

Aug. 29, 1933.

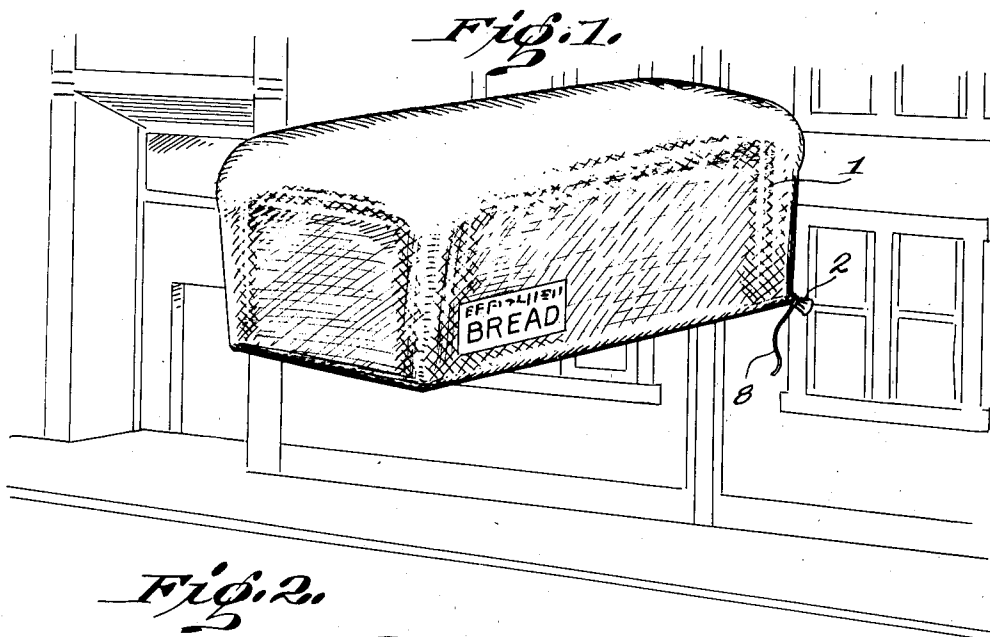
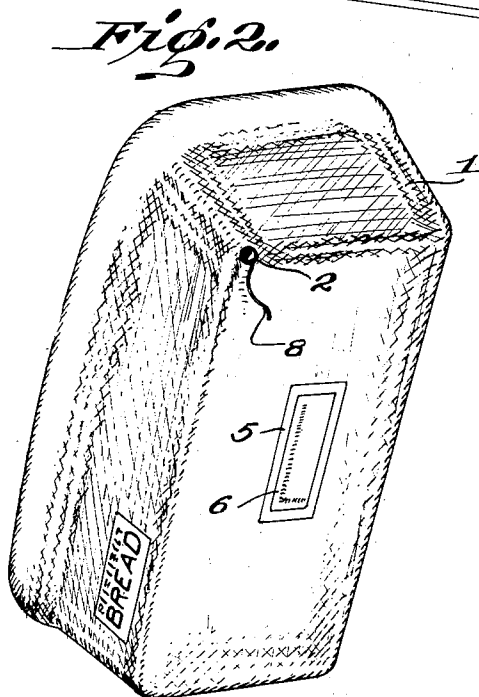
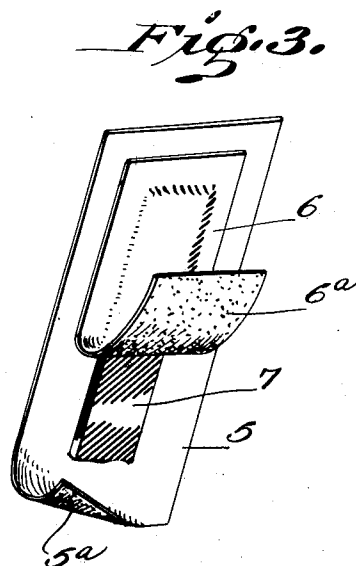
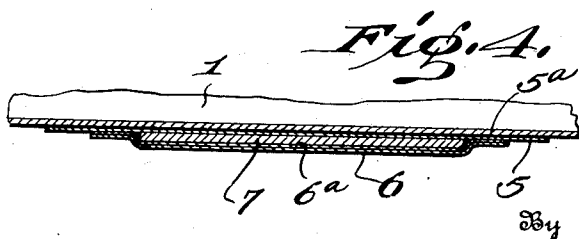
M. FRIEDBERG

1,924,236

BALLOON

Filed Sept. 21, 1931

2 Sheets-Sheet 1



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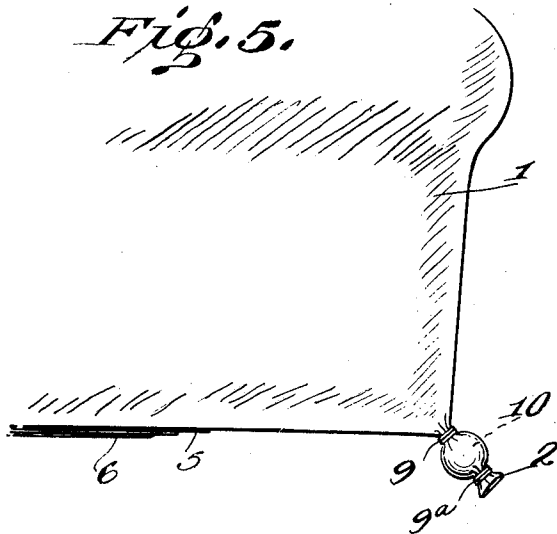
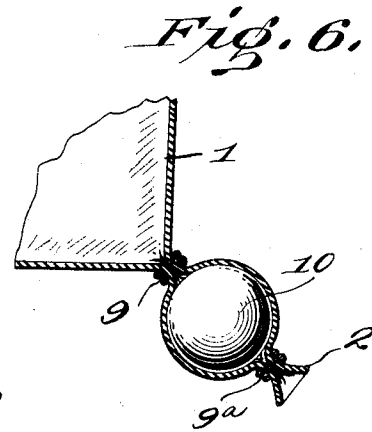
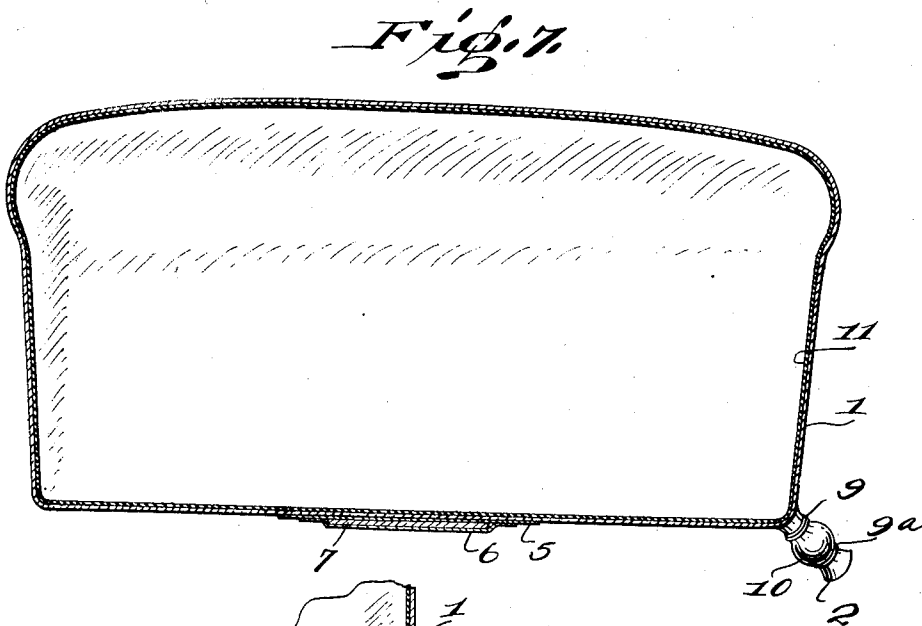
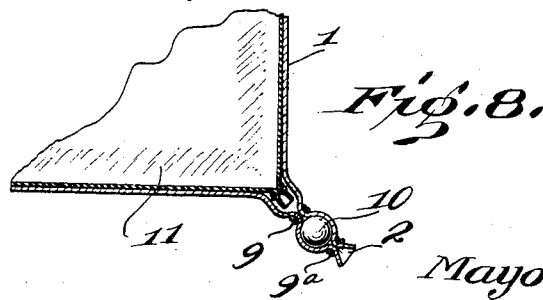
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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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BALLOON

Mayo Friedberg, Chicago, Ill.

Application September 21, 1931
Serial No. 564,221

10 Claims. (Cl. 40—127)

This invention relates to balloons, and more particularly to balloons of the miniature type, as distinguished from lighter-than-air man-carrying craft, dirigibles, and the like, and is adapted for use more especially for either outdoor or indoor advertising, amusement, and decorative purposes.

It has usually been the practice in connection with gas-filled toy balloons to have a string attached thereto to be grasped by the hand or held secure by any desirable means, whereby to maintain the balloon under control so as to display any coloring, pictorial representation, or advertising thereon within the view of the user or spectators. As soon as the string is released, however, because of the lighter-than-air gaseous content the balloon will travel skyward and cannot be retrieved by the user; and hence any advertising function or the possibility of further amusement or decorative use would thereupon become lost.

It is one of the primary objects of the present invention to provide a balloon of this general type, with associated means whereby the balloon when released will assume a predetermined distance with respect to the basic ground or floor surface, say, for illustration, 10 or 12 feet, and will maintain this approximate distance from the basic ground or floor surface, whereby as it travels to and fro (according to air currents) it will be maintained in the aforesaid approximate relation to the ground or floor surface, to the end that any data on the surface of the balloon will be readily visible to the naked eye. The balloon thus serves as a floating advertisement, amusement, or decorative medium, until after a great many hours, when owing to the permeability of the rubber or other material of which the balloon is made the gaseous pressure will become lessened and the balloon may be retrieved, if desired, and the gaseous pressure and weights adjusted so that the balloon will again assume its predetermined distance from the basic ground or floor surface.

It is further contemplated by the invention to provide a balloon of the character under consideration useful as an amusement device in the playing of games, and to this end the associated means is so regulated that when the balloon is released it will assume a predetermined distance with respect to the ground or floor surface, say, for example, approximately three feet, and will maintain this approximate distance from the ground or floor surface within convenient reach of a child or player, so that by the use of the hand, or a paddle, bat, stick, or the like, the child or player may hit the top of the balloon, thus forcing it to the ground or floor surface or away from its predetermined height to which it will at once return, when the same operation may

be repeated indefinitely, the balloon acting as a bouncing return ball. Then, again, if desired, after regulating the predetermined height of the balloon by the means herein described, to a height suitable for the players who are to use the balloon, it may be batted to and fro and may be used in substitution of a ball in playing a game similar to base ball or in engaging in ordinary catch ball game.

In carrying out the principles of the invention, it is proposed to provide a balloon of any convenient or desirable shape or design, dependent upon the use; and, by way of illustration, assuming that it is desired to advertise a loaf of bread, the balloon might take this configuration, or if intended to advertise a cigar it might take the shape of the latter. In other words, the article to be advertised or used as a decorative feature or for patriotic display might be simulated in the particular design of the balloon body.

It is proposed to utilize for the gaseous content container a rubber or rubberized material or the like, and according to the use to be made of the balloon, if deemed necessary, also a housing or surface envelope of leather or other wear-resisting fabric to be used in association therewith. In operative association with the balloon, suitable means is provided for counteracting the buoyancy effect of the balloon, which means is regulable or adjustable, whereby according to atmospheric conditions to maintain the balloon at the approximate predetermined distance from the ground or floor surface.

The invention will be understood from the description to follow, when considered in connection with the accompanying drawings wherein is illustrated a convenient and satisfactory embodiment of the invention; although it is to be borne in mind that changes may be made in the design and construction, as desired, while carrying out the principles of the invention.

In the drawings:

Figure 1 is a perspective of a loaf of bread floating through the air and viewed from the side;

Figure 2 is a similar perspective viewed from the bottom;

Figure 3 is an enlarged detail perspective of one of the weight-controlling elements and associated parts partially separated one from another and removed from the balloon proper;

Figure 4 is a detail section enlarged of the parts illustrated in Figure 3, applied to the bottom of the balloon;

Figure 5 is an elevation of a portion of the side of the balloon;

Figure 6 is a detail sectional view showing the balloon nipple and associated weights positioned therein; and

Figures 7 and 8 are sectional views of a modified

fied form of construction including an exterior casing and interior balloon member proper.

With more particular reference to the drawings, 1 is a container conveniently constructed of rubber or rubberized material or the like, which if necessary has associated therewith and exteriorly thereof a housing envelope of fabric or leather or other wear-resisting material. In the embodiment illustrated, the container or balloon represents a loaf of bread, and may be conveniently colored to correspond with the natural appearance of a loaf of bread, for instance, when baked.

Assuming the device is used for advertising purposes, the container 1 (or associated housing envelope, when this is employed) may have depicted thereon the name of the local bread manufacturer or dealer or other identifying matter. As previously stated, the device may take various shapes or forms, according to the uses. For instance, if it is desired to advertise a base ball or foot ball game, the device will be so made as to assume any such desired shape; and any data desired, according to the event to be advertised, may be appropriately applied to the outside of the device.

When used in the playing of a ball game or the like, the shape of the balloon will ordinarily be round, to simulate a ball.

In the embodiment of the invention illustrated, the container 1, which in the illustration, as stated, takes the shape of a loaf of bread, for advertising purposes, conveniently has a suitable tubular gas inlet or nipple 2, and when the device or balloon is to be used gas may be supplied through the inlet 2. For this purpose it is proposed to use hydrogen gas, helium, or a combination of air and either of these gases or any other lighter-than-air gas or combination of air and a lighter-than-air gas. When the container 1 is filled as desired, the tubular inlet 2 will be closed securely in any desired manner, as by a valve in said inlet 2, or a rubber band or string applied thereto in the customary manner; and likewise, a cord or string or the like may be applied to the inlet nipple of the housing envelope, when such is used, as described below.

The device as thus far described will be in condition to ascend skyward and may continue to travel indefinitely unless resisting means is provided; and since one of the objects of my invention is to maintain the device or balloon in floating relation to the basic ground or floor surface at an approximately predetermined distance therefrom, means is provided whereby to accomplish this purpose. And while it is to be understood that in carrying out this feature of the invention various adjustable or regulatable means may be provided, satisfactory results will be found by the use of means applied to the device, preferably immediately upon its bottom surface, adapted to receive one or more members in the nature of weights, varying in size or weight characteristics, whereby according to atmospheric and other conditions the particular restraining weight necessary to preserve the predetermined floating distance of the balloon from the ground or floor surface will be employed.

A satisfactory embodiment of this feature of the invention includes a pocket adapted to receive weights of different sizes, which pocket is conveniently constructed as follows:

5 is a strip of fabric or tape, such as adhesive tape, having upon one surface thereof adhesive material 5^a whereby the same may be readily ap-

plied and secured to the surface of the device. Another strip of fabric or tape 6 is provided, to which is applied on one surface a suitable adhesive 6^a whereby the tape 6 may be secured to the exposed outer surface of the tape 5, and the weight 7, which weight will preferably take the form of a metal piece such as aluminum or lead, though hard rubber or other substitute may be provided. It will be understood that a plurality of weights of different proportions or weight-properties may be provided, so that according to atmospheric or other conditions the metal piece or pieces having sufficient buoyancy-resisting properties to maintain the balloon at the desired level or height will be inserted between 5 and 6^a, and thereafter, if desired, the adhesive side 6^a of the tape 6 may be brought into adhesive contact with the tape 5, thereby insuring against accidental displacement of the weights when the balloon or device is in service and to securely hold the weight or weights in place. Should atmospheric conditions, for instance, change during the use of the balloon, the tape 6 may readily be released from the tape 5, whereby to add to or remove from the buoyancy-resisting elements.

It is believed that the invention will be appreciated from the above description. It will be understood that the buoyant force exerted upon the balloon will be equal to the difference in weight between the particular gas employed and the air; and as conditions in temperature, barometric pressure, altitude above sea level or basic ground, etc., vary, so the buoyant force exerted will vary. The user of the balloon will estimate or test the weather conditions or use under existing conditions and apply the appropriate weight or weights between 5 and 6^a, for instance, according to the desideratum respecting the height of the device with relation to the ground or floor surface.

Assuming the air variations are relatively slight, the predetermined traveling height of the balloon will be maintained approximately after proper adjustment through the medium of the weight attachments, to suit existing conditions, and the device will be projected forwardly or backwardly, according to air currents; and while thus presenting an attractive and pleasing appearance it will be highly serviceable as either an advertising device or toy, or for decoration, etc. And assuming there is doubt as to the best weight to be employed to maintain the device at the proper floating level, a string 8 may be attached temporarily to the nipple 2, whereby to maintain the balloon under control by the hand of the user until the appropriate weight has been introduced between 5 and 6^a, when the string may be severed or if desired retained on the balloon, for the purpose of retrieving the balloon at any desirable time, and particularly if used by the child as a toy.

While the balloon is intended more particularly for outdoor or indoor use in advertising or amusement purposes, the same may and undoubtedly will be of decorative use in theatres, ball rooms, auditoriums, and fields or stadiums; and it is obvious that when the device is used for decorative purposes the same may be of any suitable shape and colored in any desired manner or may have appearing thereon pictorial representations or other matter, together with slogans, verses and the like, appropriate for the occasion, as for Christmas, Easter, carnivals, festivals, patriotic displays or gatherings, fraternal organizations, or the like.

It is understood, of course, that owing to the permeability of the rubber or other gas-retaining material, when the container is filled with hydrogen or the like the device will eventually begin to lose its buoyancy. It is believed, however, that the device will be maintained at its predetermined height satisfactorily for upwards of fifteen hours; and as the buoyancy decreases, because of permeability, etc., the weights may be correspondingly adjusted. It will be observed that the adhesive tape pocket or pockets provided for the weights is substantially flat and readily conforms to the contour of the surface of the device; and it will be further observed that the weight is desirably flexible, yieldable and flat, whereby the weight also may conform to the contour of the balloon surface, and when in position neither the pocket nor the weight will constitute any substantial projection or protuberance beyond the normal confines of the device.

If it is desired, a plurality of weight-carrying pockets or receptacles formed by tapes 5 and 6 may be provided, the receptacles containing different weights; and, as desired, a plurality of weights may be added and made secure by bringing the adhesive surface of the tape 5 of the pocket into adhesive contact with the surface of the device. When a plurality of weight pockets is thus employed, the same containing proportionate weights or selected sizes, each pocket or receptacle will constitute an independent unit with its contained weight secured in position, for ready application to the device.

It is obvious that the weight attachment for maintaining the device at the desired predetermined elevation may take different forms, and as illustrated more particularly in Figures 6 and 8, in lieu of the adhesive tape pockets, as above described, for the reception of the buoyancy control weights, it is possible to utilize the body of the nipple 2 for the reception of weights as desired. To this end, of course, the nipple would be closed by a string or the like; firstly, after having been filled with gas, and secondary, after the insertion of the weight or weights therein. The said string is indicated by the numerals 9, 9a, respectively, and the weight by the numeral 10. Also, if desired, the weight 10 may be used in the pocket formed by the nipple as supplemental to the weight or weights carried by the pockets formed by the adhesive tapes; and this makes possible a ready adjustment of the weights, if desired, rather than removal of the adhesive tapes 6 for adjustment of the weights to be used in association with the latter.

In the preferred embodiment of the invention, the wall of the device is of such a character as to make unnecessary a separate internal gas-receiving container; but, if desired, a separate gas container may be utilized, the nipple in this instance being of such a size as to provide for insertion and removal of the gas container. This embodiment of the invention is illustrated in Figures 7 and 8, in which the gas container, per se, is illustrated at 11, the outer casing being constructed and having the weight-receiving or weight-attaching characteristics as herein above described.

What I claim is:

1. A balloon of the miniature type described, having a weight-receiving pocket on the wall thereof adapted for the reception of different sized weights, and weight means for said pocket for

maintaining the balloon at a predetermined distance from the ground or basic surface.

2. A lighter-than-air gas-containing balloon of the miniature type described, and means positioned within substantially the normal confines of the body of the balloon for counteracting the buoyant effect of the gas to the extent of maintaining the balloon at an approximately predetermined distance from the floor surface.

3. In a lighter-than-air gas balloon, the combination of varying weights, and a receiving pocket common to the weights of different sizes, and means whereby the pocket may be closed when the weights are in position.

4. In a device of the character described, the combination of a balloon adapted to contain lighter-than-air gas, the balloon having on its outer surface a substantially flat weight-receiving pocket whereby to offer substantially no obstruction beyond the normal confines thereof.

5. In a device of the character described, the combination of a balloon adapted to contain lighter-than-air gas, the balloon having on its outer surface a substantially flat weight-receiving pocket, whereby to offer substantially no obstruction beyond the normal confines thereof, and a flat weight adapted to be positioned in said pocket.

6. A lighter-than-air gas balloon of the character described, having a gas-inlet nipple, means for closing the nipple against the escape of gas, the nipple projecting beyond said means whereby to constitute a pocket for the reception of a weight or weights of a consistency to overcome the rising effect of the balloon and maintain the latter at a predetermined elevation, and means for closing the outer end of the nipple to maintain the weight or weights therein.

7. A lighter-than-air gas balloon of the character described having means on its surface for the reception of a removable weight, means for securing the weight in place when applied, and an air-inlet nipple for the balloon forming a pocket for the addition of a weight, as desired.

8. In a device of the character described, the combination of a balloon adapted to contain lighter-than-air gas, the balloon having on its outer surface a substantially flat weight-receiving pocket whereby to offer substantially no obstruction beyond the normal confines thereof, and the said balloon having a nipple constructed to form a weight-receiving pocket, and closing means for opposite ends of said pocket.

9. In a lighter-than-air gas balloon of the character described having an inlet nipple projecting therefrom, said nipple being constructed to form a weight-receiving pocket, a weight or weights in said pocket of a consistency to overcome the rising effect of the balloon and maintain the same at a height determined by the said weight or weights, and closing means for opposite ends of the pocket, constituting means to prevent the escape of gas from the interior of the balloon through said pocket.

10. A toy or miniature advertising balloon of the character described, comprising an inner lighter-than-air gas container, and an outer casing, and means positioned on the casing and acting automatically to counteract the buoyant effect of the gas to extend or maintain the balloon substantially constant at an approximately predetermined distance from the ground or floor surface.

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