Nov. 13, 1928. 1,691,782

P. E. MORRILL ET AL

BAG

Filed Sept. 17, 1925

FIG. I

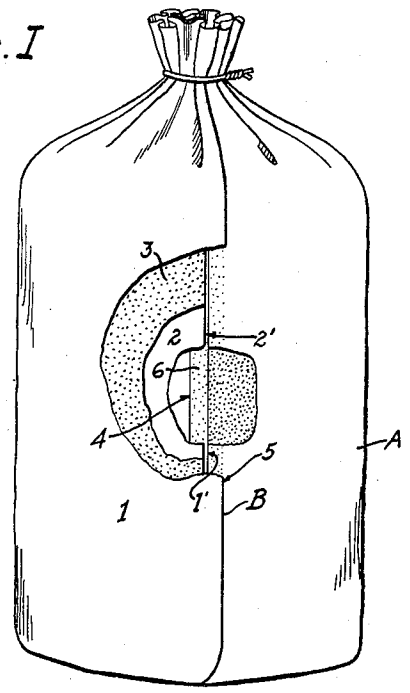



FIG. II

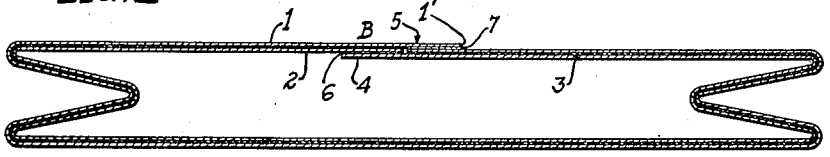
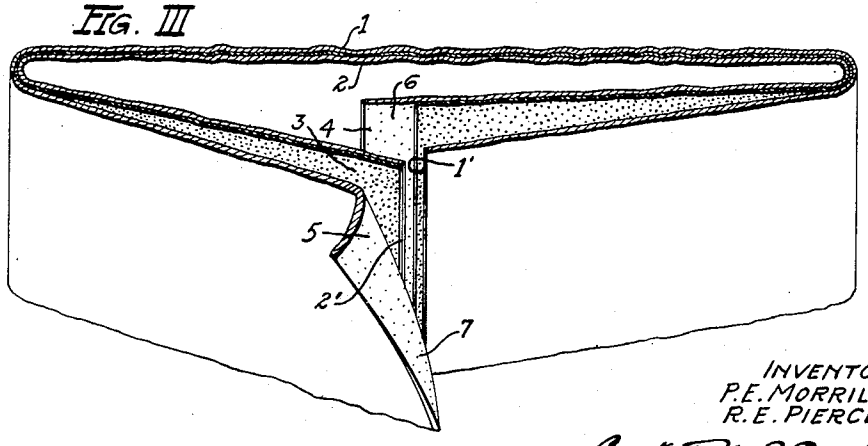



FIG. III




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# UNITED STATES PATENT OFFICE.

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## BAG.

Application filed September 17, 1925. Serial No. 56,843.

This invention relates generally to improvements in bags, and particularly to a bag made of sheet material, preferably paper, comprising a plurality of sheets of material pervious to moisture, which sheets of material are provided with a layer of material, preferably located therebetween, whereby said sheet material is rendered impervious to moisture.

Prior to this invention bags have been made of a plurality, usually two, of sheets of paper or other material between which was interposed a layer of a suitable waterproofing material, usually of an asphaltic nature. Heretofore the pairs of associated sheets of material from which a bag was formed were of the same size and the edges of said associated sheets were even with each other, and also the layer of waterproofing material was co-extensive with said sheets of material, said waterproofing material spreading over the entire inner faces of said sheets of material and acting as an adhesive which secured said individual sheets of material together. When a bag was formed from the associated sheets described, the edge portions of said associated sheets at the seam of the bag were merely caused to overlap each other and said overlapped portions were secured together by means of paste. In the case of a seam made as described, one edge portion of the outer sheet of material was secured in place only by the layer of adhesive asphaltic material, and also one edge portion of the inner sheet of material was secured in place only by said layer of adhesive asphaltic material.

Bags of the type described herein are frequently subjected to intense heat, and it has been found in connection with the use of bags made as described above that the asphaltic material would soften as a result of the heat and those portions of the individual sheets of material of which the bag was formed, which were secured in place only by said asphaltic material would pull away from the associated portions of the sheets of material, thus impairing the strength of the bag.

To eliminate the difficulty mentioned above, we form and arrange the overlapping portions of the sheets of material making up our improved bag so that there are no end portions of said sheets of material which are secured in place only by the asphaltic waterproofing material, but, on the other hand, all of the end portions of said sheets of paper at the seam of the bag are secured in place by means of paste which will not be softened by heat.

With the foregoing and other objects in view, the invention comprises the novel construction, combination and arrangement of parts hereinafter more specifically described and illustrated in the accompanying drawings, wherein is shown the preferred embodiment of the invention. However, it is to be understood that the invention comprehends changes, variations and modifications which come within the scope of the claim hereunto appended.

Fig. I illustrates a bag made in accordance with our invention, portions of the sheets making up the wall of the bag being broken away at the seam of said bag to show the manner in which said seam is made.

Fig. II is a horizontal section through a bag made in accordance with our invention.

Fig. III is a sectional perspective showing a fragment of a partially formed bag embodying the features of our invention.

In the drawing A designates a bag of the type ordinarily employed to contain lime, cement and other materials which must necessarily be maintained comparatively free from moisture until used. The bag A is made up from sheet material which comprises a plurality, preferably two, of sheets of paper or other material 1 and 2, between which is interposed a layer of suitable waterproofing material 3, preferably of an asphaltic nature. The sheets of material 1 and 2 are caused to adhere to each other because of the adhesive nature of the asphaltic material 3 located therebetween, so that what is in effect a single sheet of material is produced from which the bag is formed. The bag A is provided with a seam B where the ends of the side portions of the sheet material of which said bag is formed overlap, and said bag is of course provided with a suitable bottom wall and a suitable neck portion, but as these two latter portions form no part of the present invention they will not be described in detail.

The novelty in connection with the bag

disclosed in the present application is to be found in the arrangement of the end portions of the sheet material which are overlapped to make the seam of the bag, and this arrangement will now be described.

By referring particularly to Figs. II and III it will be seen that the sheet of material 2 which comprises the inner sheet of the sheeting forming the walls of the bag is provided with a portion 4, which extends beyond the adjacent edge 1′ of the sheet of material 1. It will also be seen that said portion 4 extends beyond the adjacent edge of the waterproofing material 3, said layer of waterproofing material terminating at the edge 1′ of the sheet of material 1. It will also be noted by referring to the views mentioned that the sheet of material 1 which comprises the outer sheet of material of the sheeting forming the walls of the bag is provided with a portion 5, which extends beyond the adjacent edge 2′ of the sheet of material 2. This portion 5 also extends beyond the adjacent edge of the layer of waterproofing material 3, said waterproofing material terminating at the edge 2′ of the sheet 2.

When a bag constructed in accordance with our invention is being formed, the previously prepared sheeting material is arranged in the form of a tube so that the side edges of said sheeting material may be brought together. A layer of paste 6 is then spread on the portion 4 of the sheet 2 and a layer of paste 7 is spread on the portion 5 of the sheet 1. The paste-bearing face of the portion 4 of the sheet 2 is then pressed against the opposite end portion of said sheet 2, and the paste-bearing face of the portion 5 of the sheet 1 is pressed against the opposite end portions of said sheet 1, and because of the presence of the layers of paste 6 and 7 said portions 4 and 5 will permanently adhere to the portions of the sheets against which they are pressed. After the seam B of the bag has been made, the bottom and neck portions of said bag are formed in any desired manner.

From the foregoing it is plain that the opposite end portions of the sheets of material 1 and 2 at the seam B of the bag are positively and permanently secured in place by means of paste, hence, even though a bag made in accordance with our invention is subjected to intense heat which softens the asphaltic waterproofing material, the end portions of the individual sheets comprising the sheeting material will not pull loose due to the fact that said end portions are secured in place by means of paste which is not softened by heat. Also, because the sheeting of which the bag is formed is folded and drawn together to form the bottom of the bag and the neck thereof, the individual sheets 1 and 2 may not be displaced relative to each other, and hence the original strength and durability of the bag is maintained in spite of the softening of the waterproofing asphaltic material.

We claim:

A new article of manufacture comprising a sheet of material shaped to produce a bag having a seam where the edges of said sheet of material are joined together, said sheet of material comprising a plurality of sheets of material having a layer of adhesive waterproofing material therebetween whereby said sheets of material are secured together, the edge portion of one of said sheets being extended beyond the adjacent edge of the associated sheet and beyond the adjacent edge of the layer of waterproofing material, and a layer of paste whereby said extended portion of said sheet is secured in place to form said seam, said paste and said waterproofing material being arranged adjacent to the same face of said sheet of material having the extended portion.

In testimony that we claim the foregoing we hereunto affix our signatures.

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