Nov. 29, 1938. H. I. MATCHETT 2,138,066

MEANS FOR SEALING TIN-TIE BAGS

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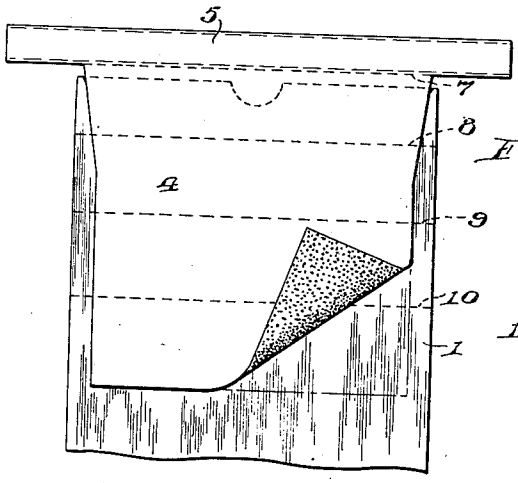


Fig. 1.

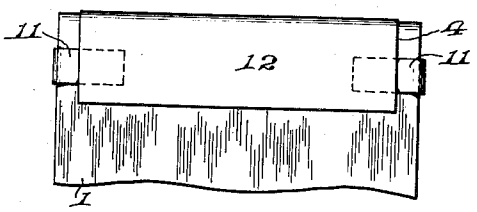


Fig. 3.

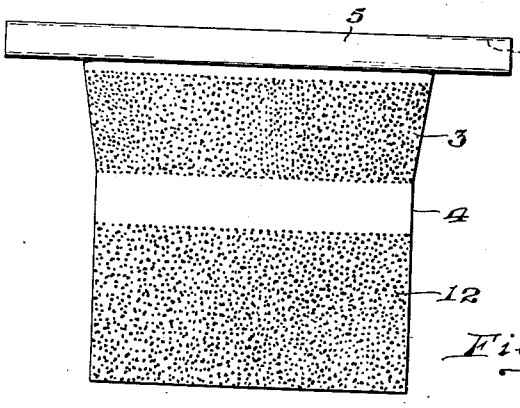


Fig. 2.

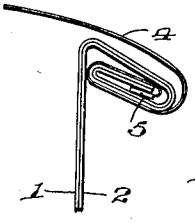


Fig. 4.

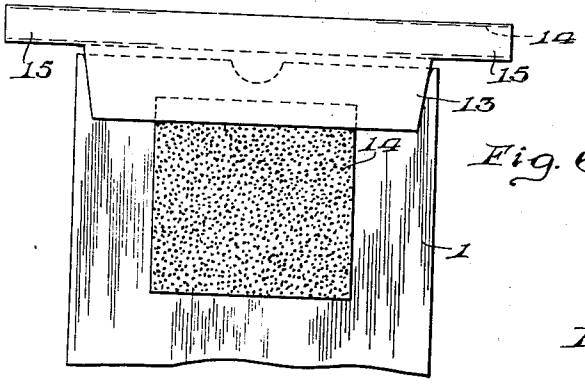


Fig. 6.

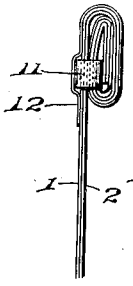


Fig. 5.

INVENTOR
Henry I. Matchett,
BY
J. Stuart Tillman
ATTORNEY

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MEANS FOR SEALING TIN-TIE BAGS

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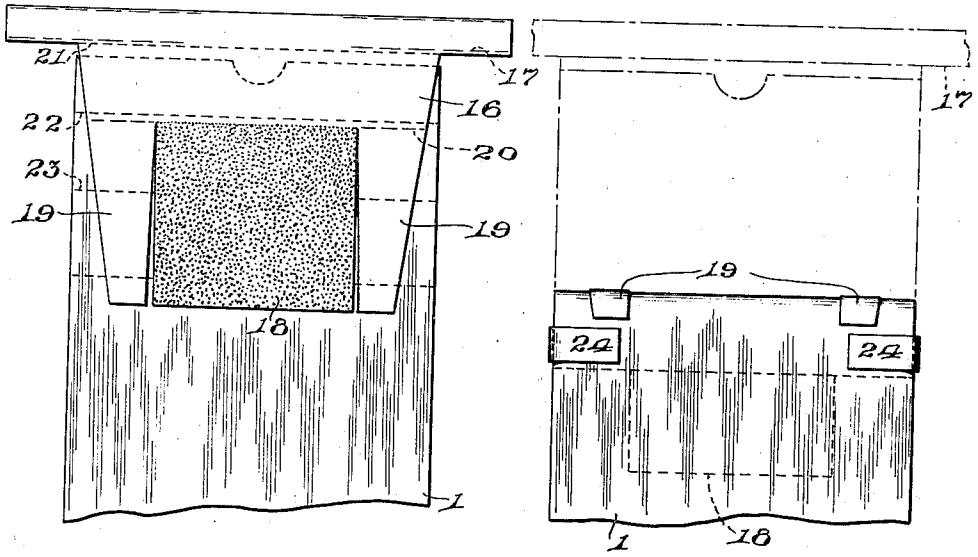


Fig. 7.

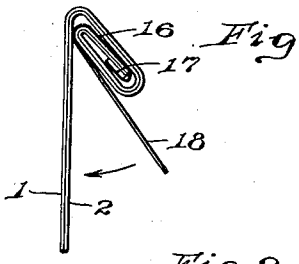


Fig. 8.

Fig. 9.

INVENTOR
Henry I. Matchett.
BY
J. Stuart Fleeman.
ATTORNEY

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MEANS FOR SEALING TIN-TIE BAGS

Henry I. Matchett, Philadelphia, Pa.

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8 Claims. (Cl. 229—65)

The object of the invention is broadly to provide improved means for sealing bags, and especially those which are of the so-called tin-tie type, together with an improved method of making the same.

Another and more specific object is to provide one form of bag of this type, in which a portion of the upper edge of the bag is provided upon its outer side both with a tin-tie element and with an initially loosely depending flap, at least the outermost freely extending portion of the originally outer face of which tongue or flap being provided with adhesive, whereby after the bag has been filled, and its open end collapsed adjacent to the tin-tie, and folded over as many times as desired, said flap thereupon lies against the opposite outer wall of the bag, to which it is then secured by means of said adhesive, and thereafter prevents opening the bag by the unrolling or unwinding of its tin-tie and adjacent portions, without destroying said tongue or flap as a sealing means.

A further object is to provide a modified form of this construction, wherein either a portion or all of the said flap is originally provided as a separate member, and is then attached to the tin-tie edge portion of the bag, and provided with adhesive so as to function in the same manner as described in the previous paragraph.

Still another object is to provide a further modified form of the invention, wherein a portion of the upper edge of a bag is provided upon one of its outer sides both with a tin-tie and a flap as in the form first mentioned, but with the initially under instead of the outer surface of said flap being provided with the adhesive, whereby after the bag has been filled, its open end collapsed adjacent to the tin-tie, and folded over as many times as desired (carrying said tin-tie and adjacent attached end of said flap with it), and the freely extending end portions of the tin-tie have been folded reversely about the laterally opposite edges of the bag, said flap is thereupon folded backwardly around the closed end of the bag, and stuck by means of said adhesive to the side against which it was first positioned, so as to span and at least partially cover the now inwardly directed tin-tie ends, and thereby secure them in operative closed position, to prevent opening of the bag without first destroying said flap as a sealing means.

With the objects of the invention thus briefly stated, said invention comprises further details of construction, which are fully brought out in the following description, when read in conjunction with the accompanying drawings, in which Fig. 1 is a fragmentary elevational view of the upper portion of the rear wall of a bag equipped with a tin-tie sealing means, comprising one embodiment of the invention; Fig. 2 is an elevational view of the reverse side of the sealing means per se; Fig. 3 is a similar elevational view of the device shown in Fig. 1, but in operative closed and sealed position; Fig. 4 is a side elevation of the structure of Fig. 3, shown in a partially closed and folded position intermediate of the positions shown in Figs. 1 and 2; Fig. 5 is a side elevational view of the upper portion of the bag closed and sealed, as shown in Fig. 3; Fig. 6 is a view similar to Fig. 1, but showing a slightly modified form in which the adhesive flap comprises an initially separate member; Fig. 7 is an elevational view similar to Figs. 1 and 6, but showing a further modified form of sealing means; Fig. 8 is a similar elevational view of the bag provided with this modified form, after the same has been completely closed and sealed, together with a dot-and-dash line extension, showing the liimt to which the bag initially extends before its upper portion is folded and sealed; and Fig. 9 is a view similar to Fig. 4, but illustrating the modifications shown in Figs. 7 and 8.

Referring to Figs. 1, 2, 3 and 4, the upper portion of any ordinary paper bag, to which the present invention may be adapted, is shown as comprising what will be termed, for purposes of illustration, rear and front walls 1 and 2, though the designation of rear and front is merely arbitrary in this case and has no especial significance. To the upper portion of said rear wall is secured, adjacent to its free edge, the upper section 3 of a sealing flap 4, which is provided throughout such section with adhesive, or in other words is gummed. Upwardly said flap merges into a transversely enlarged section 5, which is wrapped about and, therefore, operates to protect a transversely extending tin-tie 6 of well-known construction, and for the purpose hereinafter described.

With said sealing member attached to the bag, as shown in Fig. 1, said bag is first filled and then collapsed at its upper open end, after which the said tin-tie is folded downwardly upon the dotted line 7, against the opposite or front wall 2 of the bag, after which said tin-tie and bag walls are folded together upon the dotted lines 8, 9 and 10 successively, whereupon the laterally oppositely projecting end portions 11 of said tin-tie are bent reversely around the rear surface of the bag, as shown in Fig. 3, and the then freely ex-

tending end portion of the sealing member 4 is thereupon provided with adhesive 12, so as to secure it uniformly and firmly to said rear wall surface, across the adjacent ends 11 of said tin-tie. With this construction, it is quite obvious that the bag cannot be opened, without first straightening the tin-tie end portions outwardly in opposite directions and unfolding the closed end of the bag, and that such cannot be accomplished without first destroying the lower end portion 12 of the sealing member 4.

Referring to Fig. 6, the construction and operation here shown is identical with that hereinbefore described, except that said sealing member comprises originally two separate sections 13 and 14, the first of which is secured to the upper free end portion of the rear wall 1 of the bag, so that the tin-tie 14 is positioned freely above the upper limit of the adjacent bag wall, while the second section 14 is secured beneath and by the said upper section 13. After the bag is filled and closed, as hereinbefore described, the tin-tie is folded forwardly and thence with the collapsed walls of the bag over and over, until in a position similar to that shown in Fig. 3, in which case the lower section 14 may be secured by adhesive to the adjacent portion of the front wall surface 2, independently of the inwardly directed free end portions 15 of the tin-tie 14.

Referring to Figs. 7, 8 and 9, a further modification of the device is shown as comprising a sealing member having an upper portion 16, which is initially secured to the rear wall surface 1, adjacent to the upper edge thereof and above which said member supports the usually enclosed tin-tie 17. Said member also comprises, in this instance, a depending central portion 18, gummed upon its outer surface and provided with laterally positioned depending auxiliary tongues 19, which may be left on said member, or may be detached therefrom along the dot-and-dash lines 20. In this form of the device, the bag is filled and closed and the tin-tie folded forwardly, as hereinbefore described, upon the respective lines 21, 22 and 23 consecutively, after which the freely extending end portions 24 of said tin-tie are bent reversely toward each other, around the rear wall surface 1, as indicated in Fig. 8, the gummed section 18 of said sealing member being then secured against the outer front surface 2 of the bag, and the auxiliary tongues 19 (if present) may also be provided with adhesive and secured upwardly and over the top of the folded edge portion of the bag, also as shown in Fig. 8.

Furthermore, in interpreting the appended claims, it is to be understood that the particular form of the device hereinbefore described, and illustrated in the accompanying drawings, is merely illustrative of one embodiment of the invention, and that said invention is capable of being modified in many ways, as to the exact details of its construction and operation, without departing from the scope of the appended claims.

Having thus described my invention, what I claim as new and desire to protect by Letters Patent of the United States is:—

1. A bag, comprising rear and front walls, and a sealing member in turn comprising a flap having an intermediate portion secured to said rear wall, also having an initially depending free portion, and also having an upward tin-tie extension, initially projecting laterally beyond the sides of the bag, the upper portion of said flap with said tin-tie and the adjacent portions of the bag being adapted to be folded forwardly upon said forward wall, and the ends of the tin-tie then bent reversely around the opposite sides of the bag and towards each other upon the rear wall, and the depending free portion of said flap then being secured to said rear wall, so as to also secure the ends of said tin-tie thereto to seal the bag.

2. A bag, comprising rear and front walls, and a sealing member in turn comprising a flap having an intermediate portion secured to said rear wall, also having an initially depending free portion provided with a gummed under surface, and also having an upward T-shaped tin-tie extension, its arms initially projecting laterally beyond the sides of the bag, the upper portion of said flap with said tin-tie and the adjacent portions of the bag being adapted to be rolled forwardly, upon said forward wall, and the ends of the tin-tie arms then bent reversely around the opposite side of the bag and towards each other upon the rear wall, and the depending free gummed portion of said flap then being secured to said rear wall, so as to also secure the ends of said tin-tie arms thereto to seal the bag.

3. A bag, comprising rear and front walls, and a sealing member in turn comprising a flap having an intermediate portion secured to said rear wall, also having an initially depending free portion having an outer surface, and also having an upward tin-tie extension, initially projecting laterally beyond the sides of the bag, the upper portion of said flap with said tin-tie and the adjacent portions of the bag being adapted to be folded forwardly upon said forward wall, and the ends of the tin-tie then bent reversely around the opposite sides of the bag and towards each other upon said rear wall to keep said bag closed, and the initially depending portion of said flap then being secured to said forward wall, so as to seal the bag in closed position, and prevent opening of the bag without mutilating or removing said flap.

4. A bag, comprising rear and front walls, and a sealing member in turn comprising a flap having an intermediate portion secured to said rear wall, also having an initially depending free portion having a gummed outer surface, and also having an upward tin-tie extension, initially projecting laterally beyond the sides of the bag, the upper portion of said flap with said tin-tie and the adjacent portions of the bag being adapted to be folded forwardly upon said forward wall, and the ends of the tin-tie then bent reversely around the opposite sides of the bag and towards each other upon said rear wall to keep said bag closed, and the gummed surface of the initially depending portion of said flap then being secured to said forward wall, so as to seal the bag in closed position, and prevent opening of the bag without mutilating or removing said flap.

5. A bag, comprising rear and front walls, and a sealing member in turn comprising a flap having an intermediate portion secured to said rear wall, also having an initially depending central free portion having an outer surface and laterally positioned tongues, and also having an upward tin-tie extension, initially projecting laterally beyond the sides of the bag, the upper portion of said flap with said tin-tie and the adjacent portions of the bag being adapted to be folded forwardly upon said forward wall, and the ends of the tin-tie then bent reversely around the opposite sides of the bag and towards each other upon said rear wall to keep said bag closed,

and the initially depending central gummed portion of said flap then being secured to said forward wall, so as to seal the bag in closed position and said tongues being reversely bent upwardly and over said folded portion, to which they are then secured.

6. The method of sealing a bag, which consists in providing one wall of the bag with a tin-tie and a freely extending flap, closing the open end of the bag and rolling the same, together with the tin-tie, then bending the opposite ends of the tin-tie reversely about the opposite sides of the bag, and securing the flap to the opposite wall of the bag and to and across the ends of the tin-tie.

7. The method of sealing a bag, which consists in providing one wall of the bag with a tin-tie, closing the open end of the bag and rolling the same, together with the tin-tie, then bending the ends of the tin-tie reversely about the opposite sides of the bag, and finally securing a strip of flexible material over the rolled portion of the bag, and also to and across the ends of the tin-tie, so that such strip must be mutilated or removed, in order to prevent such rolled portion to be unrolled and the bag opened.

8. A bag, comprising rear and front walls, and a sealing member in turn comprising a flap having an intermediate portion secured to said rear wall, and also having an upward tin-tie supporting extension, initially projecting laterally beyond the sides of the bag, the upper portion of said flap with said tin-tie and the adjacent portions of the bag being adapted to be folded forwardly upon said forward wall, and the ends of the tin-tie then bent reversely around the opposite sides of the bag and towards each other upon said rear wall to keep said bag closed, and a flexible strip securing said folded portion to the forward wall of the bag, so as to seal the bag and prevent its being opened without mutilating or removing said strip.

HENRY I. MATCHETT.