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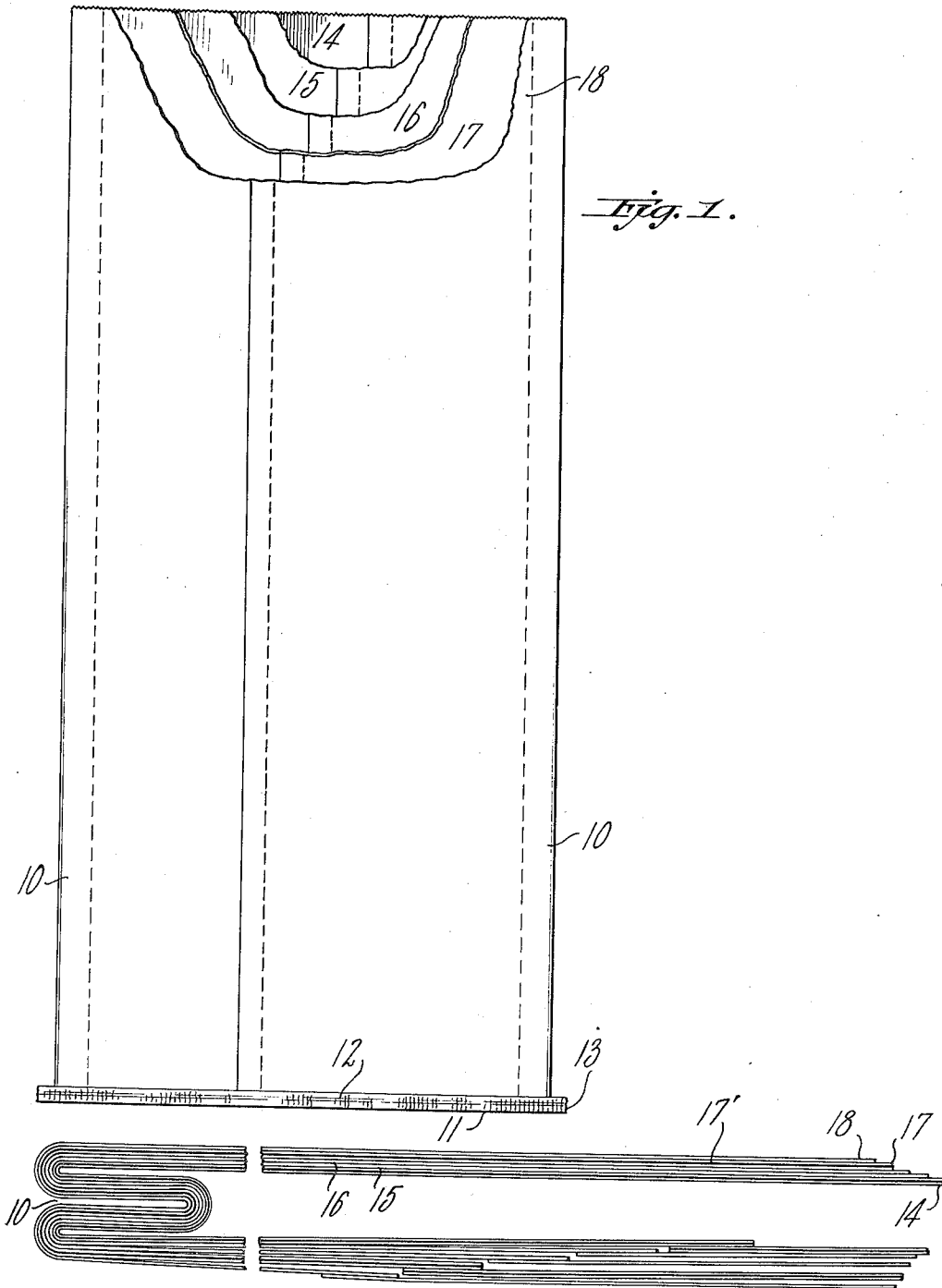


Fig. 2.

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BAG

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5 Claims. (Cl. 229—55)

This invention relates to improvements in the construction of bags either of the open mouth or valve type, preferably, but not necessarily provided with gussets, and more particularly to the construction of multi-ply bags. The bag constituting the subject matter of the present invention relates specifically to details of construction whereby greasy or oily materials may be successfully packaged.

Essentially the primary object of the invention is to so relate the various plies making up the bag that oily and greasy substances as, for example, shredded cocoanut, peanuts, etc. may be successfully packaged. Another object of this invention is to so construct a bag of the type above described in such a manner that the appearance of the bag is not altered.

Paper bags appeal strongly to customers who have heretofore relied upon bags made of coarse textiles and one of the major reasons that large paper bags have become commercially successful is that they present a smooth exterior upon which fine print and appealing designs may be carried. An advantage of the present invention lies in the preservation of this smooth unbroken exterior.

These and other objects of the present invention become more apparent from a reading of the following description taken in connection with the accompanying drawing in which

Fig. 1 is a side elevation of a multi-ply bag constructed in accordance with the principles of the invention, certain parts being broken away to show the relationship of the various plies of the different materials making up the bag walls, and

Fig. 2 is an enlarged sectional view of a portion of the bag showing in more particularity certain details of construction.

Referring now more particularly to the drawing, in which like numerals indicate like parts, there is shown a multi-ply shipping bag provided with the usual gussets 10 and bottom 11. The bottom of the bag is closed by a closure extending through the gussets and which is preferably a line of stitches, or which may be staples or other closing means indicated by the numeral 12. Preferably the bag is provided with a strip 13 of adherent material, such as gummed crepe paper, folded over the end of the bag to prevent sifting of materials through the stitches or through the stitch holes and also to protect the stitches and preserve the uniformity and the appearance of the bag. Other forms of end closures may be used since the invention does not reside in the

specific form of closure. A bottom of the satchel type may be used.

The bag is usually formed from a plurality of nested tubular plies of material and, in the embodiment shown, the inner ply 14 of the bag comprises two sheets of glassine paper laminated together by means of wax, rubber or the like so that in the event of undue tension a slight relative movement of the two layers may take place without rupture to either layer. In order to render paper sufficiently pliable it may be plasticized in any suitable manner. The binder used also increases the moisture and grease resistant characteristics of the laminated ply.

It will be appreciated that any suitable sheeted material possessing the desired grease resistant and moistureproof characteristics or either of these characteristics may be used. Glassine, however, is readily available commercially at comparatively low cost and, therefore, is to be preferred.

The next two plies 15 and 16 comprise kraft paper of suitable basis weight. For the packaging of shredded cocoanut, in particular, these two plies are formed usually of 40# basis weight paper. In order to protect the inner glassine laminated ply from outside moisture conditions an asphalt laminated ply 17 is used. The paper used comprises two sheets of kraft paper of approximately 30# basis weight laminated together in any suitable manner by means of asphalt or the like 17'. The plies 15 and 16 of kraft paper lying between the asphalt laminated ply 17 and the glassine laminated ply 14 serve not only to give the desired strength to the bag, but serve to prevent any possible contamination of the glassine ply by the asphalt. Hence any deleterious effect on the packaged commodity from outside moisture conditions is avoided. At the same time, the glassine laminated ply will serve to prevent the striking through of grease or other oily material and destroy the effectiveness of the moistureproof asphalt laminated ply. Accordingly, the outer ply never assumes a mottled or streaky appearance due to grease or other oily material because of the presence of both the glassine laminated ply and the asphalt laminated ply. As will be appreciated, in hot weather it is likely that the asphalt would strike through the glassine ply if it were in contact therewith because of the comparative thinness of the glassine, thereby contaminating the packaged contents. The glassine innermost ply may be, if desired, of a color to accentuate the whiteness of the packaged commodity and, in many

cases, will serve to reduce the effect of certain harmful rays on the commodity. Instead of using kraft paper in the construction of the asphalt laminated ply, the material known as "Sisal" kraft or similar material may be used. The Sisal kraft is of particular advantage where it is desired to increase the resistance of the bag against tearing, puncturing, or snagging which would result in a deterioration or contamination of the material packed.

The outermost ply is made of kraft paper of a higher basis weight than that used in forming the intermediate kraft plies so as to give the bag greater abrasion resistance. This outer sheet adds considerable strength to the bag and since it is inherently water resistant tends to prevent moisture from penetrating into the bag with the possibility of destroying or marring the remaining plies of the bag. It is not affected to any appreciable extent by the asphalt of the asphalt laminated ply.

A bag constructed as described above provides a suitable container for the packaging of all types of greasy and oily materials. Although the construction of the bag has been described particularly with reference to the packaging of shredded coconut, it will be obvious to those skilled in the packaging art that a bag so constructed may also be used for the packaging of all types of greasy and oily materials.

The description of the bag has been with the view of packaging shredded coconut. However, certain plies of the bag might be omitted depending upon the particular ingredient packaged and determined in part upon the usage to which the container when filled will be subjected. For example, in the packaging of materials which will not encounter water shipment conditions or which will be at all times kept under cover, the necessity for the use of an asphalt laminated ply becomes less important and although not absolutely essential it is still desirable for the reason that the packaged commodities will still be protected should the package be accidentally subjected to moisture.

Other similar modifications in form and arrangement will readily suggest themselves to those skilled in the art and we do not intend to be limited to the exact details set forth herewith, but the scope of the invention is to be determined by the following claims which are to be broadly construed.

I claim:

1. In a multi-ply bag structure for the packaging of greasy materials and the like, compris-

ing, in combination, an inner ply comprising two sheets of glassine laminated together with a non-setting adhesive, a ply comprising two sheets of kraft paper laminated together with asphalt, at least one ply of kraft paper interposed between and separating said laminated plies, and an outer sheet of kraft paper enveloping said asphalt laminated ply and providing a printing surface for identifying indicia and advertising matter.

2. In a multi-ply bag structure for the packaging of greasy materials and the like, comprising, in combination, an inner ply comprising two sheets of grease-proof material laminated together with a non-setting adhesive, a ply comprising two sheets of kraft paper laminated together with asphalt, at least one ply of kraft paper interposed between and separating said laminated plies, and an outer sheet of kraft paper enveloping said asphalt laminated ply and providing a printing surface for identifying indicia and advertising matter.

3. In a multi-ply bag structure for the packaging of greasy materials and the like, comprising, in combination, an inner ply of laminated grease-proof material, a ply of laminated Sisal kraft, at least one ply of kraft paper interposed between and separating said ply of laminated grease-proof material and said ply of laminated Sisal kraft, and an outer ply of kraft enveloping said ply of laminated Sisal kraft and providing a printing surface for identifying indicia and advertising matter.

4. A package for shredded coconuts comprising an inner ply of laminated glassine with which the shredded coconut is in contact, a ply of laminated Sisal kraft, at least one ply of kraft paper interposed between and separating said ply of laminated glassine and said ply of laminated Sisal kraft, and an outer ply of kraft enveloping said ply of laminated Sisal kraft and providing a printing surface for identifying indicia and advertising matter.

5. A multi-ply bag structure for the packaging of greasy comestibles for ocean shipment comprising, in combination, an inner ply of grease-proof sheet material incapable of affecting foods, a ply of asphalt laminated paper, at least one ply of paper interposed between and separating said ply of grease-proof sheet material and said ply of asphalt laminated paper, and an outer ply of paper enveloping said first mentioned plies and providing a printing surface for identifying indicia and advertising matter.

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