June 15, 1926.

1,588,649

A. M. BATES

PROCESS OF MAKING FILLED BAGS

Filed July 15, 1925 2 Sheets-Sheet 1

Fig. 1.

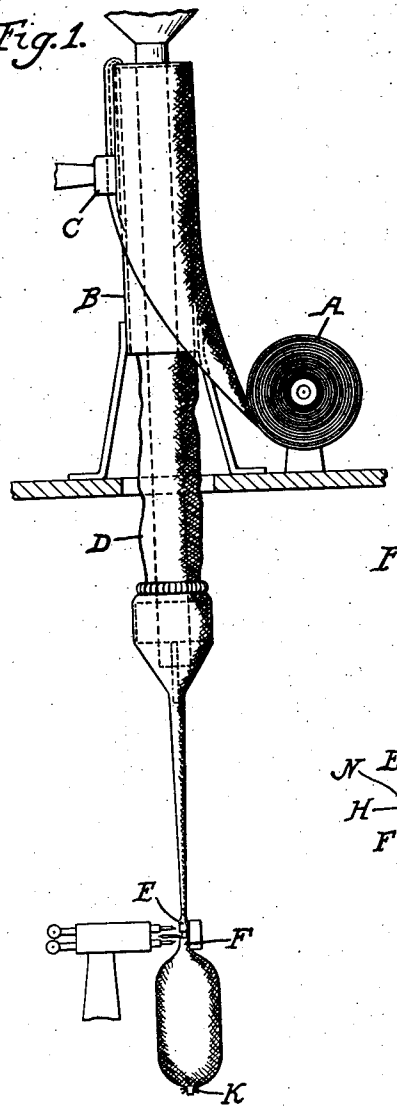



Fig. 2.

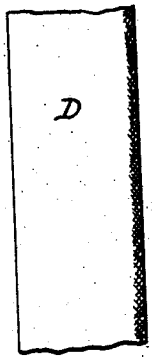



Fig. 3.

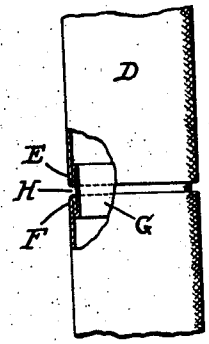



Fig. 4.

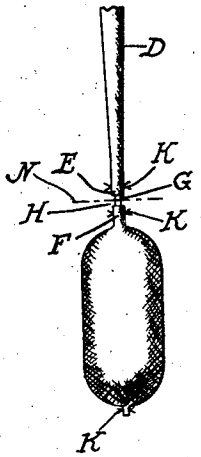
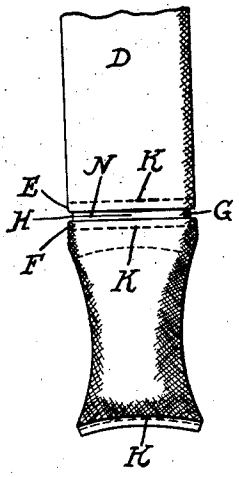



Fig. 5.




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2 Sheets-Sheet 2

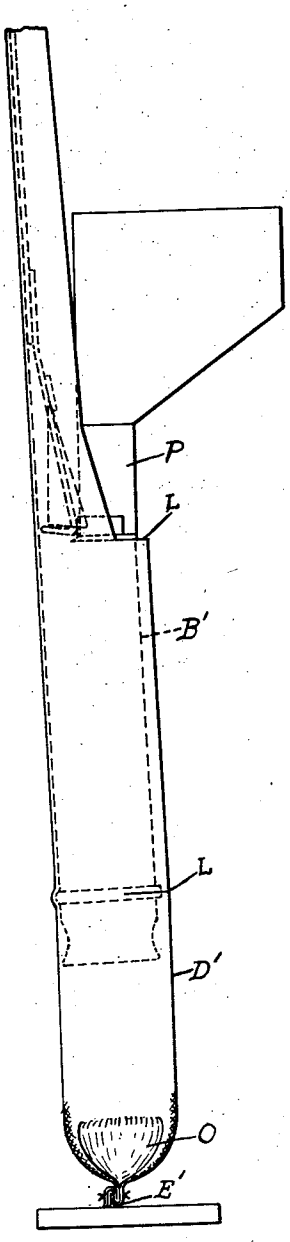



Fig. 6.

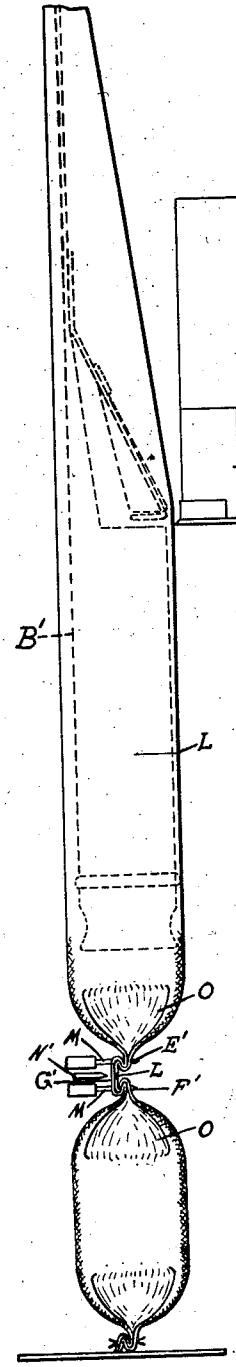



Fig. 7.

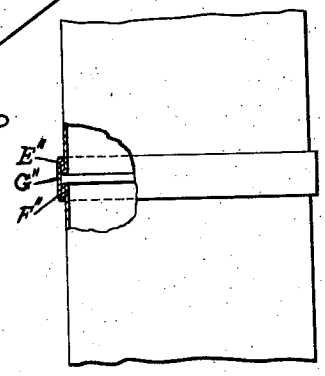



Fig. 9.

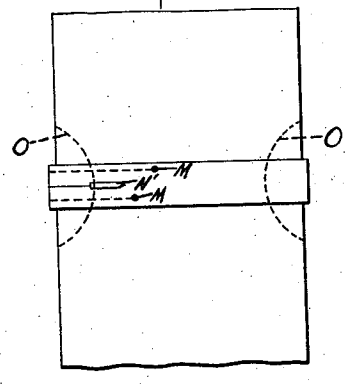



Fig. 8.

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# UNITED STATES PATENT OFFICE.

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## PROCESS OF MAKING FILLED BAGS.

Application filed July 15, 1925. Serial No. 43,696.

My invention relates to a process for producing filled bags. It has particular reference to such process when concerned with bag fabric or bags of such size and fabric as to make important a hem or fold in connection with one or both of the bag end closures.

Figure 1 is a diagrammatic side elevation of so much of an apparatus as may be used to illustrate my process. Fig. 2 is a side elevation of a bag tube. Fig. 3 is a side elevation of a bag tube with folds. Fig. 4 is an enlarged detail side view of parts showing the filled bag with hemmed closures. Fig. 5 is a front view of the same. Fig. 6 is a diagrammatic side elevation illustrating a modification of the filling step. Fig. 7 is a diagrammatic side elevation illustrating a modification of the closure-forming step. Fig. 8 is a diagrammatic face view of the closure, shown in Fig. 7, in course of formation. Fig. 9 is a view similar to Fig. 3, showing a modified form of fold.

Like parts are indicated by the same letters in all figures. A is a roll of bag fabric, B is a bag forming tube, C is a closure device such as a sewing machine to secure the edges of the material together to form a tube, D is a tube so formed. E and F are folds of the tube connected by the inner tube portion G and preferably with a space H between them. KK are closures formed by the seams whereby the folded portions of the tube are attached together to form the hemmed top and bottom closures of the bag. N is the line on which the tube is severed between these folds or seams to separate the finished bag from the tube. The folds might be made by hand or by any suitable forming mechanism. The folds are made in the tube after the bag has received its charge.

In Fig. 6 there is shown a tube D′ of any suitable bag-forming material, which is passed downward around a float B′ sustained in the tube in any suitable manner.

Successive slits L are formed in the side of the tube at suitable intervals. These slits may be formed by cutting the tube wall between the top of a tubular portion of float B′ and the bottom of a feed spout P, or they may be formed previously in any suitable manner.

A charge of material is passed from the feed spout through the float into the tube while the parts are in the position shown in Fig. 6, and then the parts are moved to the position shown in Fig. 7. Folds E′F′ are formed in the tube above the charge, connected by the tube portion G′. Preferably, the portion G′ includes the slit L. Seams are sewed through folds E′F′ by needles M, as indicated diagrammatically in Figs. 7 and 8, and severance of portion G′ is completed between the seams by a cutter N′.

As shown in Figs. 6, 7 and 8, longitudinal folds O are formed in the wall of the bag at the ends of the seam, and additionally reinforce the seams at the ends.

In Fig. 9, a fold is shown like that shown in Figs. 1 and 3 to 5, except that the connecting portion G″ between the folds E″ and F″ is on the outside of the tube instead of on the inside thereof.

The use and operation of my invention as illustrated in Fig. 1 are as follows:

The bag fabric, printed or otherwise treated, has its two edges brought together around the forming tube. The sewing machine joins these edges to form the tube, which is then reversed to bring the seam inside and passed down through the forming tube. The folds are then formed at the lower end of such tube by hand or a fold producing device and the folds are seamed, preferably the seams which close the bottom of the upper bag and the top of the lower bag being made simultaneously and the fabric of the tube between them being severed to detach the lower filled bag. A charge of material is then inserted in the tube against the end closure, the tube fed downwardly and the operation repeated. The material could be folded as many times as desired and the fabric could be severed through the fold.

The manner of forming the tube, the material of the bag or charges, the manner of inserting the charges, and the form of the folds are not essential parts of this invention except as specified in the appended claims, and these and other disclosed features may be modified within the scope of the appended claims without departing from my invention.

One form of the invention was disclosed in my prior application Serial No. 328,310, and in the division thereof, Serial No. 463,

479, and this application is a continuation of those applications in so far as the subject matter is common.

What I claim is:—

1. The method of producing a filled bag from filling material and a bag tube having a closed end, which consists in filling a charge of the material into the bag tube with one end of the charge against the closed end of the tube, then forming a fold in the walls of the tube adjacent the other end of the charge, then forming a tube closure through said fold, and severing the filled and closed bag from the tube, the severance following the formation of the fold.

2. The method of producing a filled bag from filling material and a bag tube having a closed end, which consists in filling a charge of the material into the bag tube with one end of the charge against the closed end of the tube, then forming a fold in the walls of the tube adjacent the other end of the charge, then sewing a tube-closing seam through said fold, and severing the filled and closed bag from the tube, the severance following the sewing of the seam.

3. The method of producing filled bags from filling material and a bag tube having a closed end, which comprises filling a charge of the material into the tube with one end of the charge against the closed end of the tube, then folding the walls of the tube adjacent the other end of the charge, forming two tube closures through the folded tube walls, and severing the tube between the closures, the severance following the formation of the closure.

4. The method of producing filled bags from filling material and a bag tube having a closed end, which comprises filling a charge of the material into the tube with one end of the charge against the closed end of the tube, then folding the walls of the tube adjacent the other end of the charge, sewing two tube closing seams through the folded tube walls, and severing the tube between the seams, the severance following the sewing of the seams.

5. The method of producing filled bags from filling material and a bag tube having a closed end, which comprises filling a charge of the material into the tube with one end of the charge against the closed end of the tube, then forming two transverse parallel folds in the walls of the tube adjacent the other end of the charge, sewing two tube closing seams, one through each of said folds, and severing the tube between the seams, the severance following the sewing of the seams.

In testimony whereof, I have hereunto signed my name to this specification.

ADELMER M. BATES.