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H. A. GRANT

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PAPER BAG

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Fig. 1.

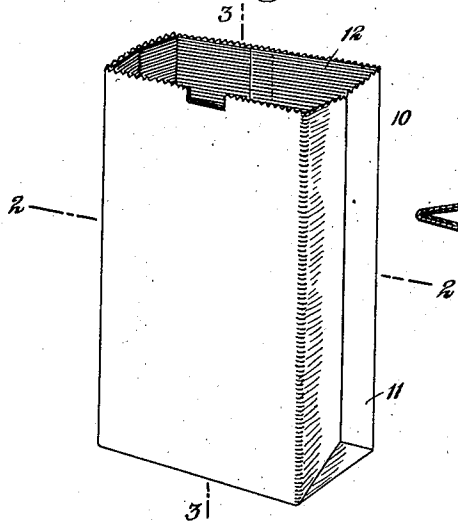


Fig. 2.

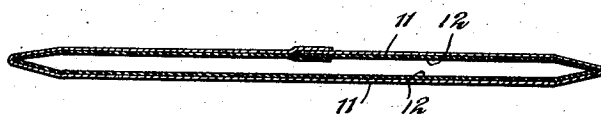


Fig. 4.

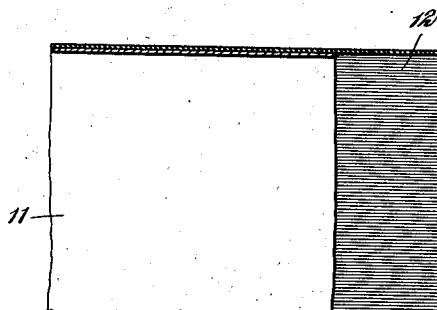


Fig. 3.

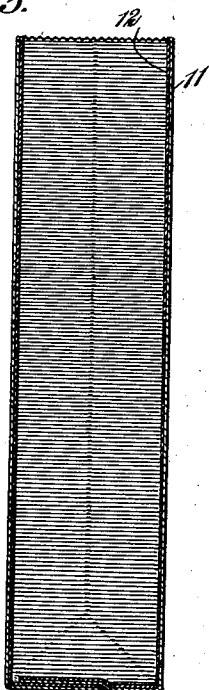


Fig. 5.

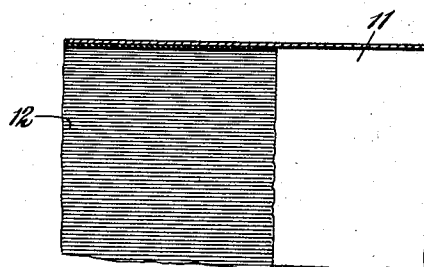
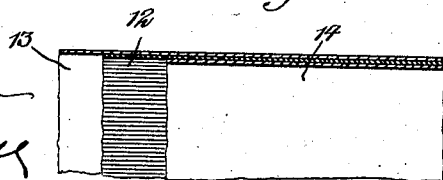


Fig. 6.

WITNESSES
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PAPER BAG

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My invention has for one of its objects to provide a paper bag, the body of which is moisture, water and air tight so that the bag may be used to store and deliver wet or moist products. The paper bag may also be used to prevent moisture or air from entering the paper bag and injuring products which may be contained therein.

Another object of the invention is to provide a paper bag which becomes tougher when moistened, the moisture serving to increase the strength of the paper instead of impairing the qualities thereof which render it serviceable.

Still another object of the invention is to provide a paper bag having a two-ply body, one ply of the body having the characteristics of a treated kraft paper which has been parchmented.

Additional objects of the invention will appear in the following specification in which the preferred form of the invention is described.

In the drawings similar reference characters refer to similar parts in all the views of which

Figure 1 is a perspective view showing the paper bag,

Fig. 2 is an enlarged sectional view on the line 2-2,

Fig. 3 is an enlarged sectional view on the line 3-3,

Fig. 4 is a sectional view showing a fragment of the bag in perspective and with the moisture-proof element at the inside of the body of the bag,

Fig. 5 is a perspective sectional view similar to that shown in Fig. 4, but with the moisture-proof element at the outside of the body of the bag, and

Fig. 6 is a sectional view showing a three-ply bag with the moisture-proof element disposed between the inner and outer body elements.

In storing and selling coal, coke, lime, fertilizers and other products and commodities it is important that an inexpensive bag or container be provided and in many cases it is necessary that this bag or container be air tight, moisture tight and water tight so

that the bag or container will preserve the product or commodity and will prevent air or moisture from passing through the bag or container to damage the bag or container, or to soil or damage articles adjacent the place where the bag or container is used or stored. It is also necessary in many cases to prevent air or moisture from passing through the paper bag to its inner side.

Many attempts have been made to supply a container having the desired qualities, but when a bag or container was found which was moisture-proof the cost of the bag or container was too great to permit of its general use and when the bag or container was inexpensive it did not have the desired moisture-proof and air-proof qualities.

After many experiments and tests it has been found that a kraft paper which has been parchmented, and which is often referred to commercially as a parchmented kraft paper, will afford many of the desired qualities when used as a protective coating for a heavy paper bag, the protective covering to be applied either as a lining or as an outer coating. This parchmented kraft paper is preferably treated to fill or load the pores of the paper and also to give flexibility. One means of accomplishing this result takes place in the use of paper from offset printing plants, for in carrying on such a printing process the paper receives a wax vapor spray and also coatings of the printing ink containing pigments, oils and driers. These coatings load and fill the pores of the paper, as well as serve to soften the paper and render it pliable, and also to toughen the paper which quality is emphasized when the paper is moistened. By using this waste paper from offset printing plates the expense of the raw material of paper becomes materially reduced.

By referring to the drawings it will be seen that the paper bag 10 has an outer body 11 which is preferably of heavy and strong paper, the paper bag 10 having an inner lining 12 which is constructed of paper and preferably of paper which is of the type referred to as parchmented kraft paper. This inner lining 12 is treated to fill or load the

pores of the paper and the pores of the paper are preferably filled or loaded with wax, pigments, oils and driers.

Figs. 1, 2, 3 and 4 of the drawings show the parchmented kraft treated paper 12 at the inner side of the body element 11, but it will be seen by referring to Fig. 5 of the drawings that the parchmented kraft treated paper 12 may be disposed at the outer side of the body element 11, or if desired, as shown in Fig. 6, the parchmented kraft treated paper 12 may be disposed between body elements 13 and 14.

The parchmented kraft treated paper and the body element or elements 11 are blanked out together and have their edges attached by a waterproof glue, the bag being formed in this way with the parchmented kraft treated paper either at the inner side of the bag or at the outer side, or if desired, in a three-ply bag, between the inner and outer body elements.

What is claimed is:

1. A multi-ply bag having as one ply a paper base with the characteristics of a parchmented kraft paper and which is coated with wax and printing ink.
2. A multi-ply bag having as one ply a paper base made from elements having the characteristics of a parchmented kraft paper which is coated with wax and printing ink, the edges of the elements being held together by moisture-proof glue.
3. A multi-ply bag having as one ply a paper base which is coated with wax and printing ink.

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