(No Model.)

J. BOWER.

Paper Bag.

No. 232,930. Patented Oct. 5, 1880.

Fig. 1.

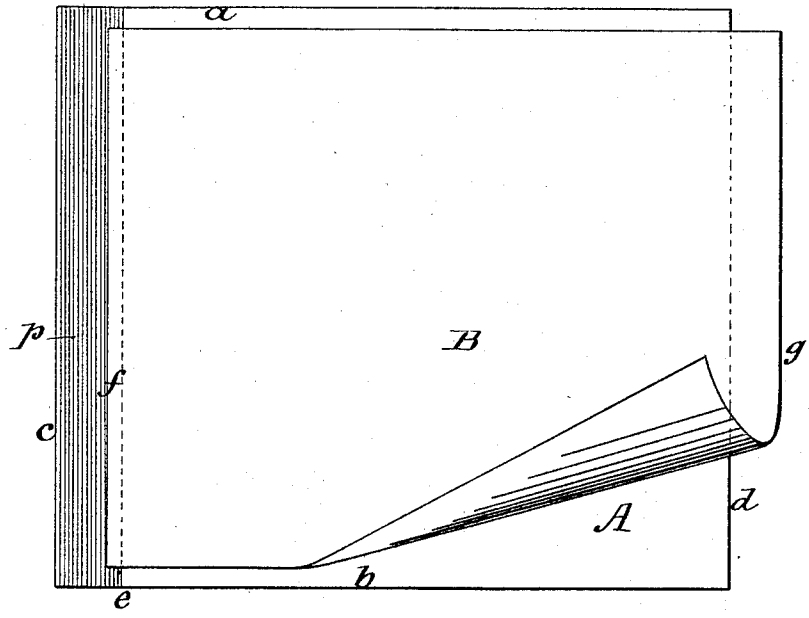



Fig. 2.

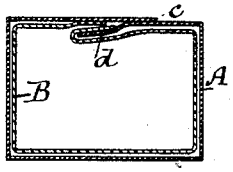



Fig. 3.

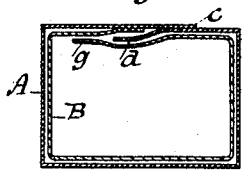



Fig. 4

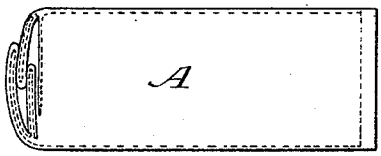
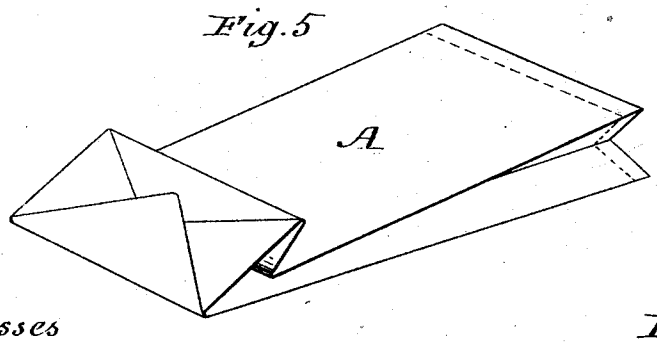



Fig. 5




Witnesses
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# UNITED STATES PATENT OFFICE.

JOHN BOWER, OF PITTSBURG, PENNSYLVANIA.

## PAPER BAG.

SPECIFICATION forming part of Letters Patent No. 232,930, dated October 5, 1880.

Application filed August 25, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN BOWER, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Water-Proof Paper-Lined Bags, of which the following is a specification.

This invention relates to sacks or bags for holding various substances, as flour, meal, tea, coffee, &c., easily deteriorated by dampness, or other substances having volatile perfumes or essences. They are particularly adapted to contain roasted coffee, either ground or in the grain, and retain its aroma and crispness, as when roasted coffee is exposed to damp air it soon becomes tough and tasteless.

Heretofore various means have been used to protect goods from dampness. They have been inclosed in successive wrappers of paper, oil-silk, waxed paper, &c., and, if the nature of the goods admits it, they have been inclosed in ordinary paper bags and dipped for an instant in a waterproofing solution, which, however, generally destroys soon the adhesive quality of the paste used in making the bag. Canvas bags have also been lined with ordinary paper to prevent pulverulent material from passing through the meshes of the canvas, the two edges of the canvas and the two edges of the paper being united together at the seam; but bags lined with water-proof paper could not be so constructed and have much strength, as paste does not unite well together paper waterproofed with the wax or oily substances generally used for the purpose.

The object of my invention is to so unite together a sheet of heavy paper and of water-proofed paper as to form of the two and at one operation a water-proof lined bag having its seams free of contact with its lining, and consequently as strong or stronger than it would have been if made of the heavy paper alone.

My invention consists in a bag blank or tube formed of two sheets of paper of substantially the same size united together, one of which is of water-proof paper, having one of its edges secured to the other adjacent to the pasted edge thereof.

It consists, also, in a bag formed of an outer wrapper of ordinary or heavy paper and an inner lining of water-proof paper, the latter having one of its side edges unsecured and the other edge pasted to the heavy paper at a short distance from its pasted edge.

In the drawings, Figure 1 represents a top view of the bag-blank formed of two sheets of paper. Fig. 2 represents a transverse section of the lined bag. Fig. 3 represents a slight modification of the same; Fig. 4, a longitudinal section of the same; Fig. 5, a perspective view of the bag folded.

In the drawings, A represents a sheet of ordinary or heavy Manila paper of suitable size for making a bag, the edges *a* and *b* being intended for the top and bottom of the bag, while the edges *c* and *d* are intended to be pasted together to form the long seam of the bag.

B represents a sheet of very light Manila or close-grained tissue-paper, rendered water-proof with any suitable material—as, for example, with a good quality of paraffine-wax, which is tasteless and odorless. It may also be of strong material, as oil-silk, &c. This sheet B is substantially of the same size as the sheet A. It is shown in the drawings as a little shorter at the top and bottom edges, to prevent its accidentally projecting higher and forming ragged edges of this thin paper, and it is not absolutely necessary that it should extend any farther than shown, as these parts, any way, have many thicknesses or folds when the bag is completed and closed.

The water-proof sheet B is united to the wrapper A by a narrow strip of paste applied to the sheet A between the line *c* and the position shown as occupied by the edge *f* of the sheet B, so that its edge *g* will project over the edge *d* of the wrapper a sufficient distance, this distance *d g* or *c f* being about an inch in bags intended to hold a pound of roasted coffee. The blank is then in a condition to be sold as a prepared blank, to be manufactured into bags by first applying paste between its edge *c* and the edge *f* of the water-proof sheet.

To reduce the number of operations, particularly when the bag is to be completed at once, I first take the sheet A and apply a strip of paste from edge *c* to line *e* (about an inch and a quarter strip.) I place the sheet B upon the former so that its edge will cover about one-quarter inch of said inch-and-a-quarter strip of

paste, and either let the paste dry on the blank, as shown at *p*, to produce a ready-pasted salable blank, or I complete the bag by uniting its edges *c d* or long seam around a former to give to said bag a form approaching the one shown in Figs. 2 or 3.

In making the water-proof bag I prefer to turn the loose edge *g* of the thin waxed paper over the inner edge, *d*, of the Manila wrapper, as shown in Fig. 2, as it makes a neater package internally; but the waxed paper may be left straight at *g*, as shown in Fig. 3. The side *d* and the water-proof lining having been folded down upon a former extending a portion of the length, *a b*, of the blank, the pasted side *c* is pressed down upon it and the flaps folded in the ordinary manner, as in making large flour-sacks, and as shown in Figs. 4 and 5.

In Fig. 4 the dotted line is made to represent the water-proof paper, and it will be seen that this waxed paper remains on the inside of each fold, and consequently does not interfere with the pasting together of the end flaps of the wrapper. To show this construction the bottom of the bag is made bulging outwardly much more than in a real bag, as the thin tissue-paper lining does not add any perceptible thickness to the bag or its folds.

In bags intended for light substances, as roasted coffee, I sometimes place first in the bottom under the goods a square of pasteboard to insure a flat bottom to the bag.

The water-proof lining, having one of its sides pasted to its wrapper, has all the play or lateral motion desired to adapt itself to the size of the tube or bag made, so there is no danger of rupture to the thin lining under the inner pressure of the goods after the bag is filled.

When bags of this nature are completed they can be folded as shown in Fig. 5, ready for shipment. I prefer to make them with a square bottom; but they may be made of the most common form with angular bottom by making the edge *b* with a sufficient flap on one side to receive paste, and secure it without having the waxed lining in the way of the pasted flap or strip, and they may be made with bag-machines.

Having now fully described my invention, I claim—

1. In a bag blank or tube, the combination of two sheets of paper of substantially the same size, one of which is of water-proof paper, having one of its edges secured to the other adjacent to the pasted edge of the latter, substantially as shown and described.

2. A bag formed of an outer wrapper of ordinary or heavy paper and an inner lining of water-proof paper, the latter having one of its edges unsecured and the other edge pasted to the heavy paper at a short distance from its pasted edge, substantially as and for the purpose described.

JOHN BOWER.

Witnesses:
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ROBT. HINES.