Aug. 15, 1950 M. A. SALTZ 2,519,290

TOBACCO POCKET AND CLOSURE MEANS THEREFOR

Filed March 11, 1946

Fig. 1

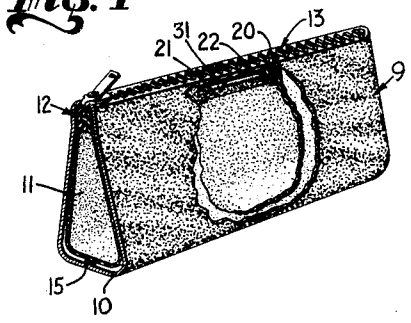


Fig. 2

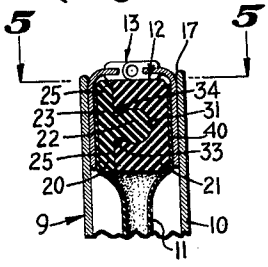


Fig. 4

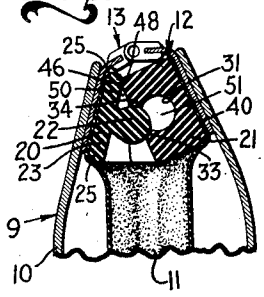


Fig. 3

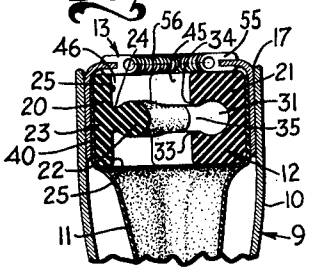


Fig. 5

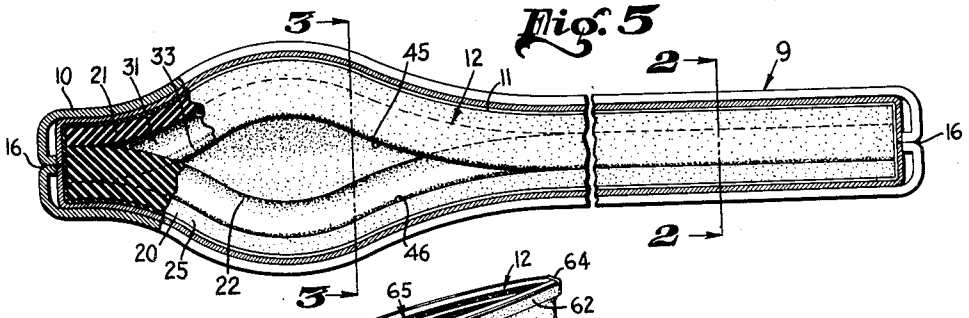
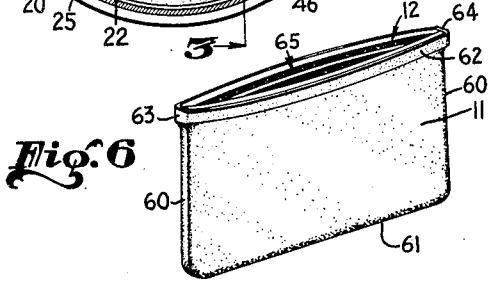


Fig. 6



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TOBACCO POCKET AND CLOSURE MEANS THEREFOR

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3 Claims. (Cl. 150—3)

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This invention relates to air-tight sealing devices and more particularly to an easily operable, positive, air-tight and water-tight flexible closure for tobacco pouches, bread bags or boxes, swim suit pockets, and the like.

The prior art, insofar as it is known to applicant, has employed various means for the purpose of providing an air-tight pocket for the purpose of keeping the contents fresh. Included in such means have been the provision of air-tight liners made of cellophane, lead-foil, tin-foil, etc., which are foldable at their open portions to retard, though usually not entirely to prevent, the entrance of air or the evaporation of the contents. Such folded inner liners have proven unsatisfactory primarily due to the necessity of tediously folding and unfolding the margins of the inner liner. Even when folded, such construction does not afford an air-tight closure.

Other attempts to provide a suitable air-tight pocket include the provision of a pouch having an opening formed with opposed abutting lips which are forced together and normally held in close association with one another by means of an outer clamping mechanism or slide fastener. These latter devices frequently fail to achieve a highly efficient degree of desired fluid tightness and in any event do not provide self-sealing lips which retain an interlocked self-sealing engagement of the sealing member such that the sealing member maintains a desirable degree of fluid tightness by virtue of its own inherent construction without the necessary aid of other external and secondary fastening devices.

This invention provides an air-tight seal which retains a close interlocking position by virtue of its own form and construction. The seal is positive and efficient. It may readily be opened or closed and it may be used either independently without the necessity of auxiliary fastening devices or, if desired, in conjunction with any suitable auxiliary fasteners.

No other satisfactory self-locking positively air-tight, simple and convenient pocket-sealing construction is known to applicant by means of which an impervious pocket may be closed so as to remain closed during use but which may be readily opened as desired.

It is therefore an object of this invention to provide an improved primary self-sealing closure for a fluid-tight pocket for tobacco or other perishable merchandise.

It is another object of this invention to provide a new and improved primary closure of flexible and efficient construction which may be readily

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carried without inconvenience upon the user's person.

It is a further object of this invention to provide a new and improved primary closure device incorporating a self-sealing interlocked construction.

It is a still further object of this invention to provide a new and improved temporary sealing closure adapted for use with an auxiliary closure to form a temporary seal and further adapted to be used independently of such auxiliary closure to form a self-sufficient sealing structure.

Another further object of this invention is to provide a new and improved fluid-tight closure whose parts are adapted to make parallel multiple longitudinal sealing engagements with one another until deliberately pulled apart for opening said closure.

A still further object of this invention is to provide a primary sealing device of new and improved construction, the opposing parts of which interlock and seal when laterally pressed together and which may be laterally drawn apart for opening and disengaging the same.

It is another further object of this invention to provide a new and improved fluid-tight pocket associated with a primary sealing device which is simple in construction, effective in operation, economical to manufacture, and convenient to use.

It is a further object of this invention to overcome many of the objections and difficulties associated with prior art devices intended for the same use.

With these and other objects in view, this invention consists in the arrangement and combination of the various parts of the device whereby the objects contemplated are attained, as hereafter set forth, pointed out in the appended claims, and illustrated in the accompanying drawings.

In the drawings:

Figure 1 is a perspective view of a tobacco pouch embodying this invention, parts being cut away.

Figure 2 is a fragmentary sectional view taken on the line 2—2 of Figure 5.

Figure 3 is a fragmentary sectional view taken on the line 3—3 of Figure 5.

Figure 4 is a fragmentary sectional view similar to Figure 2 showing the closure in an exaggerated alternative sealed position.

Figure 5 is a plan view of the tobacco pouch taken on the line 5—5 of Figure 2.

Figure 6 is a perspective view of the liner and

seal of a typical pocket embodying this invention.

Referring more particularly to the drawings, the numeral 9 generally designates a tobacco pouch which comprises an outer cover 10, a liner 11, and a primary sealing device 12. A slide fastener 13 provides an auxiliary closure.

The cover 10 in the preferred embodiment illustrated is made of leather which may be either formed as a single unit or sewed along a bottom seam 15 and at its ends 16. A mouth 17 is provided at the upper end of the cover and is normally closed by means of the slide fastener 13.

The liner 11 is normally disposed within the cover so that the sealing device 12 is below the fastener 13 corresponding, in the open position of the sealed members, to the mouth of the liner.

The sealing device comprises a male member 20 and a complementary female member 21. The male member comprises an elongated male part 22 which may be in the form of a rib, substantially cylindrical, or bulbous in cross section if desired, connected to a base 23 by means of a constricted neck 24. The base 23 is formed with lateral upper and lower shoulders 25.

The female member 21 is provided with a channel 31 therein of substantially cylindrical cross section substantially corresponding with the cylindrical construction of the male part 22. Lips 33 and 34 provide a constriction at the mouth 35 of the channel normally engaging in the constricted neck 24 of the male member.

The liner at its upper margin 40 tightly encircles and is cemented to the sealing device all the way around.

The shape of the adjacent surfaces of the male and female members respectively are complementary, and normally mutually interlocking in their most sealed position so as to form a snug fit as most clearly illustrated in Figure 2. But the male and female members have a position of non-interlocking sealed abutment, as hereinafter explained, in addition to their interlocked position.

In the operation of the tobacco pouch illustrated, the inner liner may be initially filled with tobacco and the male and female members may be laterally forced together by digital pressure causing the cylindrical male part 22 to spread the lips 33 and 34 permitting the cylindrical part to enter the channel 31 whereupon the lips snugly encircle the male part 22 and abut against both sides of the restricted neck 24, while the adjacent surfaces 45 and 46 are thereby held in close association with one another throughout the length of the sealing device.

If desired, upon forcing the male and female members together, the slide fastener also may, though it need not, be closed. Thus the inherent resiliency of the male and female members coupled with the interlocking engagement of the lips 33 and 34 against the constricted neck 24 prevents the sealing device from opening during the normal use of the pouch whether the slide fastener is closed or not. If desired, however, the slide fastener 13 may be closed so as to function as a safety lock to afford additional assurance that the sealing members will not be accidentally pulled apart between uses.

Instead of interlocking the male and female members as illustrated in Figure 2, a non-interlocked sealing of the members 20 and 21 may be occasioned by simply closing the slide fastener in the manner illustrated in Figure 4 where said male and female members are shown in a somewhat exaggerated tilted relationship with respect to one another. In this position the upper corner 48 of the female member normally abuts against the adjacent edge or surface 46 of the male member providing a first air-tight seal therealong. Similarly the upper lip 34 of the female member establishes a second seal against and along the upper edge of the cylindrical male part 22. A third sealing engagement may also be made between the lower lip 33 of the female member and the adjacent surface of the male part.

Thereby a first dead air space 50 and a second dead air space 51 extend throughout the length of the sealing device to provide an additional sealing effect and greater insurance against leakage of air into or from the liner, even though the male and female members are not in their interlocked position of sealed engagement.

Such a non-interlocked sealing engagement of the male and female members is occasioned by the tendency of the slide fastener to draw the mouth of the pouch together into approximate relationship especially along its upper edge and is also partly due to the tendency of the cover and liner to retain a natural position which is distorted when the slide fastener is closed without interlocking the male and female members. Moreover the particular manner in which the ends of the sealing apparatus are cemented or otherwise closely engaged with the resilient liner provides sufficient flexibility at the ends of the sealing device to permit the male and female members to rotate slightly relative to one another, yet tends to return them to their normal aligned and non-tilted position as hereafter described.

From the last described position of non-interlocked sealing engagement of the male and female members caused by the closing of the slide fastener alone, these members may be forced into interlocking engagement by the simple expedient of compressing them laterally together by exerting digital pressure against the outer upper margins of the pouch.

When it is desired to open the pouch, assuming that the slide fastener is in an open position, the opposite halves 55 and 56 of the slide fastener may be grasped and pulled apart thereby drawing the male part out of the channel 31. An initial, partially open position of the sealing device is illustrated in Figure 5 wherein the male and female members are separated along a part of their length.

If the slide fastener is omitted altogether, the male and female members may be separated by pulling open the mouth of the pouch by directly grasping the same, or, if desired, suitable tabs or pull pieces may be furnished at the sides of the mouth of the pouch.

If the slide fastener is in a closed position and the male and female members are interlocked as shown in Figure 2, the slide fastener must first be opened before the male and female members may be conveniently disengaged from one another. But if the slide fastener is closed and the male and female members are disposed in non-interlocking engagement with one another as illustrated in Figure 4, the pouch may be opened by the sole and simple expedient of opening the slide fastener.

In the manufacture of this invention the inner liner may be formed from a plurality of separate pieces or by halves vulcanized together along their ends 60 and bottom 61. Or the liner may be

molded from a single piece of material to form a pocket preferably of uniform thickness throughout its area though optionally reinforced or thickened at desired points as, for example, around the upper margin **62**.

The male and female members are preferably formed from extruded sections separately from the liner and may be subsequently cut to equal lengths before or after being placed in an interlocked relationship with one another. The upper margin of the inner liner may be then stretched over the interlocked male and female members and cemented thereto all the way around including the end portions **63** and **64**. While it is not essential to stretch the upper margin of the inner liner around the male and female members comprising the closure, this method of construction has been found to be highly desirable in that it has proven otherwise quite difficult or impossible to achieve a satisfactory air-tight seal at the ends of the closure.

By both cementing and stretching the ends of the mouth of the liner around the closure it has been found that a suitable tension is given around the upper margin **62** which aids the adhesion of the cement and tends to prevent the separation of the upper margin of the inner liner from the outer edges of the sealing device. This construction is also characterized by a desirable flexibility at the end portions, and in view of the fact that the male and female members present interlocking surfaces of identical cross section throughout their length, provides a snug and effective resilient fit for these members in the end areas. When the inner liner **11** and the sealing male and female members are molded of a single piece of material it has been found that a satisfactory seal at the ends of the opening **65** is not obtained but that leakage occurs when very slight pressure is exerted upon the inner liner as evidenced by the formation of bubbles when the pocket is submerged.

The outer cover **10**, as well as the inner liner and the male and female sealing members may be formed from rubber, whether natural, artificial, or composition, or from plastic, fabric, leather, or even springy metal or equivalent material. It has been found that an outer cover of leather, an inner liner of rubber or latex, and sealing members made of rubber, either pure or impregnated in fabric, provides a satisfactory pouch. It would be apparent, however, that only one of the male and female sealing members need be of a resilient material while the other may be made of a non-resilient substance.

The inner liner, while preferably cemented around the sealing device, may also be secured thereto by other means, such as stitching, stapling, or a combination of stitching, stapling, and cementing, etc., while yet retaining an air-tight construction. Likewise, the combined inner liner and sealing device may be cemented, sewed, stapled, or otherwise fastened to the mouth or upper margin of the outer cover in a position substantially similar to that illustrated in the accompanying drawings.

It will likewise be apparent that in the non-interlocked sealed engagement of the male and female members at least three tendencies concur to bring about a position of closure. First, the end construction tends normally to cause the ends of the male and female members to remain in a closed position in alignment with one another; second, the inherent resilience of the male and female members tends to twist them into a

normal parallel relationship from one end to the other; and thirdly, the natural shape of the pouch itself, due to its inherent resilience, tends to draw the parts into a normal position of interlocked or at least abutting engagement throughout their length.

In lieu of the slide fastener, it is obvious that other auxiliary fastening means such as ties, buttons, hooks, snaps, or the like may be used.

It will thus be apparent that this invention contemplates the use of an inner liner associated with a sealing device for the opening thereof and which is adapted to be used together with an auxiliary fastener or, if desired, entirely independently of such a secondary fastening means. The auxiliary fastener if used may operate to furnish a temporary abutting air-tight seal between the male and female members, or optionally it may provide an auxiliary or safety closure in addition to the sealed closure provided by the interlocked male and female members themselves. If not wholly omitted, the auxiliary or slide fastener need not be used with every use of the tobacco pouch inasmuch as the lips of the sealing closure may be effectively and permanently interlocked with the constricted neck portion **24** between uses of the pouch.

As an optional feature of this invention it is contemplated that by the use of an inverted U-shaped type of slide fastener known to those familiar with the art of manufacturing tobacco pouches by means of which the male and female members may be encircled either inside or, as is customary, outside of the cover, or by increasing the size of the mouth **35** relative to the male element **22** or vice versa, or by stiffening the lateral relationship of the conventional slide fastener illustrated relative to said male and female members, the pouch may be sealably closed either to a lesser extent than that illustrated or to the same extent by the sole and simple expedient of closing the slide fastener. Such a modified construction would obviously interlock the male and female members in a sealed relationship to one another by the mere act of closing the slide fastener itself and without the necessity of pressing these members laterally so as to seal them after the slide fastener has been closed as heretofore described.

Although the invention has been herein shown and described in what is conceived to be the most practical and preferred embodiment, it is recognized that departures may be made therefrom within the scope of the invention, which is not to be limited to the details disclosed herein but is to be accorded the full scope of the claims so as to embrace any and all equivalent devices.

Having thus described the invention, what is claimed and desired to secure by Letters Patent is:

1. In the art of producing a substantially air-tight pocket, the steps of forming an open bag of resilient material of substantially uniform thickness, extruding male and female interlocking closure members of resilient material, cutting said extruded members to equal lengths exceeding the normal length of the opening in the bag, stretching the opening of said bag, and cementing equal lengths of interlocked male and female members within said opening, said cement being applied entirely around the sides and ends of said interlocked members.

2. In the art of producing a closure for a pocket, the steps which comprise, forming separate male and female interlocking members of

sensibly equal lengths, interlocking said equal lengths, and cementing said interlocked lengths including the outer edges and ends thereof all the way around within the mouth of a bag for the purpose of providing an interlocking closure for the bag when the male and female members are interlocked.

3. In the art of producing a substantially air-tight closure for a pocket, the steps which comprise, forming separate male and female interlocking members of sensibly equal lengths, interlocking said equal lengths, stretching the mouth of a resilient bag, cementing said interlocked lengths including the outer edges and ends thereof all the way around within said stretched mouth of said resilient bag, and allowing said bag to contract so as to provide a substantially air-tight seal for the bag when the male and female members are interlocked.

MORRIS A. SALTZ.

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