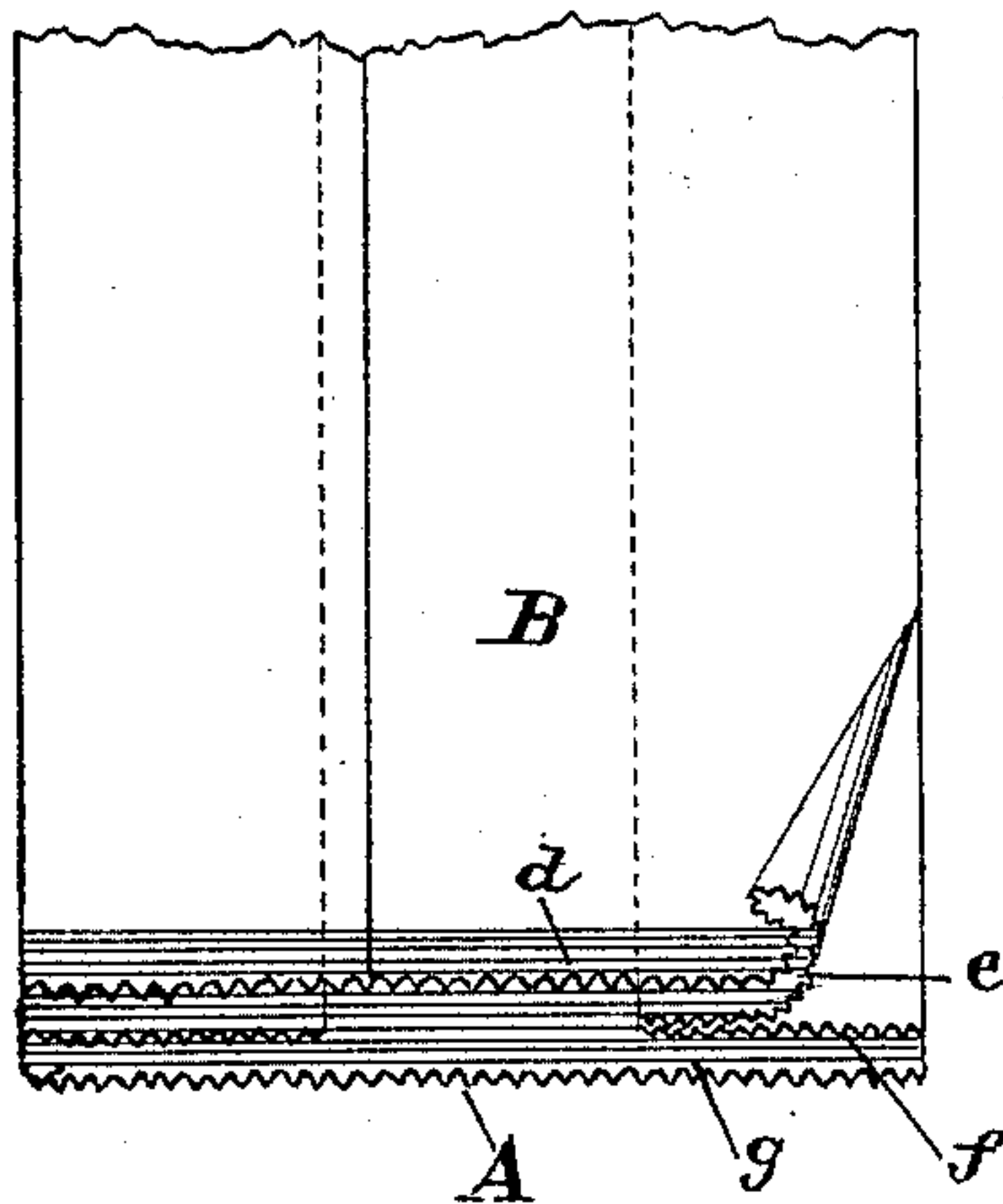
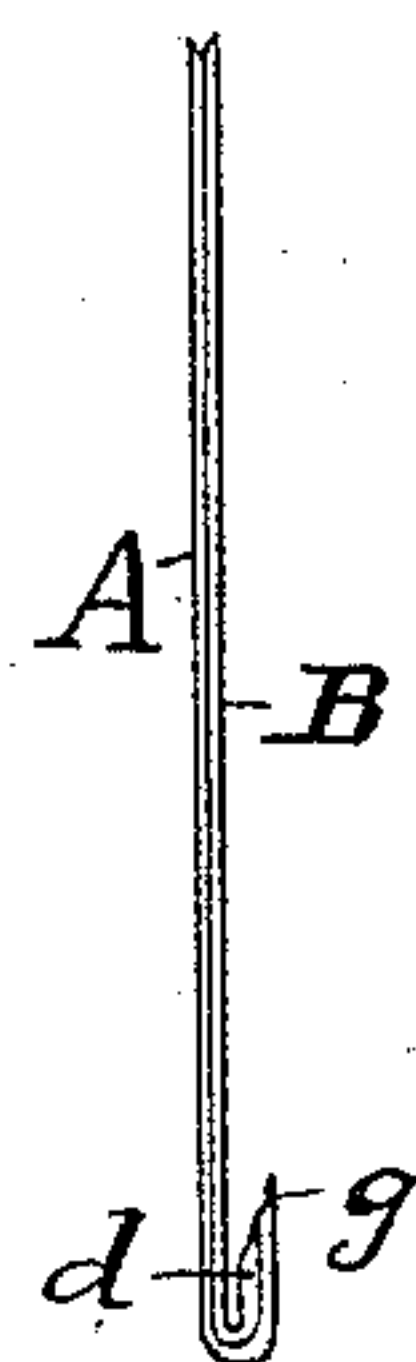


Fig. 3.



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# UNITED STATES PATENT OFFICE.

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## PAPER BAG.

SPECIFICATION forming part of Letters Patent No. 421,191, dated February 11, 1890.

Application filed October 7, 1889. Serial No. 326,238. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK E. PORTER, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Paper Bags, of which the following is a specification.

This invention relates to a paper bag; and it consists in a particular construction and manner of closing and pasting the bottom end of bellows side-fold bags, the object being to secure the bellows fold at the bottom by applying paste to the cut end of the upper portion of the said bellows fold.

The drawings illustrate the invention.

Figure 1 is a view of a bellows fold paper tube with ends cut to form the bottom according to my invention. Fig. 2 shows the same with paste applied to the cut ends and one corner turned up. Fig. 3 is an edge view of the tube, showing where the end folds up to be pasted.

The style of paper bag to which this invention appertains is the well-known bag in which the tube or body part is formed with bellows side fold or a single inward tuck at each edge and the end closed, so as to form a square bottom. As ordinarily made, a considerable proportion of these machine-formed bags are found, when opened preparatory to being filled, to be unpasted and unsecured at the lower cut edges of the "bellows fold" or tucked-in part, and consequently such bags will allow powdered or pulverized material to waste or leak out at the point named.

The bag-tube is of the ordinary bellows form. The letter A designates the lower side of the tube, B the upper side of the tube, and c the seam. The bellows fold is tucked in once at each edge. The improved cut consists in cutting the serrated end *d* of the upper side B of the tube on a continuous straight line entirely across the said side, and so as to leave the cut end of the upper portion *e* of the bellows fold exposed or projecting, as shown, and also cutting the end *g* of the lower side of the tube on a continuous straight line entirely across the said side. As will be seen,

a bag thus cut may have paste applied not only to the ends *d g* of the upper and lower sides of the tube, but also to the exposed end *e* of the upper portions of the bellows fold. It will be noticed the cut ends *e f* of the upper and lower portions of the single bellows fold are both exactly the same length, both being cut by the same serrated cutter. When the lower end of the tube, having paste applied to the upper and lower ends *d g* and to the exposed end *e* of the upper portion of the bellows fold, as shown in Fig. 2, is bent over, they will be pasted to the upper side B of the tube, and thereby the bellows fold will be secured.

The finished bag at the bottom will have the same exterior appearance as the ordinary bag, but will not be liable to leakage.

As there is at the cut end of the paper tube but one thickness of paper—namely, the end *d*, between the upper surface B and the upper portion *e* of the single bellows fold—it will be seen the paste-applying device of the bag-machine will be more certain to apply the paste thereto than in the case of a bag having two thicknesses of paper at the upper surface. In my bag both cut ends of the paper tube are alike, one being an exact counterpart of the other, and either one, therefore, could be closed to form the bottom of the bag.

Having described my invention, I claim—

A paper bag having a single inward tuck along each edge to form the bellows fold between its upper and lower sides and having the bottom ends *d g* of the upper and lower sides cut on a continuous straight line entirely across the side and so as to leave the upper portion *e* of the single bellows fold exposed, and the bottom or closed end formed by the said ends *d g* of the upper and lower side and said upper portion of the bellows fold each pasted to the side of the tube, as set forth.

In testimony whereof I affix my signature in the presence of two witnesses.

FREDERICK E. PORTER.

Witnesses:

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JNO. T. MADDOX.