Sept. 5, 1967 J. J. GREVICH 3,339,825

BAG

Filed Dec. 8, 1965

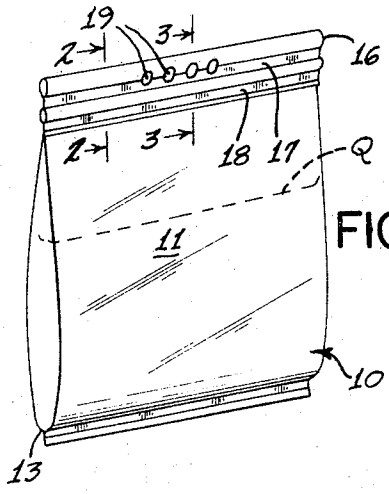


FIG. 1

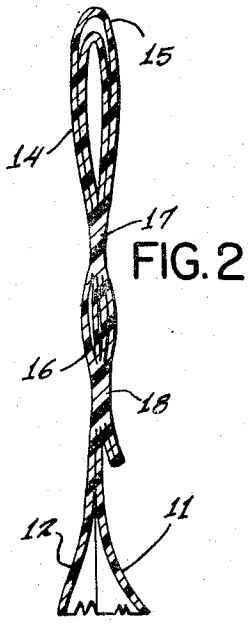


FIG. 2

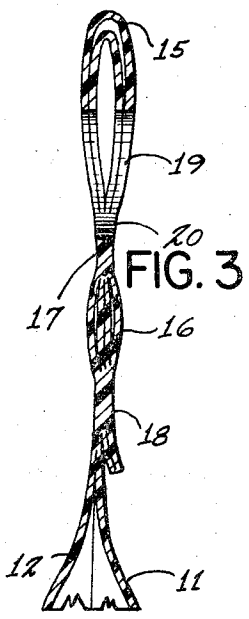


FIG. 3

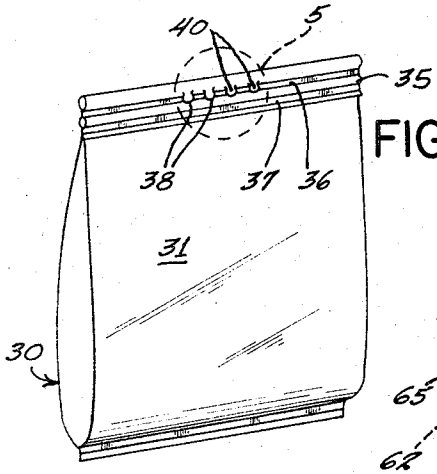


FIG. 4

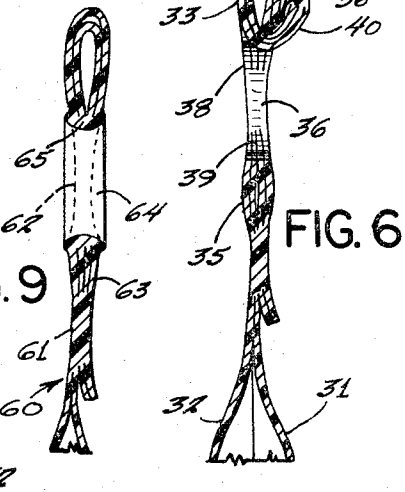


FIG. 6

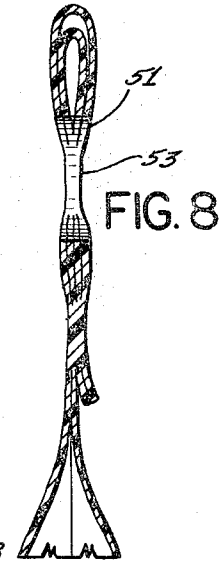


FIG. 8

FIG. 9

FIG. 7

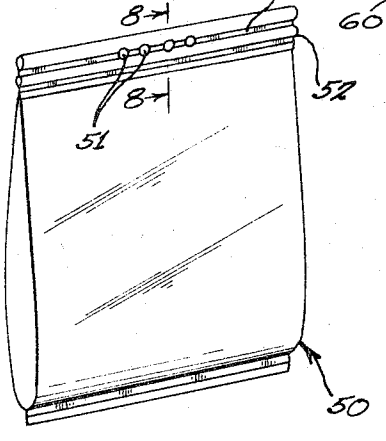
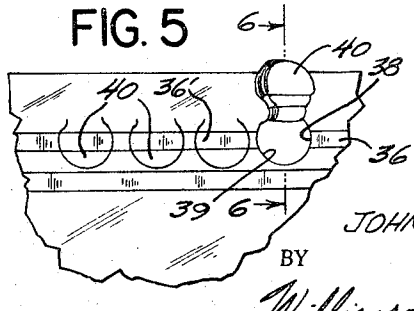


FIG. 5



INVENTOR.
JOHN J. GREVICH

BY

Williamson & Palmatier

ATTORNEYS

United States Patent Office 3,339,825
Patented Sept. 5, 1967

3,339,825

BAG

John J. Grevich, Star Prairie, Wis., assignor to Doughboy Industries, Inc., New Richmond, Wis., a corporation of Wisconsin

Filed Dec. 8, 1965, Ser. No. 512,488
7 Claims. (Cl. 229—62)

ABSTRACT OF THE DISCLOSURE

A bag with the end folded down and sealed to itself along a band parallel to the fold; a handle being provided by finger holes in the bag and intersecting the band, the apertures being die cut across the band or fusion-formed with heat sealed peripheries.

This invention relates to a bag for confining articles for transport and storage and having a carrying handle formed in the upper marginal portion thereof.

An object of my invention is to provide a new and improved article-confining bag with a novel and improved bag carrying portion formed integrally into the upper marginal edge portion of the bag.

Another object of my invention is to provide an improved article-confining bag with a simple and inexpensive closure formed in the upper marginal portion of the bag, into which a carrying feature is provided of a nature as to be formed by high speed processing machinery.

Another object of my invention is to provide in an article confining bag constructed of heat sealable material, a carrying handle which is easy on a person's fingers so that a substantial weight of material can readily be handled without injuring or unduly tiring a person's hand.

These and other objects and advantages of my invention will more fully appear from the following description made in connection with the accompanying drawings, wherein like reference characters refer to the same or similar parts throughout the several views, and in which:

FIG. 1 is a perspective view of a bag incorporating the present invention.

FIG. 2 is an enlarged detail section view taken at approximately 2—2 in FIG. 1.

FIG. 3 is an enlarged detail section view taken approximately at 3—3 in FIG. 1.

FIG. 4 is a perspective view of a modified form of the bag.

FIG. 5 is an enlarged detail elevation view of a portion of the bag illustrated in FIG. 4.

FIG. 6 is an enlarged detail section view taken approximately at 6—6 in FIG. 5.

FIG. 7 is a perspective view of another modification of the bag and incorporating the present invention.

FIG. 8 is an enlarged detail section view taken approximately at 8—8 in FIG. 7.

FIG. 9 is an enlarged detail section view, similar to FIG. 8, but illustrating a further modification of the bag incorporating my invention.

In FIG. 1, the bag **10** is constructed of a tube of flexible heat sealable material, such as polyethylene, which is flattened into an oblong bag shape so that the bag essentially has a pair of front and rear flattened panels **11** and **12** in confronting relation with each other. The bag is shown having a closed bottom **13**, and as illustrated the bag **10** has a quantity Q of merchandise such as fertilizer contained therein. The bag **10** is particularly adapted for confining small quantities of various granular materials, such as fertilizer, or for confining articles of manufacturers which are commonly sold in retail stores, and the bag is well adapted to be carried by a purchaser from the store, substantially in the manner of a woman's purse.

As illustrated in FIGS. 2 and 3, the upper portion **14** of the bag is folded at **15** downwardly so as to define a multiple thickness closure area **16**, cooperatively defining a strong handle and an efficient closure for the bag **10**. The closure area **16** is provided with a pair of continuous seals **17** and **18** in spaced and parallel bands extending entirely across the width of the bag. The seal **18** provides a complete closure for the interior of the bag and fuses together the multiple thicknesses of the closure area to very materially strengthen the bag in the closure area **16** which also serves as a handle.

The closure area **16** is also provided with a plurality of finger-receiving holes or apertures **19**, the periphery of each intersecting the seal **17** so that the edges **20** of the multiple thicknesses in the closure area are held together by the seal **17**.

In the form illustrated in FIGS. 1–3, the holes **19** are die cut around their entire peripheries **19**.

It will be noted that the holes **19** are spaced from each other so that the fingers of a person's hand can be comfortably inserted into these holes for gripping the bag. The sealing together at the edge **20** of the multiple thicknesses produces an intimate cooperation between the several thicknesses of heat sealable polyethylene as to provide a handle of very substantial strength and comfort for the fingers. The weight of the material in the bag and the tension applied at the holes **19** on the fingers is spread out over a substantial width of the bag by the seals **17** and **18**, and furthermore, the upper peripheral portions of the holes **19** tend to turn over slightly under weight of the material Q so as to distribute the weight over a substantial surface area of the person's fingers.

The construction of the bag **30** illustrated in FIGS. 4, 5, and 6 is substantially the same as that hereinbefore described. The flattened rear and front panels **31** and **32** have their upper portions **33** folded downwardly at **34** to define a multiple thickness closure portion **35** having seals **36** and **37** fusing together all of the thicknesses of polyethylene material in the closure portion **35**. The holes or apertures **38** are die cut incompletely around the periphery **39** of the holes and in intersecting relation with the seal **36** so as to define a depending flap **40** attached to the closure area **16** at the top of each of the holes **38**. The flap also has multiple thicknesses which are secured together by the seals **36'** formed prior to the die cutting of the holes **38**.

The several flaps **40** at each of the holes is swung out of the hole and folded upwardly as illustrated in FIG. 6 when a person's fingers are inserted into the apertures for carrying the bag. It will be understood that the seal **36** which is intersected by the die cut peripheries of the holes, holds the multiple thickness of the closure area together adjacent the holes **38** as to multiply the strength of the material by assuring all of the available material is continuously used in supporting the load carried by the bag. Retaining of the multiple thicknesses together in the closure area **35** also facilitates easier insertion of the person's fingers through the holes.

Additionally, and of substantial importance in this form of the invention, the flaps **40** provide a smoothly rounded or contoured surface against which the fingers of a person's hand press when the bag **30** is lifted by means of the fingers extending the the holes.

In the form of the invention illustrated in FIG. 7, the bag is substantially identical to bag **10** hereinbefore described, but it will be noted that the apertures **51** in the closure area **52** have diametrically opposite portions **53** of the hole peripheries secured together by the seal **54** which is entirely intersected by each of the holes **51**. This contrast to the placement of the holes **19** in FIG. 1 which intersect the seal **17** only at the edges **20** adjacent the lower

portion of the periphery and the seal **17** is uninterrupted across the entire width of the bag.

The form of the bag **60** illustrated in FIG. 9 is similar to the bags **10** and **50** of FIGS. 1 and 7 and has the seals **61** and **62** in the closure area **63**. Each of the apertures **64** is formed by melting the heat sealable material and forming an annular bead **65** at the entire periphery of the hole. The complete peripheral bead around the whole periphery provides additional strengthening by assuring complete cooperation between all of the thicknesses of the closure area **63** in supporting the material carried by the bag. The peripheral bead **65** also increases the comfort in supporting the bag on a person's fingers. It will be seen that I have provided a new and improved bag having an integrally formed carrying handle in such a simple and inexpensive manner as to eliminate the need for other form of carrying devices or handle structures or bags in which rather heavy products are sold. The bag provides a complete closure to confine the granular material or other type of merchandise therein.

It will, of course, be understood that various changes may be made in the form, details, arrangement and proportions of the various parts without departing from the scope of my invention.

What is claimed is:

1. A hand carriable bag for confining merchandise such as articles and granular material,

comprising a tube of flexible sheet material flattened to arrange a pair of panels in confronting relation with each other, said panels having upper portions folded downwardly and defining a multiple thickness closure area, said closure area including a seal fusing the thicknesses of sheet material together and along a band spaced downwardly from the fold, and said closure area having a plurality of finger-receiving holes through the band and facilitating manual gripping and carrying.

2. The bag according to claim **1** wherein said finger-receiving holes have die cut peripheries intersecting the seal whereby to retain the multiple thicknesses together at the holes.

3. The bag according to claim **1** wherein said multiple thickness closure area has edges extending incompletely around the peripheries of said holes and defining depending flaps foldable upwardly out of the holes during hand carrying of the bag.

4. The bag according to claim **1** wherein said multiple thickness closure area has hole edges sealed together and extending incompletely around the peripheries of said holes and defining depending flaps each of multiple thickness material sealed together, said flaps being foldable upwardly out of the holes during hand carrying of the bag.

5. The bag according to claim **1** wherein said seal is substantially uniform all along the band at said holes and extending entirely across the closure area and the pair of flattened sheet material panels.

6. The bag according to claim **1** wherein said seal is substantially continuous along said band to the holes and to the sides of said panels, said closure area also including a second seal fusing the thicknesses of sheet material together uniformly all along a band disposed below said first mentioned band and effecting a secure closure between the upper portions of said panels.

7. The bag according to claim **1** and including a second seal fusing the multiple thicknesses of the closure area together uniformly along a second band disposed below said first mentioned band and extending across the panels substantially to the side edges thereof.

References Cited

UNITED STATES PATENTS

2,463,302	3/1949	Orchard	229—54
3,008,837	11/1961	Kaplan	229—54 X
3,092,439	6/1964	Harrison.	
3,140,039	7/1964	Conti	229—62
3,249,285	5/1966	Dollheimer et al.	229—53

JOSEPH R. LECLAIR, *Primary Examiner.*

DAVID M. BOCKENEK, *Assistant Examiner.*