Oct. 5, 1937. J. DE F. KIRK 2,095,067

BAG LINER

Filed May 29, 1935

Fig. 1

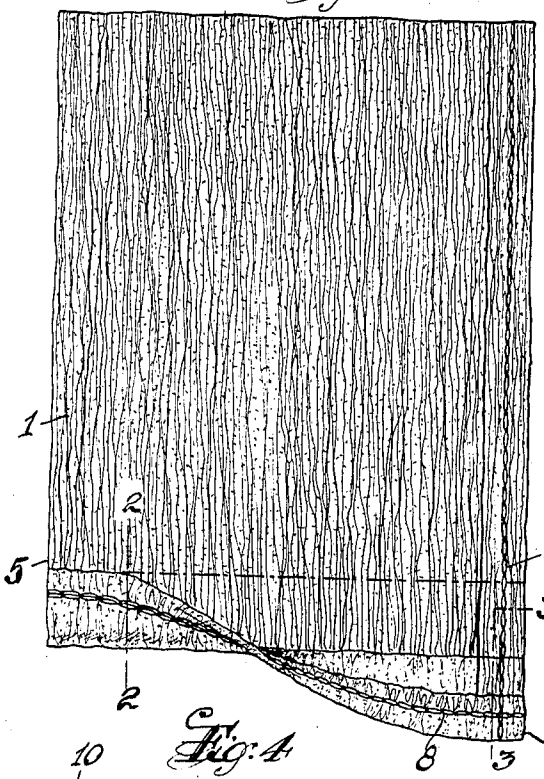


Fig. 2

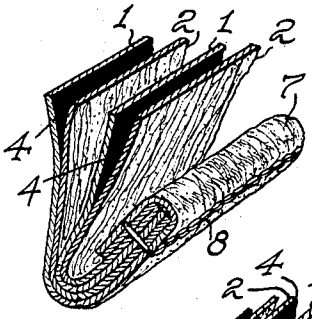


Fig. 3

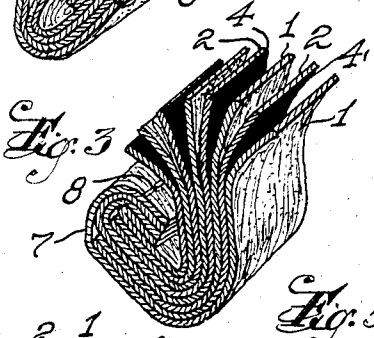


Fig. 5

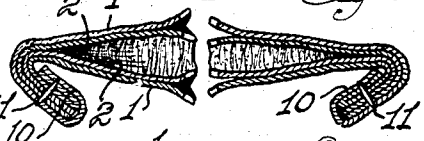


Fig. 6

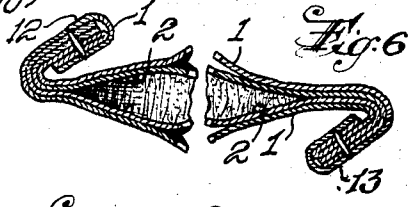


Fig. 4

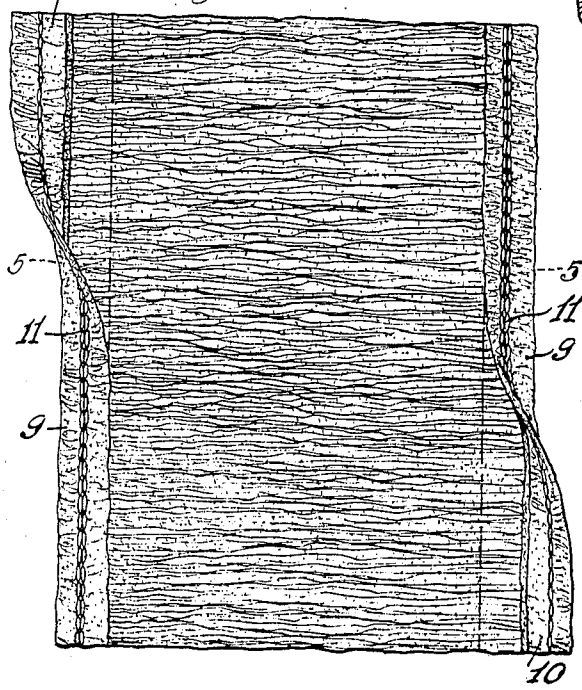


Fig. 8

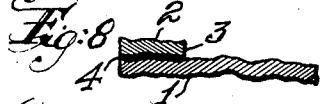
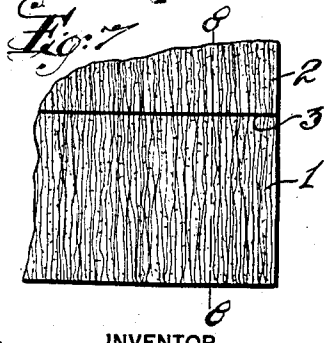


Fig. 7



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Patented Oct. 5, 1937 2,095,067

UNITED STATES PATENT OFFICE

2,095,067

BAG LINER

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Application May 29, 1935, Serial No. 24,022

4 Claims. (Cl. 229—55)

This invention relates to what is commonly called a bag liner, barrel liner and the like which is usually made of paper folded upon itself and seamed upon the bottom and one side or upon both sides to form a bag-like article, which, in use, is placed inside the bag or other container to provide a clean receptacle for shipments of powdered substances and prevent sifting or loss of the powdered materials from the bag which is usually formed of burlap or through cracks where the liner is used in a barrel. This invention is contemplated for use with liners of the general character described formed of creped paper or plain paper, either of single ply type or of duplex or multi-ply type, waterproof or not waterproof.

Such liners are frequently formed of duplex paper, that is, paper formed of multiple plies between which is an adhesive composition usually waterproof, such as an asphaltic composition. In making seams in bags formed of such paper, due to the presence of a large number of thicknesses at the seam, undesirable bulkiness is present at the seam.

Therefore, a prime object of my invention is to provide novel and improved duplex paper wherein one of the plies shall terminate a substantial distance short of the edge of the other ply to provide an extension on the second-mentioned ply sufficiently wide that in making the seam this extension or single ply may be embodied in the seam in place of the usual double plies and thereby make possible a seam of less thickness or bulk, and at the same time result in a saving of paper and waterproofing composition or adhesive.

My invention contemplates a liner in which only said extension shall be used for the seam, and also a liner wherein the selvage is folded with portions of the multi-ply or duplex portions of the sheet of paper, and for the purpose of illustrating the principles of the invention I have shown it embodied in many different types of liners.

Other objects and advantages of the invention will appear from the following description when considered in connection with the accompanying drawing in which

Figure 1 is a plan view of a liner constructed in accordance with the invention.

Figures 2 and 3 are sectional views on the lines 2—2 and 3—3 respectively of Figure 1.

Figure 4 is a view similar to Figure 1 of a liner having the side seams instead of the bottom seam like that shown in Figure 1.

Figure 5 is a horizontal sectional view on the line 5—5 of Figure 4.

Figure 6 is a similar view showing a modification.

Figure 7 is a fragmentary plan view of a sheet of duplex water-proof crepe paper embodying the invention, and

Figure 8 is a sectional view on the line 8—8 of Figure 7.

Specifically describing the invention, Figures 7 and 8 illustrate the duplex creped paper, and as shown this paper includes a ply 1 which has superposed thereon another ply 2 one edge of which terminates a substantial distance short of the corresponding edge of the ply 1, as indicated at 3, the two sheets preferably being secured together by an adhesive composition 4, usually water-proof. The portion of the sheet 1 projecting beyond the sheet 2 is termed an extension.

Now referring to Figure 1, the liner is composed of a single sheet of duplex creped paper folded upon itself at 5 and having its side edges folded and stitched together at 6 to form a side seam. At the bottom of the liner the extensions of the two thicknesses of duplex paper, that is the thicknesses forming the front and rear of the liner, are in juxtaposition to each other, and the bottom seam 7 of the liner is formed by simply folding back the extensions together upon the body portions at one side of the liner and securing both extensions together and to said body portions to form a thin seam and permit saving of material by virtue of said extensions, as clearly shown in Figures 2 and 3. As shown, a line of stitches 8 runs along the bottom edge portions of the liner and penetrates all of the plies of the folds, the stitches thus passing through both of the extensions and all of the plies of the duplex body portions.

Instead of folding the paper as for example in Figure 1 to make one side seam and one bottom seam, the bottom of the liner may be formed by folding the paper upon itself. The side edges of the paper may then be stitched together to form the side seams 9 as shown in Figure 4. In this form of the invention, the crinkles of the creped paper may extend circumferentially of the liner instead of longitudinally as in Figure 1, and the extensions may be formed at either one or both sides of the paper.

In Figure 5, both side seams are shown as including the extensions as indicated at 10, the extensions being turned back over the duplex por-

tions and the stitches 11 passing through both the extensions and the duplex portions.

Figure 6 shows a similar construction wherein the two side seams 12 and 13 are disposed on opposite faces of the liner for convenience in manufacture, the seams being otherwise identical to those shown in Figure 5.

Obviously the width of the extensions may be varied if desired, but will be sufficient to form a substantial part of the seam as shown in Figures 1, 2 and 3.

While I have shown the invention as embodied in certain different structures, it should be understood that this is primarily for the purpose of illustrating the principles of the invention and that the invention may be embodied in other structures without departing from the spirit or scope of the invention.

Having thus described my invention, what I claim is:

1. A liner including two superposed thicknesses of paper having duplex body portions, each comprising a plurality of plies of paper and each thickness having an edge portion of one ply projecting substantially beyond the corresponding edge of the other ply to form an extension in juxtaposed relation to the extension of the other thickness, and a seam formed by folding both said extensions upon said body portions and a line of stitches along said edge portions and penetrating all of the plies of said folds.

2. A liner including two superposed thicknesses of paper having duplex body portions, each comprising a plurality of plies of paper and each thickness having an edge portion of one ply projecting substantially beyond the corresponding edge of the other ply to form an extension in juxtaposed relation to the extension of the other thickness, and a seam formed by folding both said extensions upon said body portions and means securing together all of the plies of said folds.

3. A liner including two superposed thicknesses of paper having duplex body portions, each comprising a plurality of plies of paper and each thickness having an edge portion of one ply projecting substantially beyond the corresponding edge of the other ply to form an extension in juxtaposed relation to the extension of the other thickness, said extensions being folded together upon said body portions at one side of the liner, and means securing together all of the plies of said folds to form a thin seam and permit saving of material by virtue of said extensions.

4. A liner including two superposed thicknesses of paper having duplex body portions each, comprising a plurality of plies of paper and each thickness having an edge portion of one ply projecting substantially beyond the corresponding edge of the other ply to form an extension in juxtaposed relation to the extension of the other thickness, said extensions being folded upon said body portions, and means securing both said extensions together and to said body portions to form a thin seam and permit saving of material by virtue of said extensions.

J. DE FOREST KIRK.