Oct. 31, 1961 B. RÖDSET 3,006,578

FIRE BALLOON

Filed Feb. 25, 1959

FIG. 1.

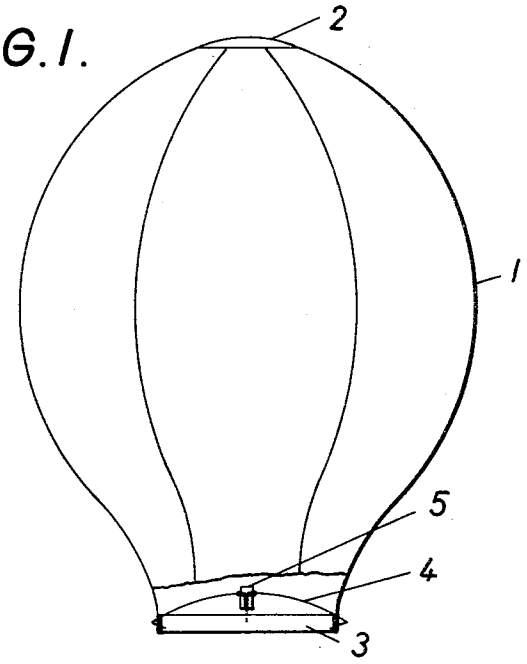


FIG. 2.

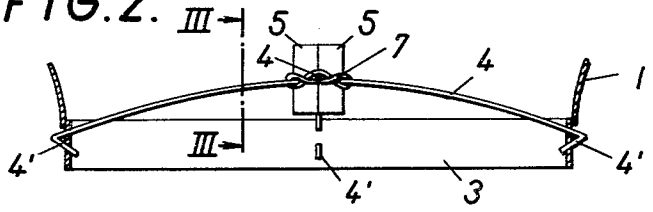
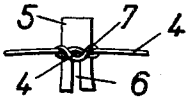


FIG. 3.



United States Patent Office

3,006,578
Patented Oct. 31, 1961

3,006,578

FIRE BALLOON

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Filed Feb. 25, 1959, Ser. No. 795,431
Claims priority, application Norway Feb. 26, 1958
2 Claims. (Cl. 244—31)

This invention relates to toy-balloons of the fire type which are caused to ascend into the air by means of heated air produced by a heat source positioned at the lower open end of the balloon.

The object of the invention is to provide an improved balloon of the type referred to which has the necessary lightness and at the same time sufficient stiffness in order to hold the heat source in such position in the lower open end of the balloon that the heated air flows effectively upwards into the balloon which thereby with respect to the amount of fuel obtains maximum climbing capacity.

The invention is mainly distinguished in that a ring made from pliable material, such as paper or carton, is secured in the lower open end of the balloon, that two thin steel wires are secured across said ring at right angles to one another, said wires being curved upwardly in longitudinal direction, and that at least one wick is secured at the crossing point of said wires. The ring flattens out in folding the balloon for packaging.

As a heating source a pair of cylindrical wicks are preferably used. The wicks are split longitudinally approximately in half and positioned as opposing riders on one of said wires, said wicks being secured by means of a seizing thread which also serves to hold the central portion of said wires firmly together.

By this arrangement the heating source is placed above the lower end of the balloon, centered in such manner that the flame cannot reach and ignite the material of the balloon.

An embodiment of the invention is as an example illustrated in the accompanying drawing in which:

FIGURE 1 shows a side elevation of a balloon with parts broken away,

FIGURE 2 shows at a greater scale an axial section through the lower part of the balloon, and

FIGURE 3 is a section along the line III—III in FIG. 2.

In the drawing the balloon bag or envelope **1** which may be ball or pear shaped or have another suitable form is indicated with a lower open end. The bag or envelope **1** is made from a number of sections of thin acidless silk paper interconnected by gluing, and the upper ends of said sections, or an opening at the apex, is covered with a circular piece **2** of paper also secured by gluing. A similar piece may also be applied on the inner side of the envelope.

In the lower open end of the balloon a ring **3** is secured by gluing. The ring ism ade from a strip of pliable material, such as thick paper, thin carton or the like, so that said ring may be squeezed together in folding down the balloon.

In order to hold the ring **3** in normal open position two thin steel wires **4** are secured across the same, angularly spaced 90° to one another, and curved upwardly in the

longitudinal direction, as shown. Said wires **4** are secured to the ring **3** by passing their ends through the ring strip adjacent the upper edge thereof and then bending into angles **4'** which are passed back and through the ring strip at the lower portion thereof.

A heating source comprises one or more cylindrically shaped wicks **5** made from cotton or another suitable moisture absorbing material. In the embodiment shown two wicks **5** are used, which are longitudinally split approximately in half, as shown at **6**, so as to be placed as riders on one of the wires **4**, one at each side of the other wire, and in this position the wicks are secured by means of a seizing thread **7**, which at the same time holds the middle portions of the wires firmly together.

When the wicks **5** are saturated with a liquid fuel, preferably spirit, and ignited the fire heats the air in the balloon so that the balloon obtains a relatively great lift. In positioning the wicks centrally in the opening it is ensured that the flames of the wicks, even if the balloon occupies a somewhat sloping position, do not reach the material of the balloon **1** and ignite the same.

When the steel wires are connected at the middle portions as described, said wires, by closing the ring **3** along an axial plane which bisects the angle therebetween, are rotated with respect to one another, at the same time as they lose their curved shape and extend by straightening to the length of the flattened ring.

I claim:

1. A collapsible fire balloon, comprising an inflatable envelope closed at the top and having a lower open end, a ring made from a pliable material and secured to said open end, two crossed flexible wires having ends which are fastened to said ring approximately 90° apart, said wires being fastened together at their intersection for rotation with respect to each other around said intersection when said wire ends are moved together to flatten said ring, said wires being longer than said ring diameter and curved upwardly when said wires are 90° apart and said ring is expanded, and straight when said wires are moved together and said ring is flattened, and at least one wick secured to said wires at their intersection, whereby said envelope of said collapsible balloon is folded around said flattened ring and crossed wires in a package having a width of less than the diameter of said ring.

2. A fire balloon having a lower open end, a ring made from pliable strip material secured in said open end, two thin steel wires secured across said ring at right angles to one another, said wires being curved upwardly, the end portions of said wire being secured to said ring strip by being passed through the ring strip adjacent the upper edge thereof and then bent into angles which are passed back through the ring strip at the lower portion thereof, and at least one wick secured at the crossing point of said wires.

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