The present invention relates to improvements in bags and similar receptacles such as those employed for the packaging of various materials, and more especially to those composed of an outside sheet of paper or the like lined with metal foil or other air and moisture proof material and having a bottom or other portion thereof closed by flaps which are folded and pasted together.

The primary object is to provide novel means whereby the closing flaps of the bag or receptacle may be effectually pasted and thus securely held together notwithstanding the interposition of the liner of foil or other substance which is difficult to paste or cement, especially when the foil or liner is provided with a waxed backing sheet.

In the accompanying drawing:—

Fig. 1 is a perspective view, partly broken away, of a foil lined bag embodying the present invention;

Fig. 2 is a bottom view of the bag showing a pair of the bottom flaps unfolded and the parts of one of these flaps separated;

Fig. 3 is a view similar to Fig. 2 but showing one of the flaps in unfolded position;

Fig. 4 is a section on an enlarged scale, taken through the bottom of the bag on the line 4—4 of Fig. 1; and

Fig. 5 is a detail fragmentary section through one of the flaps, taken on the line 5—5 of Fig. 8.

The invention is shown in the present instance applied to a foil lined bag which is composed of an outside sheet 1 of ordinary fiber paper such as that commonly used in the making of paper bags, a sheet of tin or other metal foil 2 and an inner waxed paper backing sheet 3, all of which are thin and flexible, the outside sheet and the foil and its backing sheet being coextensive in area and pasted to one another and formed into a bag which, in the example shown, is of the so-called automatic type having pleats or folds 4 in its opposite edges which enable the front and back of the bag to fold flatwise against one another, and the bottom of the bag is closed by a pair of inside flaps 5 which are folded inwardly from two of the opposite edges of the bag and by a pair of outside flaps, 6 and 7 which are folded inwardly from the other opposite edges of the bag onto the previously folded inside flaps 5 to which they are pasted, the flap 7 being folded against the outside of the flap 6.

Foil obtainable from foil manufacturers is usually furnished with the foil 2 stuck to the waxed backing sheet 3, but in attempting to use such foil in the manufacture of foil lined bags it has been found that the outermost flap of the bottom of the bag could not be firmly secured in its folded position by the usual pasting, due to the fact that the waxed backing sheet does not stick to the metal foil sufficiently to hold the outermost flap in folded position by pasting in the usual way. While the portion of the waxed backing sheet on the inner side of the outermost flap was pasted to the underlying flap or flaps and the outside paper sheet and foil on this flap were pasted or cemented together, this flap was subject to detachment and unfolding, due to the easy separation of the foil portion of this flap from the waxed backing sheet portion thereof.

The present invention enables the outside flaps to be securely pasted together by pasting together directly the portions of the outside flaps which are composed of the outside paper sheet. In the bag shown in the present instance, this is accomplished by cutting through a portion of the foil 2 and its backing sheet 3 on the outermost flap 7 to form a tongue 8 which is folded or doubled against the outer side of the foil and between the foil and the outside paper sheet 1, thus providing a slot or opening 9 which extends through the foil 2 and backing sheet 3 and exposes the inner side of the outside paper sheet 1, the foil beyond the slot or toward the free end of this flap being pasted to the outside paper sheet 1, and when the outside flap 7 is folded against the flap 6, after a line of paste or other suitable adhesive 10 has been applied to the outside of the flaps 5 and the inside of the flap 7 and across the area of the outside paper sheet 1 exposed through the slot or opening 9 in the latter flap, the area of the outside paper sheet 1 exposed through the slot or opening 9 is pressed into contact with...
outside paper sheet on the outside of the flap 6, a portion of the flap 6 being, if necessary, pressed through the slot 9 as shown in Fig. 4, whereby the flaps 6 and 7 are secured together firmly and securely by the direct pasting together of the contacting portions of the outside paper sheet 1. The outside flaps of the bag are thus securely pasted together notwithstanding the insufficient sticking of the foil to the waxed backing sheet.

Such direct pasting together of the fiber paper sheets of the outside flaps 6 and 7 securely holds these flaps in folded position, and the line of paste 10 will sufficiently attach the outside flaps to the inside flaps 5 to close the bag bottom against leakage, the secure uniting of the outside flaps in the manner described effectively preventing pulling open of the bag bottom. The foil of the liner is pasted to the outside fiber paper around the top of the bag, thus facilitating the opening of the bag mouth and filling of the bag.

Bags as described above may be readily made in different ways, as for example on an ordinary bag making machine embodying a perforator to cut the slot through the foil and its waxed paper backing, as will be well understood by those skilled in the art.

It will be understood that the invention is applicable also to bags or other receptacles having a liner composed of other air and moisture proof material which is difficult to paste or cement, such for example as "Cellophane" or any of the other well-known thin, transparent, flexible sheet cellulose products obtained from viscose.

The provision of the slot or perforation 9 enables the outermost flap to be securely pasted to the underlying flap by the direct contact and pasting together of the ordinary or fiber paper portions of these flaps as hereinafore described, the folding of the tongue 8 into position between the foil portion and the outer fiber paper portion of this flap avoiding the necessity of removing entirely the portions of the foil and its backing sheet which are cut to form the slot or perforation.

While the invention is shown and described by example as applied to a bag of one well-known type, it will be understood that the invention is applicable to bags of other types having flaps for closing the bottom thereof and may also be applied to receptacles or containers of other kinds having flaps for closing or securing portions thereof.

I claim as my invention:

1. A bag or receptacle comprising an outside sheet and a liner and backing sheet therefor portions of which sheet and liner form flaps one of which is folded against the other, the portions of the liner and its backing sheet on one flap and which lie between the folded flaps being perforated to expose