

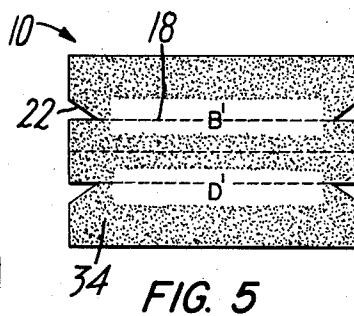
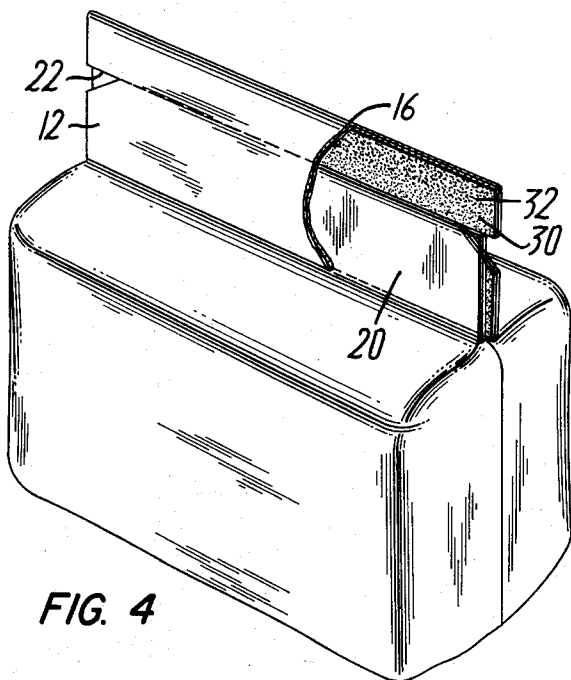
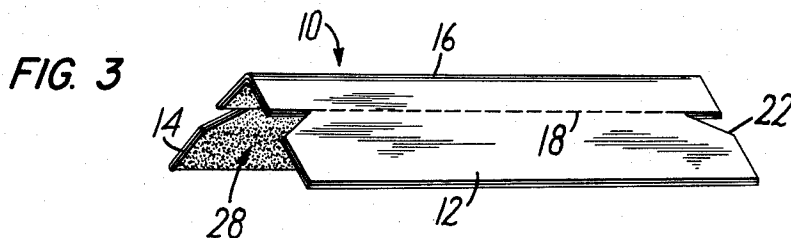
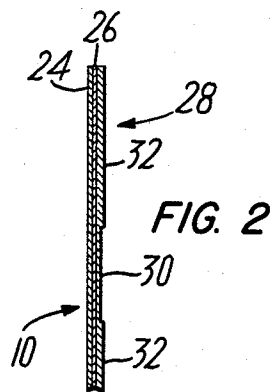
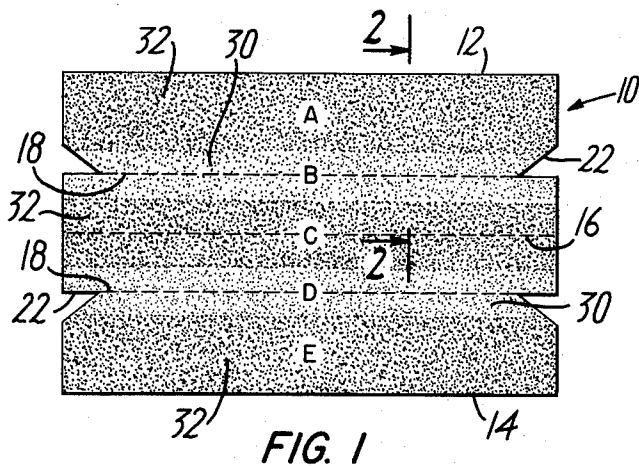
Dec. 18, 1962

H. E. PECKHAM

3,069,066

CLOSURE MEANS

Filed Dec. 19, 1960



INVENTOR.
HARRY E. PECKHAM

BY

Herbert J. Evers
ATTORNEY

3,069,066

CLOSURE MEANS

Harry E. Peckham, Ridgewood, N.J., assignor to National Biscuit Company, a corporation of New Jersey
Filed Dec. 19, 1960, Ser. No. 76,539
3 Claims. (Cl. 229-62)

This invention relates generally to an improved bag closure, and more particularly to an improved sealable bag closure for the sealed packaging of perishable commodities, such as cookies, or the like.

In the conventional adhesive-sealed or heat-sealed bag closure having a perforated tear strip, one of the problems is aligning the mouth of the bag with the perforated line in the bag closure. If the line of perforations is below the mouth of the bag, the closure will adhere to the bag and make it quite difficult to tear the bag open. On the other hand, if the perforations lie above the mouth of the bag, the tearing of the closure along said perforations will not unseal the bag, since the portion of the closure immediately below the perforations remains sealed. If exact alignment of the bag mouth with the perforations in the bag closure can be obviated, it would simplify the machinery used in sealably closing the mouth of the bag. In addition, it would greatly facilitate the opening of the bag closure.

It is therefore an important object of the present invention to provide an improved perforated type bag closure which can be quickly opened and which does not require alignment of the mouth of the bag with the perforations in the bag closure.

Another object of the invention is to provide an easy-opening perforated bag closure having an adhesive coating thereon in which the thickness of the coating is substantially reduced in an intermediate zone approximately in the region of the line of perforations.

Other objects, features and advantages of the present invention will be apparent to those skilled in the art from the following details of a preferred embodiment thereof, taken in conjunction with the drawing in which:

FIG. 1 is a face view of a bag closure blank illustrating the principles of the invention;

FIG. 2 is a sectional view taken along line 2-2 in FIG. 1;

FIG. 3 is a perspective view of a partially folded bag closure made from the blank shown in FIG. 1; and

FIG. 4 is a perspective view, with parts broken away to show underlying parts, of the bag closure in assembly with the mouth of a bag.

FIG. 5 is a modification of the bag closure blank shown in FIG. 1.

The invention will be described in terms of an adhesive-backed foil-lined, paper or cellophane bag closure having a perforated tear strip which approximately coincides with the mouth edge of a bag. It is to be understood, however, that the bag closure may be constructed of other materials, that it may be applied to various types of bags, and that it is not intended to restrict the invention to any particular adhesive, bag material, or bag closure shape.

In accordance with the invention, there is provided in an adhesive-backed bag closure having a pair of panels foldable about an intervening bag mouth, a line of perforations in each panel coincident with each other in folded condition and in approximate registry with said bag mouth. The adhesive film in the area of said perforations is relatively thin in comparison to the normal thickness of adhesive in the remaining bag closure, but is sufficient to effect a substantially air-tight seal. This arrangement permits the consumer to conveniently tear the bag open even when the mouth of the bag projects above the line of perforations. Should the mouth of the bag terminate

short of the line of perforations, the adherent panels of the bag closure can be manually separated to expose the mouth of the bag since the panels are only secured to each other in this area by a relatively thin film of adhesive.

Shown in FIG. 1 is a blank 10, preferably made of an adhesive-backed, foil-lined paper or other suitably sheeted material from which the bag closure device of the invention may be formed. The blank 10 comprises a pair of panels 12, 14, adapted to be creased or folded along a transverse score or perforated line 16 disposed in the central portion of the blank 10 to facilitate folding the panels as illustrated in FIG. 3.

Each panel, 12, 14, is provided with a score line or a line of perforations 18, generally transversely disposed in its respective panel so that the perforated lines 18 coincide with each other when the bag closure is folded along line 16 about an intervening bag mouth 20 in the manner illustrated in FIG. 4. Notches 22 may be provided at the terminals of the perforated lines 18 to facilitate opening of the bag.

The manner in which the bag closure is attached to the mouth 20 of the bag which is to be sealed may comprise a suitable film of adhesive material or other suitable means and need not be elaborated upon herein. Preferably, the means for attachment of bag closure should be of the type which permits the heat sealing of the adhesive at a sealing temperature below that of the bag material and for a minimum period of time. An adhesive that is admirably suited in the practice of the present invention, particularly in connection with the sealing of a cellophane bag which fuses at about 220° F., is one whose melting point is between 130° and 150° F., requires light pressure up to about 60 p.s.i. for less than a second at a temperature about 20 to 40° below the fusion point of the bag. An example of such an adhesive is that sold by American Can Company under the identification number 906 or 908 RCE.

The bag closure of the invention may comprise one or more plies of paper or other suitably sheeted material, or may comprise a composite of two or more plies of different materials, a composite of aluminum foil of approximately 0.00035" thickness bonded to a sheet of 30# sulphite sheet being preferred and illustrated herein. Referring to FIGS. 1 and 2, the blank 10 comprises a flexible base sheet 24 of metal foil, preferably aluminum, bonded to a sheet of paper 26 having on the free side thereof a film or coating 28 of adhesive material.

According to the invention, provision is made for a reduced thickness of adhesive film in the immediate vicinity of the perforated lines 18, the thickness being at least sufficiently effective to seal the mouth of the bag. Yet the thickness of the adhesive film should be sufficiently thin so it can be manually broken apart to unseal the contents of the bag. To this end, the adhesive film 28 comprises a light film 30 of approximately .001" thickness in the zone or vicinity of the perforated line 18 and a heavy film 32 of approximately .002" thickness in the remaining portion of the blank 10, said films being preferably contiguous with one another to form a unitary, integral film of varying thickness. In the drawing, see FIG. 1, the zones having a heavy application of adhesive have been designated as zones A, C, and E, the zones having light applications of adhesive as zone B and D. The demarcations between the various zones may be sharp, as illustrated in FIG. 2, or if so desired, may constitute a gradual merging of the two thicknesses with no sharp or perceptible definition therebetween.

In the modification shown in FIG. 5 there is provided a blank 10 in which zones B' and D' are the counterparts of zones B and D in FIG. 1. The zones B', D' are either of light adhesive intensity, or preferably as illustrated in

FIG. 5, contain no adhesive. It will be understood, however, that if desired, any pattern or arrangement of adhesive may be used in the zones B' and D', such as for example spot adhesives, strip adhesives, or a series of adhesive strips. In such case, any suitable thickness of adhesive may be used. The zones B', D', extend generally longitudinally along the score line 18 and terminate just short of the notches 22 where end borders 34 of adhesive having approximately the same thickness as the adhesive in zones A, C, and E are provided. The end borders 34 serve to connect the adhesive zones B' and D' together and complete the edge sealing the bag closure, and are disposed in overlapping relation to the lateral extremities of the bag mouth. In assembly, the zones B' and D' present opposed mating areas of generally rectangular configuration for the partial reception therebetween of the intervening bag mouth 20. Upon stripping the bag closure along the score line 18, the contents of the bag are exposed without the necessity of any further breaking of seals.

In applying the closure device of the invention to the mouth of a bag such as a cellophane bag, the opposed halves of the closure blank 10 may be heat sealed against the collapsed sides of the bag mouth. Inasmuch as the melting or activation point of the adhesive is substantially lower than the temperature at which the cellophane bag will soften and fuse, the closure device, particularly in zones A and E, will become sealed to the collapsed ends of the cellophane bag to a highly effective degree without fusing the bag panels to each other. The opposed zones B and D will be sealed to each other to a much lesser degree because of the light coating of adhesive. In the case of the closure having no adhesive in zones B' and D', no bonding will occur in this area. In either case, there is formed an effectively sealed bag which can be used for edible commodities such as biscuits, crackers, cookies or the like.

Opening of the bag closure of the invention is accomplished by grasping the notch 22 at either end thereof and tearing transversely across and separating the uppermost portion of the closure along the line 18. The removed portion of the closure may then be discarded. The remaining portions of the bag closure remain securely adhered to the mouth of the bag. Depending on whether there is a thin film of adhesive in the area of the perforated line 18 or no adhesive at all, little or no further effort is necessary to expose the interior of the bag.

A feature of the invention lies in the ease and effectiveness with which the bag may be tightly reclosed once it has been unsealed. This is performed in the present invention by collapsing the top of the bag and folding over the bag closure portion which adheres to the mouth of the bag. When folded or bent, the metallic foil lamina will remain in such position, and serves to retain the bag in its reclosed position. Thus the bag may be opened or closed as often as desired after the unsealing of the bag closure.

It will be understood by those skilled in the art that numerous variations in the above described bag closure involving substitutions of materials or elements for the invention described are intended to be comprehended within the spirit of the present invention and that the invention is capable of extended application and is not confined to the precise constructions illustrated and, therefore, such changes and modifications may be made therein as do not affect the spirit and scope of the invention.

What is claimed is:

1. A closure comprising a general rectangular sheet, a continuous coating of adhesive material applied to one

side of said sheet, said coating having spaced-apart zones of light intensity adhesive, whereby upon folding said closure about an intervening bag mouth, said spaced-apart zones are in registry with each other about said bag mouth, said zones of light intensity adhesive being of a thickness sufficient to effect a seal, yet being sufficiently thin to be readily manually broken.

2. In combination, an article-containing bag and a closure therefor, the bag having:

a pair of main panels;
a pair of inwardly folding gusset panels connecting each of the side edges of one of said main panels to the opposite edge of the other main panel to form the side walls of the bag;

the bag closure comprising a thin flexible blank of metallic foil bonded to paper;
said blank having a unitary coating of thermoplastic sealing material forming five distinctive sealing zones thereon;

two of said zones being adherently-weak and separated by a central zone of adhesively-strong coating;
said adherently-weak zone being disposed to lie in face-to-face relation adjoining the mouth edge of said bag when said closure blank is folded thereover.

3. In combination, an article-containing bag and a closure therefor, the bag having:

a pair of main panels;
a pair of inwardly folding gusset panels connecting each of the side edges of one of said main panels to the opposite edge of the other main panel to form the side walls of the bag;

the bag closure comprising a thin flexible blank of metallic foil bonded to paper;
said blank having a unitary coating of thermoplastic sealing material forming five distinctive sealing zones thereon;

two of said zones being adherently-weak;
a central zone having an adherently-strong coating separating said adherently-weak zones;

a pair of remotely spaced, adherently-strong zones in straddling relationship to said adherently-weak zones;
said adherently-weak zones being disposed to lie in face-to-face relation adjoining the mouth edge of said bag when said closure blank is folded thereover;

said remotely spaced, adherently-strong zones forming a relatively permanent seal with said main panels;
a perforated tear line extending longitudinally through each of said adherently-weak zones;

said lines being in sealed juxtaposition when said closure is in said folded position, whereby simultaneous tearing of said perforated lines will separate the upper portion of the closure from the lower permanently sealed portion to expose the open mouth of the bag, said lower permanently sealed portion of said closure being adapted to be bent and foldably retained in closed position.

References Cited in the file of this patent

UNITED STATES PATENTS

754,201	Davalos	Mar. 8, 1904
1,827,636	Ames	Oct. 13, 1931
2,527,073	Port	Oct. 24, 1950
2,779,526	Vogt	Jan. 29, 1957

FOREIGN PATENTS

893,339	France	Jan. 24, 1944
---------	--------	---------------