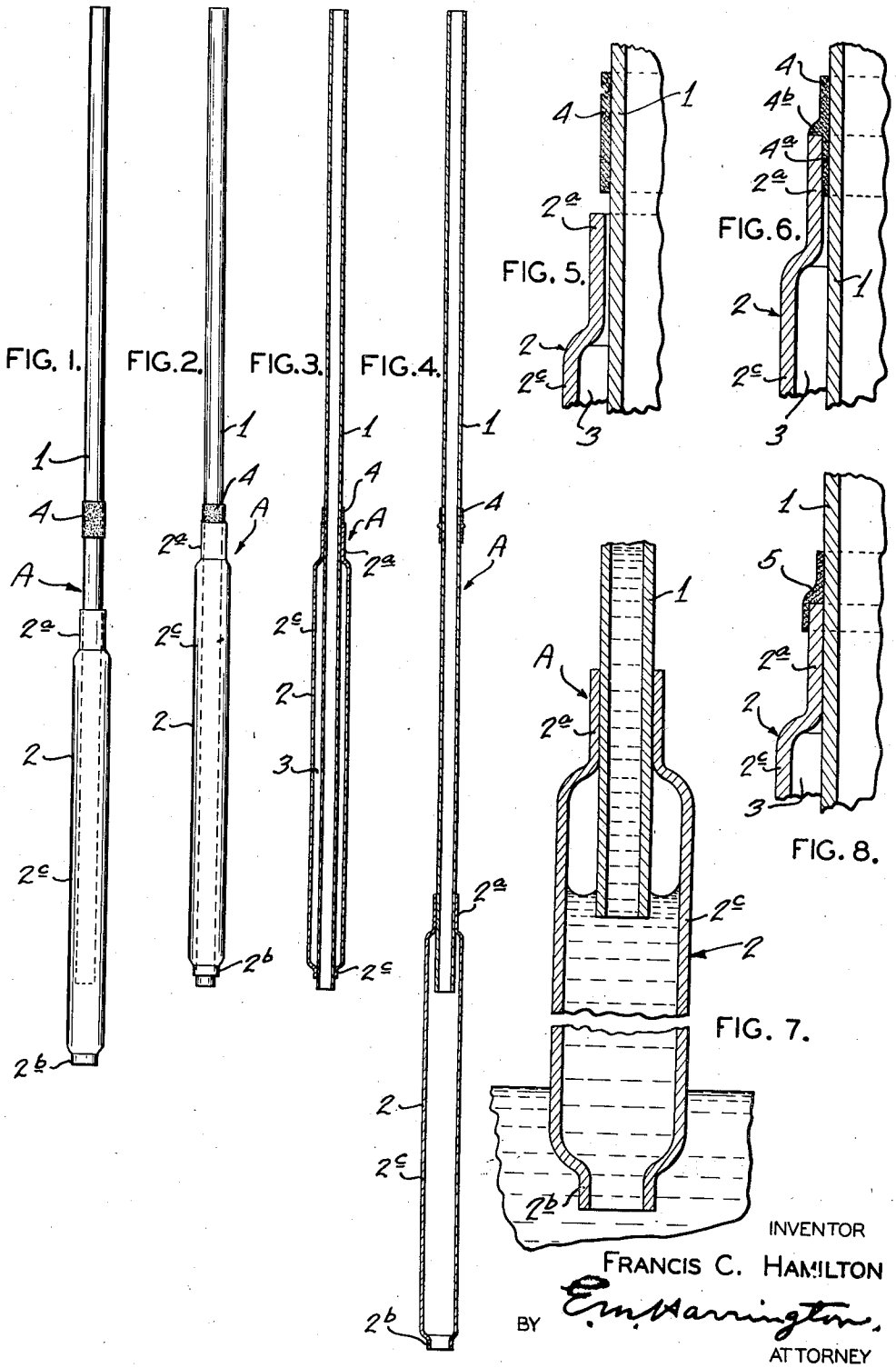
Feb. 27, 1940. F. C. HAMILTON 2,192,036

SIPPER

Filed March 11, 1939



INVENTOR
FRANCIS C. HAMILTON
BY E. M. Harrington.
ATTORNEY

Patented Feb. 27, 1940 2,192,036

UNITED STATES PATENT OFFICE

2,192,036

SIPPER

Francis C. Hamilton, Columbia, Ill., assignor of one-half to L. Ray Schuessler, St. Louis, Mo.

Application March 11, 1939, Serial No. 261,179

3 Claims. (Cl. 299—17)

This invention relates generally to sippers of the type employed to drink beverages and other liquids from bottles and other receptacles, and more specifically to sippers of this type which are adapted to be sealed in the bottles or other receptacles with which they are employed, the predominant object of the invention being to provide an improved sipper which includes a jacket portion that provides the sipper with a space in which air is confined to give buoyancy to the sipper and which jacket is movable longitudinally of the axis of the sipper to extend the length thereof.

Prior to this invention United States Letters Patent were granted which disclosed the arrangement of sealing sippers in bottles and other receptacles containing liquids, the idea behind such arrangement being that when the caps or other closures of the receptacles are removed by the consumers the sippers will be projected slight distances above the mouths of the bottles or receptacles, because of the buoyancy of the sippers, to present to the consumers clean and sanitary sippers for use in drinking the liquids. A distinct disadvantage in connection with a sipper sealed in a bottle is that the sipper must necessarily be of less length than the distance between the bottom wall of the bottle and the inner face of the cap, and as a consequence thereof the sipper is too short to reach down into the lower portion of the bottle when its upper end is extended out of the mouth of the bottle a sufficient distance to permit application of the user's mouth thereto. In this connection attention is directed to United States Letters Patent No. 1,309,994, granted on July 15, 1919, to John W. McAuliff, in Fig. 1 of which is illustrated by dotted lines the situation referred to above.

The improved sipper disclosed herein includes as a part thereof a jacket portion which when the sipper is sealed in a bottle provides the sipper with an annular space in which air is confined so as to give buoyancy to the sipper. This jacket is attached to the main portion of the sipper by a joint which may be easily broken by the user of the sipper, and when the joint is so broken the jacket may be moved longitudinally of the main portion of the sipper to increase the effective length of the sipper and thereby render it sufficiently long to reach into the extreme lower portion of the bottle when the upper portion of the sipper is extended upwardly beyond the mouth of the bottle.

Fig. 1 is an elevation of the improved sipper showing same as it appears when the jacket portion thereof has been moved longitudinally of the main portion of the sipper to increase the effective length of the sipper.

Fig. 2 is an elevation of the sipper shown in Fig. 1 but illustrating same as it appears before the jacket portion of the sipper has been moved with respect to the main portion thereof.

Fig. 3 is a longitudinal section of the sipper as it is illustrated in Fig. 2.

Fig. 4 is a longitudinal section of the improved sipper as it appears in its fully extended condition.

Fig. 5 is a greatly enlarged fragmentary sectional view showing the manner of making the breakable joint between the jacket portion of the sipper and the main portion thereof.

Fig. 6 is an enlarged fragmentary sectional view illustrating the completed joint between the jacket portion of the sipper and the main portion thereof.

Fig. 7 is a greatly enlarged fragmentary sectional view of the improved sipper showing same as it appears when in use in an extended condition.

Fig. 8 is a greatly enlarged fragmentary sectional view illustrating a different form of joint between the jacket portion of the sipper and the main portion thereof.

In the drawing, wherein are shown for the purpose of illustration, merely, two embodiments of the invention A designates the improved sipper generally, said sipper A including a main sipper portion 1 and a jacket portion 2. The main sipper portion comprises a simple tubular element which is open from end to end, said element being formed from any suitable material which will not be affected by the liquid contents of the receptacle in which it is disposed, and also which will not effect said liquid.

The jacket portion 2 of the improved sipper A comprises an element made of the same material from which the main portion 1 is produced, or a different material having the required characteristics. The jacket portion 2 is provided with cuff portions 2^a and 2^b at its opposite ends which contact closely with the outer surface of the main sipper portion 1 and the elongated part of the jacket portion 2 between said cuff portions is of substantially greater diameter than the main sipper portion 1 to provide an annular space 3 within said portion 2^c between the outer face of the main sipper portion and the inner face of the wall of the portion 2^c of the jacket portion 2. Because of the close contact of the cuff portions of the jacket portion with the surface of

the main sipper portion air is trapped in the space 3 when the sipper A is in the condition illustrated in Figs. 2 and 3, and this trapped air gives buoyancy to the sipper which tends to cause the sipper to float upwardly in liquid in which the jacket portion of the sipper is submerged.

The jacket portion 2 of the sipper is attached to the main portion 1 thereof by means of a readily breakable joint which is provided by suitable material 4. There are several materials obtainable on the market which posses the characteristics necessary to provide the joint required in producing the improved sipper disclosed herein, one characteristic of the material being that it is non-toxic, and another characteristic being that a joint made with the aid of the material be sufficiently secure under ordinary handling of the sippers to hold the main portion 1 and the jacket portion 2 together but which may be broken when desired by the application of slight force.

One method of producing the joint between the main portion 1 of the sipper and the jacket portion 2 thereof is to apply a band of the material 4 to the outer face of the main portion 1 of the sipper as shown in Figs. 1 and 5, and slide the jacket portion longitudinally of said main portion, as suggested by Fig. 5, so that the cuff 2^a is caused to be moved into contact with said band of material as shown in Fig. 6. By moving the cuff portion 2^a of the jacket portion 2 into contact with the band of material as described a film 4^a of the material is interposed between the inner face of the cuff portion 2^a and the outer face of the main sipper portion, as shown in Fig. 6, and a portion of the material 4 is plowed up by the moving outer edge of the cuff portion 2^a to form a ridge or bead 4^b as is also shown in Fig. 6. Thus by forming a joint as described the jacket portion 2 is attached to the main portion 1 of the sipper with the required security, and because of the nature of the material employed to produce the joint, said joint may be readily broken when desired.

Instead of making the joint between the main portion 1 of the sipper and the jacket portion 2 thereof the jacket portion may be assembled on the main portion after which a band of material is applied to the assembled elements to provide the joint 5 illustrated in Fig. 8 which simply overlaps the cuff portion 2^a of the jacket portion 2.

In illustrating in Figs. 5, 6, and 8, the joints between the main portions of the sippers and the jacket portions thereof, thicknesses of materials are, of course, very greatly exaggerated. It is to be understood however that in the actual sipper there is no space between the inner face of the cuff portion 2^a of the jacket portion of the sipper and the main portion 1 thereof as is shown in Figs. 5 and 6 as there is a close fit between these parts with a very thin film of the joint producing material therebetween.

In the use of the improved sipper disclosed herein the sipper is sealed in a bottle or other receptacle with which the sipper is associated, the top of the sipper being forced against the cap or other closure which seals the mouth of the bottle or other receptacle by the buoyancy provided by the body of air trapped in the space 3. Because of this situation removal of the cap or other closure of the bottle or receptacle will permit the upper portion of the sipper to be buoyantly projected upwardly beyond the mouth of the bottle or other receptacle. When the upper end portion of the sipper has been projected above the mouth of the bottle or other receptacle the user may drink the contents of the bottle or receptacle with the aid of the sipper until the level of the liquid is lowered to a point where it is necessary to increase the length of the sipper. He may then withdraw the sipper from the bottle or receptacle and by applying a slight pull to the jacket portion of the sipper with reference to the main portion thereof, break the joint between said parts and move the jacket portion longitudinally of the main sipper portion to increase the sipper to the required length. It is obvious, of course, that if desired, the effective length of the sipper may be increased, as described above, as soon as the removal of the cap or closure of the bottle or other receptacle releases the upper portion of the sipper for projection beyond the mouth of the bottle or other receptacle.

When the jacket portion 2 of the sipper is extended beyond the lower end of the main portion 1 of the sipper and the lower open end portion of the jacket portion is submerged in the liquid to be consumed with the aid of the sipper as shown in Fig. 7, the jacket portion provides a reservoir into which liquid is drawn by suction created in the main sipper portion. Also because of the restricted opening at the bottom of the jacket portion 2 the liquid will flow from said jacket portion slowly when suction through the main sipper portion is discontinued. As a result of this situation resumption of the suction through the main sipper portion after a short period of discontinuance of the suction will find liquid still present in the jacket portion and this liquid will be drawn immediately through the main sipper portion by the suction therein. Additionally it has been found that when liquid is being drawn through the main sipper portion 1 the liquid within the jacket portion 2 rises a slight distance above the lower end of the main sipper portion as shown in Fig. 7. This situation provides an air seal which prevents air from being drawn by suction within the main sipper portion between the inner face of the cuff 2^a of the jacket portion 2 and the outer face of the main sipper portion 1.

I claim:

1. A sipper including a main sipper portion comprising a tubular element open from end to end, a jacket portion surrounding said main sipper portion, said jacket portion being of a diameter substantially greater than that of the main sipper portion to provide a space within said jacket portion between a wall thereof and the wall of said main sipper portion in which air is confined, and a readily breakable joint for securing said jacket portion to said main sipper portion, said jacket portion on breaking of said joint being freed from the main sipper portion for movement longitudinally thereof to increase the effective length of the sipper.

2. A sipper including a main sipper portion comprising a tubular element open from end to end, a jacket portion surrounding said main sipper portion, said jacket portion being provided with cuff portions at opposite ends thereof which contact closely with said main sipper portion and a portion located between said cuff portions which is of a diameter substantially greater than that of the main sipper portion to provide a space within said jacket portion between a wall thereof and the wall of said main sipper portion in which air is confined, and a readily breakable joint for securing said jacket portion to said main sipper portion, said jacket portion on breaking of said joint being freed from the main sipper

portion for movement longitudinally thereof to increase the effective length of the sipper.

3. A sipper including a main sipper portion comprising a tubular element open from end to end, a jacket portion surrounding said main sipper portion at a point adjacent to an end thereof, said jacket portion being provided with cuff portions at opposite ends thereof which contact closely with said main sipper portion and a portion located between said cuff portions which is of a diameter substantially greater than that of the main sipper portion to provide a space within said jacket portion between a wall thereof and the wall of said main sipper portion in which air is confined, and a readily breakable joint for securing said jacket portion to said main sipper portion at a cuff portion of said jacket portion, said jacket portion on breaking of said joint being freed from the main sipper portion for movement longitudinally thereof to increase the effective length of the sipper.

FRANCIS C. HAMILTON.