June 5, 1934. E. D. GREENE 1,962,071

BAG

Filed May 15, 1931 2 Sheets-Sheet 1

FIG. 1.

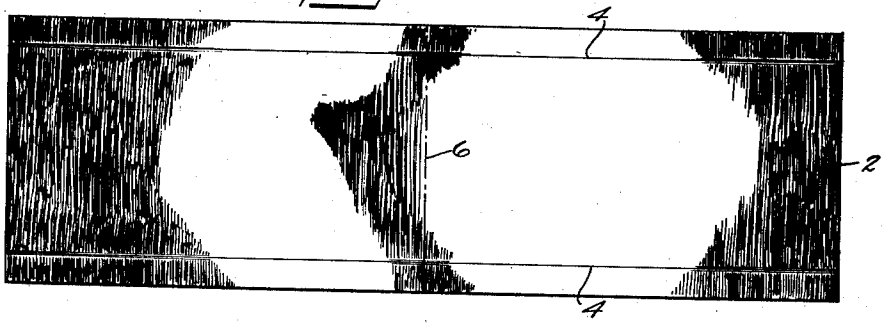


FIG. 2.

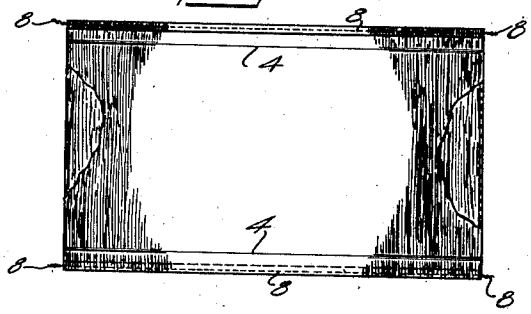


FIG. 3.

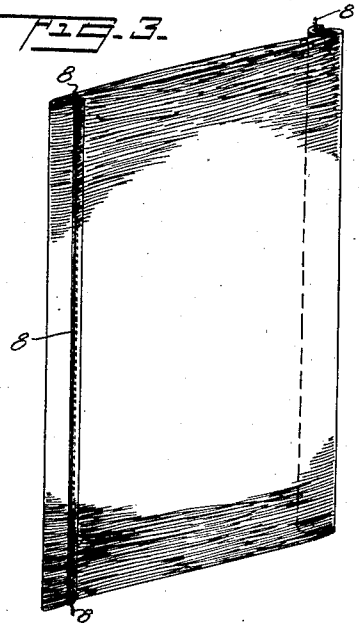
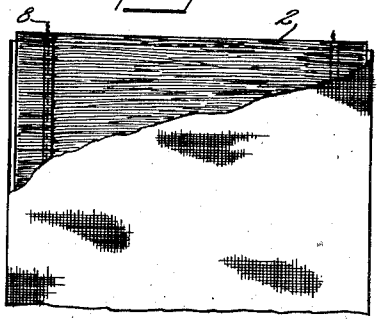


FIG. 4.



INVENTOR
Edwin D. Greene
By Bartlett Lyon Scott & Keel,
ATTORNEYS

June 5, 1934. E. D. GREENE 1,962,071

BAG

Filed May 15, 1931 2 Sheets-Sheet 2

FIG. 5.

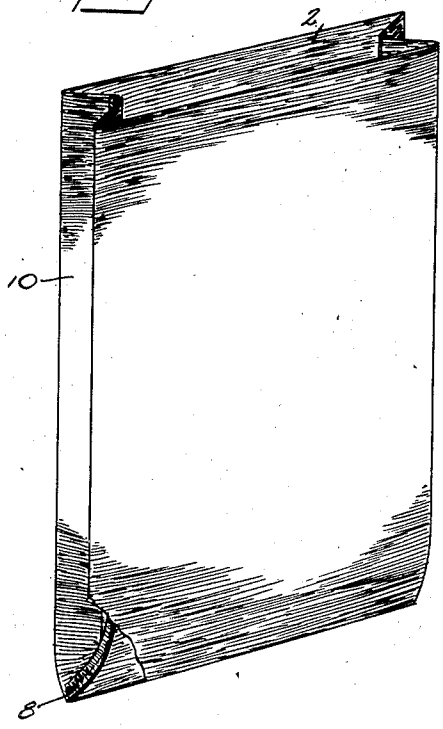


FIG. 7.

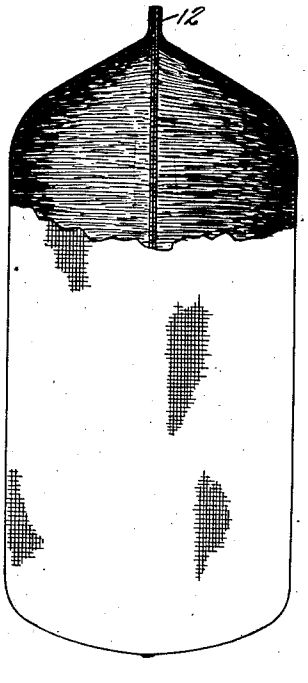


FIG. 6.

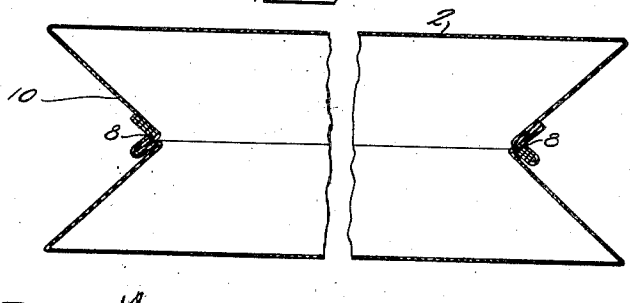
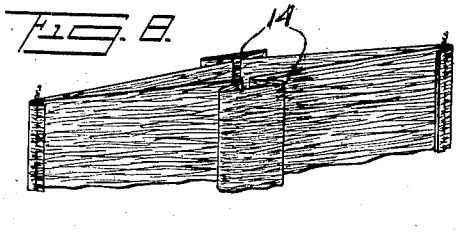


FIG. 8.



INVENTOR
Edwin D. Greene
BY
Bartlett Eyre Scott & Keal,
ATTORNEYS

Patented June 5, 1934 1,962,071

UNITED STATES PATENT OFFICE

1,962,071

BAG

Edwin D. Greene, New York, N. Y., assignor to Arkell Safety Bag Company, New York, N. Y., a corporation of New York

Application May 15, 1931, Serial No. 537,523

8 Claims. (Cl. 229—53)

My invention relates to bags, and has special reference to linings of crinkled paper for burlap or other textile fabric bags. My invention further relates to a method of making such articles.

In forming the lining for bags of the character indicated, it has been customary to fold a sheet of crinkled paper upon itself in the direction of the crinkles and secure the longitudinal edges and the lower end edges of the bag tube thus formed by sewed seams, the crinkles extending longitudinally of the bag lining. The lining is inserted loosely in the bag with its upper end projecting beyond the upper end of the bag. When the lined bag is filled, the projecting upper end portion of the lining is tucked or folded in over the contents of the bag, and then the upper end of the bag or outer envelope is closed by a sewed seam.

While the bag as thus constructed has met with considerable commercial success, it has certain disadvantages. As the crinkles extend longitudinally of the lining, the lining is not stretchable longitudinally and consequently in handling the filled bag by grasping it at its ends, the paper is liable to break across the lining, allowing the material to come into contact with the more or less coarsely woven burlap and sift out through the burlap, and exposing the contents to dirt and dampness. Such breaking of the lining is especially objectionable where the bag is used for sugar or other food-stuffs and certain chemicals that should be protected from exposure and, consequently, the bag has not been generally used for containing such materials. Moreover, in packaging products such as sugar, which is done largely by automatic machinery, it would be impracticable to tuck in the upper end of the paper lining before closing the bag by a sewed seam, and with the crinkles in the paper extending longitudinally of the lining it would be impracticable to sew in the upper end of the lining with the upper end of the bag as the unstretchability of the paper longitudinally of the lining would result in the stitches easily tearing out.

One of the objects of the present invention is to provide a paper-lined bag which overcomes the disadvantages above described of prior constructions.

Another of the objects of the present invention is to provide a novel and improved bag of the character indicated and method of forming the same.

Referring to the drawings,

Figure 1 is a plan view of a blank from which my improved lining may be formed;

Fig. 2 is a side elevation, partly broken away, of my improved lining at the completion of the sewing of the seams;

Fig. 3 is a view in perspective of the completed lining, ready to be inserted in the bag;

Fig. 4 is a side view of a portion of a bag with my improved lining inserted therein;

Fig. 5 is a view in perspective of a modified form;

Fig. 6 is a transverse sectional view, on an enlarged scale, of the same;

Fig. 7 is an edge view, partly in section, of a filled bag; and

Fig. 8 is a perspective view of the upper portion of another modified form.

My improved lining as illustrated in the drawings may be made from a rectangular sheet of crinkled paper 2 having the crinkles extending transversely thereof. If desired the sheet may be waxed or otherwise treated. In accordance with my improved method, I score the sheet on lines 4 arranged parallel to and spaced from the longitudinal edges of the sheet. The sheet is then folded upon itself on a transverse line 6 midway between its ends. The longitudinal edges are then turned over and secured by lines of stitches 8. Previously to inserting the lining thus formed in the bag, the longitudinal edge portions thereof may be folded over on the lines of scoring 4, said edge portions being preferably folded in opposite directions as shown in Fig. 3. Instead of folding said edge portions over, however, they may be tucked in on said lines of scoring as shown in Fig. 5 to provide the accordion folds 10. Preferably the lining is of substantially the length of the bag so that when inserted in the bag the upper end of the lining becomes substantially even with the upper edge of the bag. When the bag has been filled it may be easily closed by bringing the edges of the open ends of the lining and the outer envelope together, and securing them by a line of stitches 12 as shown in Fig. 7 which may be done by hand or by suitable sewing mechanism.

With the lining constructed as above described, during the filling of the bag, the folds at the longitudinal edge portions provide the necessary slack transversely thereof, and the transversely extending crinkles provide the necessary stretchability longitudinally of the lining, allowing the lining to freely stretch to the full capacity of the bag without danger of breaking the paper. Also, during the filling of the bag

the unseamed bottom of the lining is free to stretch and adjust itself to the bottom of the fabric envelope. The longitudinal stretchability of the crinkled paper allows the upper end of the lining to be sewed in with the upper end of the fabric envelope without danger of the stitches pulling out so that it is unnecessary to tuck in the upper end of the lining previously to sewing the upper end of the bag. Such closing of the upper end of the bag may be performed by the usual automatic sewing mechanism employed with present day bag filling machines. Also, by sewing in the upper end of the lining with the fabric, there is an appreciable saving of paper over the prior constructions which have a projecting end to be tucked in as above described. During the handling of the filled bag, the paper readily stretches longitudinally thereof, the unseamed bottom of the lining is permitted to freely expand and fit against the bottom of the burlap envelope, and the folds or tucks at the longitudinal edge portions of the lining provide plenty of slack to prevent any undue strain transversely of the lining, so that danger of breakage of the lining is reduced to a minimum. The longitudinally extending sewed seams hold the lining from becoming unduly distorted and serve to reinforce the lining longitudinally thereof.

Instead of providing folds adjacent the longitudinal sewed seams as above described, it may be desirable in some instances to provide longitudinally extending folds 14 midway of said sewed seams (Fig. 8). Preferably these folds are of dove-tail form as shown. Also, the paper may be crinkled longitudinally of the lining as well as transversely so as to provide the necessary slack, or the desired result may be otherwise secured.

As will be evident to those skilled in the art, my invention permits various modifications without departing from the spirit thereof or the scope of the appended claims.

What I claim is:

1. A lining for insertion in a fabric bag of the class described made from a sheet of crinkled paper with the crinkles extending transversely thereof to provide for longitudinal stretchability and with the sheet folded over upon itself on a transverse line, and seams securing the longitudinal edges together, said lining having longitudinally extending means to provide for circumferential stretchability.

2. A bag lining of the class described made from a sheet of crinkled paper, with the crinkles extending transversely thereof and with the sheet folded over upon itself on a transverse line, the longitudinal edges of the folded sheet being turned over, and lines of stitching securing them together.

3. A bag lining of the class described made from a sheet of crinkled paper, with the crinkles extending transversely thereof and with the sheet folded over upon itself on a transverse line, and seams securing the adjacent longitudinal edges of the folded sheet together, the folded sheet being folded over on lines spaced from the longitudinal edges thereof.

4. A lining for insertion in a fabric bag of the class described made from a sheet of crinkled paper, with the crinkles extending transversely thereof to provide for longitudinal stretchability and with the strip folded over upon itself on a transverse line, and seams securing the adjacent longitudinal edges together, the longitudinal seamed edges of the bag being tucked inwardly to provide for circumferential stretchability.

5. A lining, for insertion in a fabric bag, made of crinkled paper with the crinkles extending transversely thereof to provide for longitudinal stretchability, and reinforcing means extending lengthwise of the bag on diametrically opposed lines, said lining having longitudinally extending means to provide for circumferential stretchability.

6. A lining, adapted for insertion in a fabric bag of the class described, made from a sheet of crinkled paper with the crinkles extending transversely thereof to provide for longitudinal stretchability and with the sheet folded over upon itself on a transverse line, and seams securing the longitudinal edges together, the sides of the bag thus formed having longitudinally extending folds positioned midway between the sewed seams to provide for circumferential stretchability.

7. A bag lining of the class described made from a sheet of crinkled paper with the crinkles extending transversely thereof and with the sheet folded over upon itself on a transverse line, and seams securing the longitudinal edges together, the bag thus formed having folded over portions extending longitudinally thereof to provide slack in opening up the bag.

8. A paper lining for a fabric bag of the class described, said lining being transversely crinkled so as to provide for longitudinal stretchability thereof and having longitudinally extending means to provide for circumferential stretchability, said lining being in the form of a bag having a closed lower end and sides adapted to be inserted in the fabric bag with the bottom of the lining adjacent the bottom thereof, and said provisions for longitudinal and circumferential stretchability being such that when the lined bag is filled with finely divided material and the bag is closed the lining may freely adjust itself to the inner surface of the bag during handling without undue strain being placed thereon.

EDWIN D. GREENE.