Nov. 13, 1951 H. BERTHENE 2,575,157

PARACHUTE DROPPING KITE

Filed May 9, 1950 2 SHEETS—SHEET 1

Fig. 1

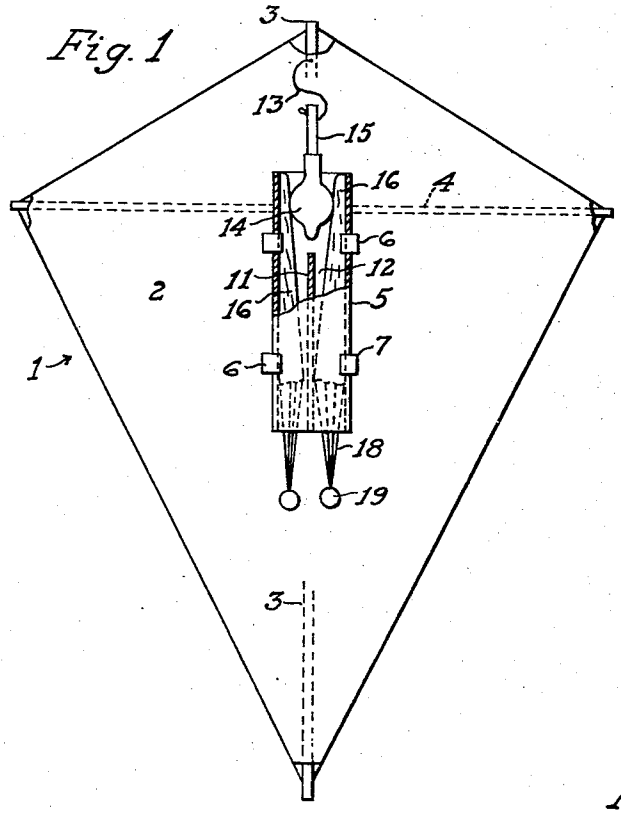


Fig. 3

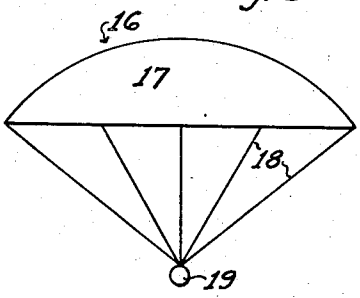


Fig. 5

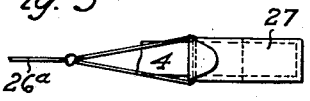


Fig. 4

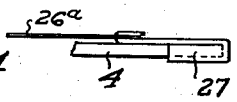
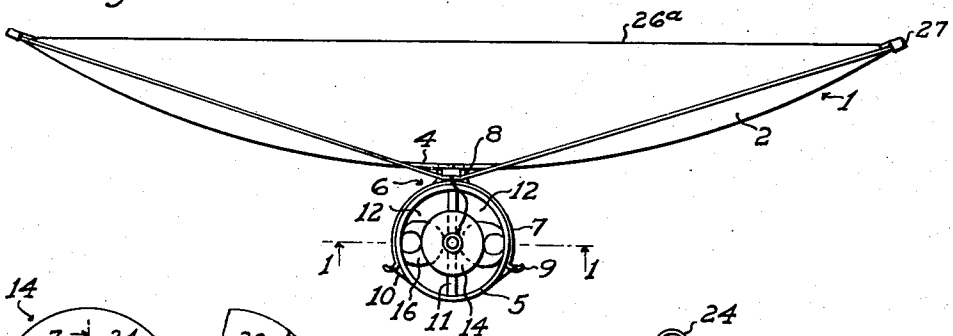


Fig. 2



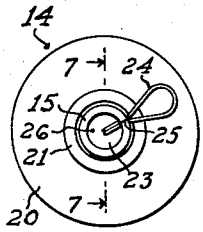


Fig. 6

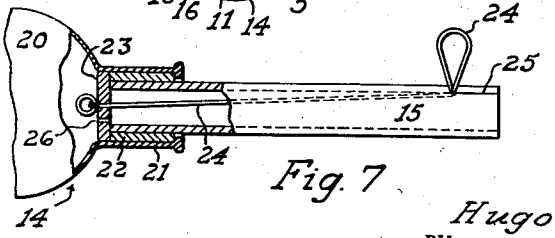


Fig. 7

INVENTOR.
Hugo Berthene.
BY
Benjamin Yoman,
Atty.

Nov. 13, 1951 H. BERTHENE 2,575,157

PARACHUTE DROPPING KITE

Filed May 9, 1950 2 SHEETS—SHEET 2

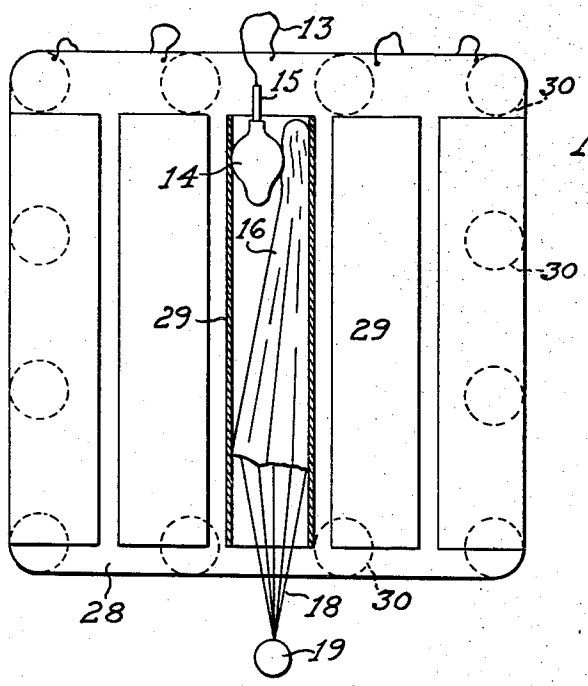
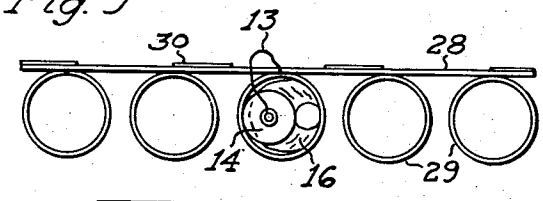


Fig. 8

Fig. 9



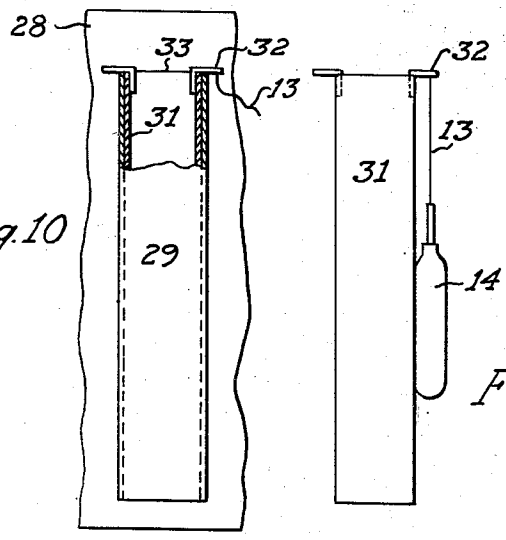
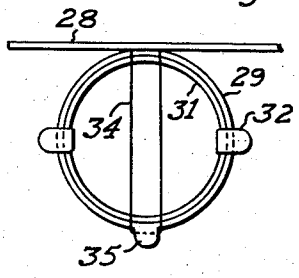


Fig. 10

Fig. 11

Fig. 12



INVENTOR.
Hugo Berthene
BY
Benjamin Toman.
Atty.

Patented Nov. 13, 1951

2,575,157

UNITED STATES PATENT OFFICE

2,575,157

PARACHUTE DROPPING KITE

Hugo Berthene, Brooklyn, N. Y.

Application May 9, 1950, Serial No. 160,996

2 Claims. (Cl. 244—155)

1

This invention relates to a kite and parachute dropping device therefor, and its principal object is to provide an improved device for this purpose which is conveniently and economically manufacturable, salable at low cost, of highly simplified provisions and operation, reliable, strong, durable, and efficient.

Another object is to provide an improved device for said purpose which may be readily, rapidly, and conveniently installed on any usual completed kite, and without requiring any skill.

A further object is to provide an improved device for said purpose which is free from any complications tending to become out of order, and which will not require for its operation any actuation by the user of the kite during its flight.

Other objects and advantages will hereinafter appear.

In the accompanying drawings,

Fig. 1 is a front elevational view of a usual kite, showing it as equipped with a device constituting the invention.

Fig. 2 is a top plan view, in an enlarged scale, of the kite and device shown in Fig. 1.

Fig. 3 is an elevational view illustrating one of the parachutes of the invention, as it appears when opened up and in a descending condition.

Figs. 4 and 5 are a top plan view and rear elevational view, respectively, and in approximately full size scale, of a detail of the invention.

Fig. 6 is a top plan view, in approximately full size scale, of a balloon forming part of the invention.

Fig. 7 is an elevational and partially cross-sectional view of the balloon, taken on line 7—7 of Fig. 6.

Figs. 8 and 9 are a front elevational and top plan view, respectively, of a device which is a modification of the invention.

Fig. 10 is an elevation view, partly in cross-section, of another modification of the invention.

Fig. 11 is an elevational view of a detail of the modification shown in Fig. 10.

Fig. 12 is a top plan view, in an enlarged scale, of the modification shown in Fig. 10.

The usual kite 1, Fig. 1, includes a light plane 2, reinforced by a vertical longitudinal bar 3 and a flexed cross-bar 4. To the bar 3 is secured a tube 5 held thereto by cleats 6, each having arms 7 tensionally embracing the tube and prongs 8 fixedly gripping the bar, as shown in Fig. 2. If desired, the tube 5 may be additionally fastened by tying together the hooked ends 9 with an elastic or plain cord 10, as shown. The interior of tube 5 is separated by a partitioning wall 11 into subsidiary tubes 12. To the bar 3 is held

2

by a cord 13 a balloon 14, which may be inflated through an air inlet pipe 15 thereof, but which is provided with an air leaking opening for gradual deflation, as will be hereinafter shown. A parachute 16, Figs. 1, 3, as used with the invention, comprises an umbrella-like top 17 from the periphery of which extend cords 18 tied together at their terminals jointly to a weight 19, which may be a sphere as here shown or in form of a paratrooper.

In operation of the invention, the folded-up parachutes 16 are inserted upwardly into the tubes 12 in the position shown in Fig. 1, and then the balloon 14 is inserted downwardly into the tube 5 and inflated until it bears firmly against both parachutes and therethrough against the wall of the tube, thereby efficiently holding and retaining the parachutes 16 in place. The kite 1 may be then flown in a usual manner, whereupon as the balloon 14 gradually becomes deflated it releases the parachutes 16, which then drop out, open up, and descend to earth, to the amusement and entertainment of the user of the kite and those watching the flight.

The balloon 14 includes an inflatable member 20, Figs. 6, 7, the mouth 21 of which is secured to a sleeve 22 that carries the pipe 15, and against the joint terminals of said pipe and sleeve, interiorly of the member 20, is located a diaphragm 23. An elastic cord 24 is secured to the diaphragm 23, as shown, and extends therefrom through and outwardly of the pipe 15, to which it is secured by being wedged in a slit 25 thereof as shown. The diaphragm 23 is provided with a small opening 26 for the gradual deflation of the member 20. When the air is blown into the pipe 15, acting as a mouthpiece, it displaces the diaphragm 23 from its seat and permits the shell 20 to be inflated to the extent required for firmly holding in place the folded up parachutes 16, Fig. 1, and during the period, while the kite 1 is in flight, the air in shell 20 gradually leaks out therefrom through the perforation 26, causing the shell to deflate and release the parachutes 23 as above described.

The cross-bar 4 of the kite 1 is maintained in requisite flexed and bow-like condition shown in Fig. 2, by a cord 26a having thereto tied at each end thereof a ferrule-like fitting 27, which slips over the terminal of the bar 4, in the manner illustrated in Figs. 4, 5.

According to the modification of the invention shown in Figs. 8, 9, there is provided a plate 28 to which is secured a plurality of tubes 29, each adapted to receive a folded parachute 16,

and to said plate are secured as shown balloons **14** for cooperation with said tubes. The plate **28** is provided with areas **30** of adhesive material, wherewith the plate may be secured to and over the median area of the plane **2** of any kite, and the latter at once rendered ready to be operated for parachute dropping with the entire battery of tubes **29**, in the above described manner.

In the modification shown in Figs. 10, 11, 12, there is provided for each of the tubes **29** an auxiliary tube **31**, which is telescopically slidable downwardly into the former tube and held thereto by lateral projections **32** thereof resting upon the shoulder **33** of tube **29**. The tube **31** is retained against upward dislocation by an elastic cord **34** secured to the rim of tube **29** looping over a lateral projection **35** thereof, as shown in Fig. 12. To each tube **31** is tied a balloon **14**, as shown in Fig. 11, whereby when the tubes **29** are thus equipped with the tubes **31** the latter may be all loaded with parachutes **13** held in place by their balloons **14**, and the kite may be then flown for dropping the parachutes in the above described manner. The advantage of this modification is that during the period when the kite is still in flight additional auxiliary tubes **31** may be loaded up with folded parachutes and inflated balloons, ready for quick insertion into the tubes **29** upon return of the kite to its user.

Variations may be resorted to within the scope of the invention, and portions of the improvements may be used without others.

Having thus described my invention, I claim:

1. A parachute dropping device for a kite having the combination of a plate, a plurality of tubes secured to said plate, a parachute in a folded condition within each of said tubes, an inflatable member in an inflated state located in each of said tubes between the parachute therein and its wall maintaining the parachute in place, each of said members having an air leaking opening, and means to secure said plate to said kite with the said tubes in an upright state, whereby deflation of said members through their said openings during flight of the kite will release and drop all of said parachutes from said tubes.

2. A parachute dropping device for a kite having the combination of a tube, a parachute in a folded condition within said tube, an inflatable member in an inflated state located within said tube between said parachute and the wall of said tube maintaining the parachute in place, said member having an air leaking opening, means to secure said tube to said kite in an upright state, whereby deflation of said member through said opening during flight of the kite will release and drop said parachute from said tube, and said member being tied to said tube.

HUGO BERTHENE.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
916,605	Rouse	Mar. 30, 1909
919,436	Jackson	Apr. 27, 1909
1,180,224	Ayling	Apr. 18, 1916
1,274,207	Sordyka	July 30, 1918
1,329,584	Martinis	Feb. 3, 1920
1,337,403	Holtvoigt	Apr. 20, 1920
1,714,079	Copeman	May 21, 1929
1,735,309	Albrecht	Nov. 12, 1929
1,816,814	Ater	Aug. 4, 1931
2,444,642	Frieder	July 6, 1948
2,480,948	Moon	Sept. 6, 1949
2,488,118	Cobb	Nov. 15, 1949
2,492,800	Isom	Dec. 27, 1949
2,507,777	Frey	May 16, 1950

FOREIGN PATENTS

Number	Country	Date
532,369	Great Britain	Sept. 26, 1940
608,000	Great Britain	Sept. 8, 1948