

PATENT SPECIFICATION

(11) 1334831

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DRAWINGS ATTACHED

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- (21) Application No. 10716/72 (22) Filed 13 July 1971
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- (52) Index at acceptance
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A4G 19 5B 5E 5H 5J
B5D 2B1 4A
- (72) Inventor JOHN ALAN FAIERS



(54) IMPROVEMENTS IN OR RELATING TO BAGS

(71) We, DECOFLEX LIMITED, a British Company of Lamson House, 75—79 Southwark Street, London, S.E.1, do hereby declare the invention for which we pray that a patent may be granted to us and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to bags and particularly but not exclusively to bags for containing coins.

In patent specification No. 829,215 there is described and claimed a method of manufacturing bags from a continuous web of heat sealable plastics material and a bag made according to the method. The bag is intended to be used for storing an article of merchandise and is characterised in that the rear panel of the bag is provided with an inwardly extending flap which is sealed along its side margins to the sides of the bag. The flap is arranged so that the lip of the bag formed by the front panel of the bag overlaps part of the flap. When the bag is filled with an article of merchandise, the end of the article nearest the opening of the bag is tucked under the flap and is thus prevented from falling out of the bag.

The bag described in patent specification No. 829,215 has been modified, so that the modified bag is suitable for containing coins. The modification has been achieved by increasing the length of the rear panel of the bag, while keeping the length of the front panel of the bag and the length of the flap constant thus forming two spaced pockets, one of which is larger than the other. The arrangement is such that after the larger pocket has been filled with coins, the bag is folded in such a manner that the bottom of the filled pocket can be tucked into the smaller pocket. In this manner, the coins are contained within an enclosed pack. The modified bag is the subject of Patent No. 1072696.

In use, the modified bag has been found to be not entirely satisfactory because some skill and dexterity is required to close the bag after it has been filled and it is costly to manufacture.

Certain proposals have been made for providing plastics film bags with a 'flip' closure. For example in patent specification No. 769058 there is described a bag having a pouch across the front of a bag, the pouch being open from below. When the pouch is turned inside out, it forms a hood over the mouth of the bag thereby closing the bag.

Some such bags have been proposed in which the rear panel of a bag is extended to provide a rudimentary flap or lip which extends beyond the pouch for a short distance. In practice such a rudimentary flap or lip may assist in the loading of articles into the bag but does not play a part in closing the bag or retaining the articles in the bag when the bag is closed.

It has been found that proposed 'flip' closure bags have a serious disadvantage when used for coins because if such a bag is inverted after it has been filled and closed there is a tendency for the mouth of the bag to gape open and for the coins to spill out.

In order to overcome the problem of coin spillage another type of bag has been proposed. This other type of bag is not, however, of the 'flip' closure type. It has a pouch across the front of the bag, the pouch being open from below, and the rear panel of the bag is extended to provide a free flap which extends from the back of the bag beyond the open end thereof. The bag is closed by tucking the free flap indiscriminately into the pouch without flattening and it is stated that the bulk of the tucked-in portion, together with the contents of the bag, retains the bag in a closed condition thereof.

An object of the present invention is to provide an improved bag.

SEE CORRECTION SLIP ATTACHED

According to the present invention there is provided a bag of synthetic plastics or the like material and having front and back panels sealed together along opposite side margins of the bag, the front panel being folded outwardly upon itself and sealed to the side margins of the bag to form a pouch extending across the front of the bag with the mouth of the pouch directed towards the bottom of the bag and the back panel extending beyond the fold of the front panel thereby forming a free flap, the arrangement being such that the bag is closed by turning the pouch inside out and trapping the free flap within it, the trapped free flap thereby forming a barrier within the reversed pouch.

Examples of a bag according to the present invention will now be described with reference to the accompanying drawings, in which:—

Figure 1 is a transverse cross section of a flattened tube from which bags according to one example of the present invention are made,

Figure 2 is a transverse cross section of two folded webs which have been cut from the tube shown in Figure 1,

Figure 3 is a plan view of one of the folded webs shown in Figure 2 indicating the ultimate lines of sealing and severance at longitudinally spaced intervals along the web,

Figure 4 is a perspective view of a bag which has been severed from the web shown in Figure 3, the bag being shown in an open condition with the mouth of the bag open to receive coins.

Figure 5 is a longitudinal cross section of the neck of the bag shown in Figure 4,

Figures 6 & 7 are views similar to Figure 5 showing the operation of closing the bag,

Figure 8 is a longitudinal cross section of the neck of the bag shown in a closed condition,

Figures 9 to 14 show another example of a bag and a method of manufacturing the bag according to the present invention, and

Figures 15 to 17 show a further example of a bag and a method of manufacturing the bag according to the present invention.

Referring now to Figures 1 to 8, there is shown an example of a bag which is one of many identical bags made in continuous form from a flattened tube 1 of heat sealable transparent plastics material. First the tube is slit longitudinally along a centre line 2 to form two folded webs 3, the distance from the fold to the longitudinal edge of each of the layers of each folded web being the same for both of the layers. The longitudinal edges of each web then are turned in the same direction onto themselves to form two further layers 6 and 7 extending above and parallel to the first formed layers 4 and 5 respectively. For each of the folded webs the layer 6 has a larger area than the layer 7 and so the fold

8 of the layers 4 and 6 is spaced from the fold 9 of the layers 5 and 7. Next, the layers 4, 5, and 6 and 5 and 7 are heat sealed together along lines 10 extending transversely of the webs and at longitudinally spaced intervals along each web. The process of heat sealing also serves to sever the webs to provide a series of identical bags.

Each bag, one of which is shown generally designated 11 in Figure 4, thus has a front panel 12, a rear panel 13, a pouch 14, a pocket 15 and side seams 16 and 17. The rear panel 13 has a larger surface area than the front panel 12, because the folds 8 of the webs 3 were spaced from the folds 9 so that the rear panel 13 has a free flap 19 which extends beyond the front panel 12.

The presence of the pocket 15 on the free flap 19 is specifically designed to give rigidity to the top of the bag to facilitate opening and filling of the bag.

After coins have been inserted into the bag, the bag can be closed by a two stage operation illustrated in Figures 5 to 8. The first stage consists of folding the flap 19 from the position shown in Figure 5 onto the pouch 14 as shown in Figure 6. The second stage is to turn the pouch 14 inside out, as shown in Figure 7 so that the pouch 14 is 'flipped' over to close the bag and the free flap 19 is trapped within it thereby distorting the free flap which forms a barrier within the reversed pouch (as shown in Figure 8) to prevent the coins from spilling out of the bag should the closed and filled bag be inverted.

However, it has been found that if the pouch 14 is folded over to close the bag without first folding the free flap 19 onto the pouch 14, the flap still will be trapped within the reversed pouch.

When the bag subsequently is opened by reversing the pouch 14 the rigidity provided by the pocket 15 on the free flap 19 makes it easier to dispense the coins while the pocket 15 gives a controlled flow in the dispensing of the coins from the bag.

A bag as shown in Figure 4 has the following dimensions:

Width of bag:	7.5cm—10.5cm	
Depth of panel (12)	9.5cm—12.5cm	115
Depth of pouch (14)	3.5cm—5.5cm	
Depth of pocket (15)	0.5cm—2.4cm	

Referring now to Figures 9 to 14, there is shown a method of manufacturing a modified bag and the bag made according to the method.

As in the previous example, the modified bag, shown generally designated 20 in Figure 14, is one of many identical bags made from a flattened tube 21 of heat sealable transparent plastics material (Figure 9).

The tube is slit longitudinally along a centre line 22 to form two folded webs gener-

ally designated 23 (Figure 10), the distance from the fold to the longitudinal edge of each of the layers 24 and 25 being the same for both of the layers.

- 5 Next, the longitudinal edge of each upper layer 24 is turned onto itself to form a top layer 26 (Figure 11) and each lower layer 25 is turned back under itself to form a bottom layer 27 (Figure 12), the fold 28 of the layers 24 and 26 being spaced inwardly from the fold 29 of the layers 25 and 27.

10 In the final stage of manufacturing the bags 20, the layers 25 and 27; 24 and 25 and 26, are heat sealed together, as shown at 30 in Figure 12, along lines extending transversely of the webs 23 and at longitudinally spaced intervals along the webs. The process of heat sealing also serves to sever the webs to provide a series of identical bags 20.

- 85 20 Each of the bags 20 is used in the same manner as the bag 11 of the previous example. However, although each bag 20 has a pocket, which is provided to give rigidity to the top of the bag, the pocket of the bag 20 is on the reverse side of the bag. Thus, when the bag 25 20 is emptied of coins, the pocket does not check the flow of coins from the bag as does the pocket 15 of the bag 11 in the previous example but the pocket does provide a convenient means for lifting the bag.

95 30 The pocket may be dispensed with, however, as will now be described with reference to Figures 15, 16 and 17.

- 100 35 In Figures 15 and 16 there is shown a method of manufacturing a bag in which the first three stages (Figure 15) of manufacture are similar to the first three stages of manufacturing the bag 20 in the previous example as shown in Figures 9, 10 and 11 respectively. However, the bags, one of which is shown generally designated 31 (Figure 17), are made in a fourth stage of manufacture by heat sealing webs 32 which have been folded as a result of the first three stages as shown in Figure 15. The heat seals of the webs 32 are shown at 33 in Figure 16. The process of heat-sealing also serves to sever the webs 32 to provide a series of identical bags 31.

- 110 45 Each of the bags 31 has a free flap 34 and is used in the same manner as the bags 11 and 20 of the previous examples.

115 50 The bag as shown in Figure 17 has the following dimensions:—

- 120 55
- | | |
|---------------------|--------------|
| Width of bag: | 7.5cm—10.5cm |
| Depth of bag: | 9.5cm—12.5cm |
| Depth of pouch: | 3.5cm—5.5cm |
| Depth of free flap: | 3.5cm—5.5cm |

60 In the specification of Patent No. 1,269,517 there is claimed a bag made from plastics film and having a pouch adjacent to the open end of the bag and extending across the front of the bag with the mouth of the pouch directed towards the bottom of the bag, characterised by a free flap which extends 65 from the back of the bag beyond the open end thereof and is arranged so that, when the bag is filled, it can be tucked indiscriminately into the pouch without flattening so that the bulk of the tucked-in portion, together with the contents of the bag, retains the bag in the closed condition thereof. 70

WHAT WE CLAIM IS:—

- 75 1. A bag made of synthetic plastics or the like material and having front and back panels sealed together along opposite side margins of the bag, the front panel being folded outwardly upon itself and sealed to the side margins of the bag with the mouth of the pouch directed towards the bottom of the bag and the pack back panel extending beyond the fold of the front panel thereby forming a free flap, the arrangement being such that the bag is closed by turning the pouch inside out and trapping the free flap within it, the trapped free flap thereby forming a barrier within the reversed pouch. 80
2. A bag according to claim 1 wherein the free flap is folded upon itself and sealed to itself to form a pocket, the mouth of the pocket being directed towards the bottom of the bag. 85
3. A bag according to claim 2 wherein the pocket is on the front of the free flap. 90
4. A bag according to any one of the preceding claims wherein the depth of the pouch is substantially equal to the length of the free flap. 95
5. A bag according to any one of the preceding claims wherein the material of the bag is transparent. 100
6. A method of manufacturing a bag comprising the steps of flattening a tube of synthetic plastics or the like material, cutting the tube to form two folded webs, folding a layer of each of the webs outwardly upon itself, sealing the webs at longitudinal intervals transversely of the webs and severing the webs in the seals. 105
7. A method according to claim 6 wherein before the webs are sealed, the other layer of each of the webs is folded upon itself. 110
8. A bag constructed and arranged substantially as herein described with reference



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10 In the final stage of manufacturing the bags 20, the layers 25 and 27; 24 and 25 and 26, are heat sealed together, as shown at 30 in Figure 12, along lines extending transversely of the webs 23 and at longitudinally spaced intervals along the webs. The process of heat sealing also serves to sever the webs to provide a series of identical bags 20.

15 20 Each of the bags 20 is used in the same manner as the bag 11 of the previous example. However, although each bag 20 has a pocket, which is provided to give rigidity to the top of the bag, the pocket of the bag 20 is on the reverse side of the bag. Thus, when the bag 25 20 is emptied of coins, the pocket does not check the flow of coins from the bag as does the pocket 15 of the bag 11 in the previous example but the pocket does provide a convenient means for lifting the bag.

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45 50 Each of the bags 31 has a free flap 34 and is used in the same manner as the bags 11 and 20 of the previous examples.

The bag as shown in Figure 17 has the following dimensions:—

55 Width of bag: 7.5cm—10.5cm
Depth of bag: 9.5cm—12.5cm
Depth of pouch: 3.5cm—5.5cm
Depth of free flap: 3.5cm—5.5cm

In the specification of Patent No. 1,269,517 there is claimed a bag made from plastics film and having a pouch adjacent to the open end of the bag and extending across the front of the bag with the mouth of the pouch directed towards the bottom of the bag, characterised by a free flap which extends 60 65 from the back of the bag beyond the open end thereof and is arranged so that, when the bag is filled, it can be tucked indiscriminately into the pouch without flattening so that the bulk of the tucked-in portion, together with the contents of the bag, retains the bag in the closed condition thereof. 70

WHAT WE CLAIM IS:—

1. A bag made of synthetic plastics or the like material and having front and back panels sealed together along opposite side margins of the bag, the front panel being folded outwardly upon itself and sealed to the side margins of the bag with the mouth of the pouch directed towards the bottom of the bag and the pack back panel extending beyond the fold of the front panel thereby forming a free flap, the arrangement being such that the bag is closed by turning the pouch inside out and trapping the free flap within it, the trapped free flap thereby forming a barrier within the reversed pouch. 75 80 85

2. A bag according to claim 1 wherein the free flap is folded upon itself and sealed to itself to form a pocket, the mouth of the pocket being directed towards the bottom of the bag. 90

3. A bag according to claim 2 wherein the pocket is on the front of the free flap. 95

4. A bag according to any one of the preceding claims wherein the depth of the pouch is substantially equal to the length of the free flap.

5. A bag according to any one of the preceding claims wherein the material of the bag is transparent. 100

6. A method of manufacturing a bag comprising the steps of flattening a tube of synthetic plastics or the like material, cutting the tube to form two folded webs, folding a layer of each of the webs outwardly upon itself, sealing the webs at longitudinal intervals transversely of the webs and severing the webs in the seals. 105

7. A method according to claim 6 wherein before the webs are sealed, the other layer of each of the webs is folded upon itself. 110

8. A bag constructed and arranged substantially as herein described with reference

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to Figures 1 to 8, 9 to 14 or 15 to 17 of the accompanying drawings.

9. A method of manufacturing a bag substantially as hereinbefore described with reference to Figures 1 to 8, 9 to 14, or 15 to 17 of the accompanying drawings.

For the Applicants
D. T. TOWNSEND,
Chartered Patent Agent,
Lamson Industries Limited,
Lamson House, 75-79 Southwark Street,
London, S.E.1.

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PATENTS ACT 1949

SPECIFICATION NO 1334831

The following corrections were allowed under Section 76 on 6 December 1973.

Page 3, line 15, *delete* 12 *insert* 13

Page 3, line 81, *delete* pack

Attention is also directed to the following printers errors:-

Page 3, line 79, *after* bag *insert* to form a pouch extending across the front of the bag

THE PATENT OFFICE
17 January 1974

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