E. BERGHER.

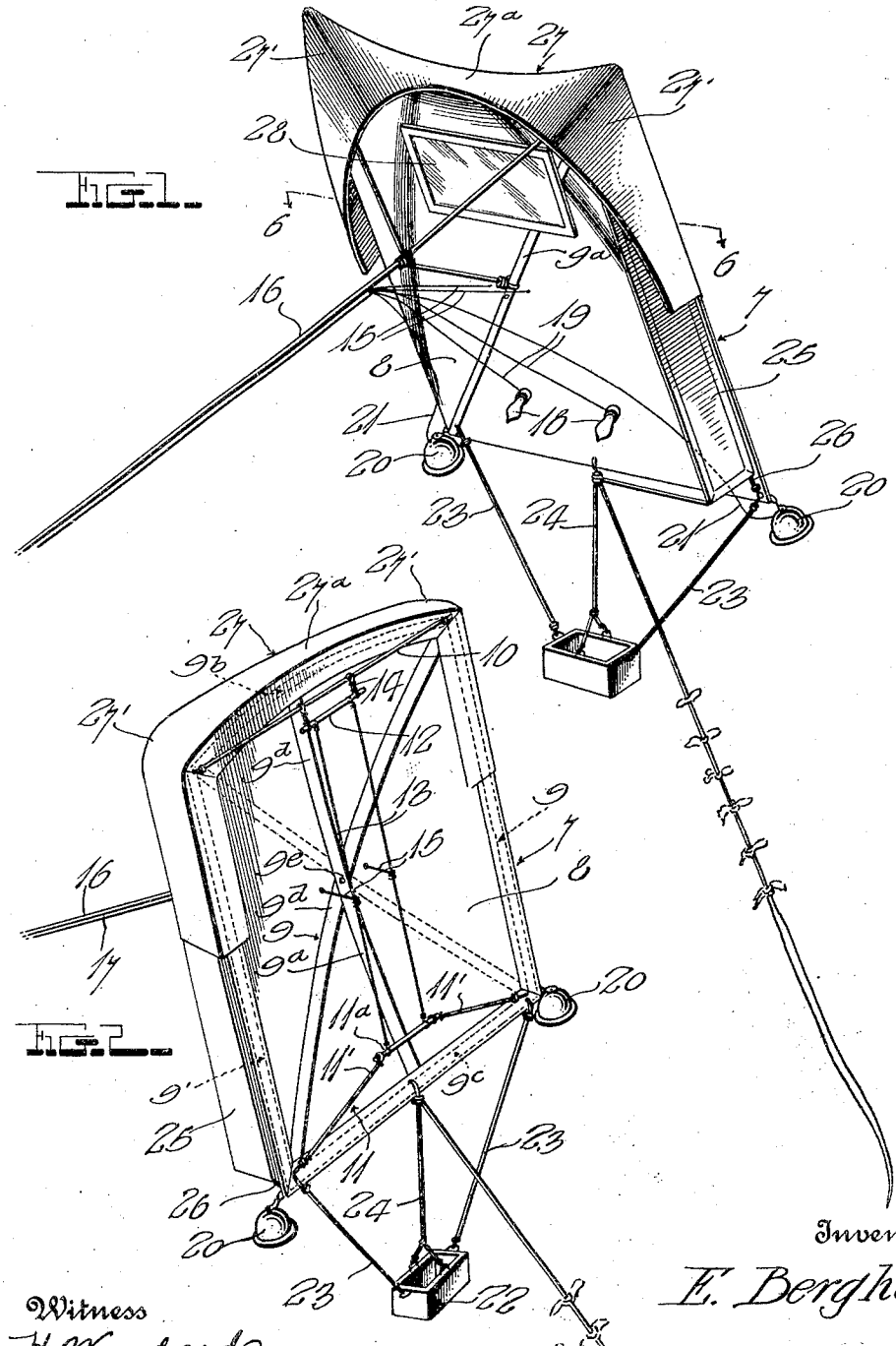
MILITARY KITE.

APPLICATION FILED JAN. 20, 1919.

1,326,434.

Patented Dec. 30, 1919.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

FIG. 3.

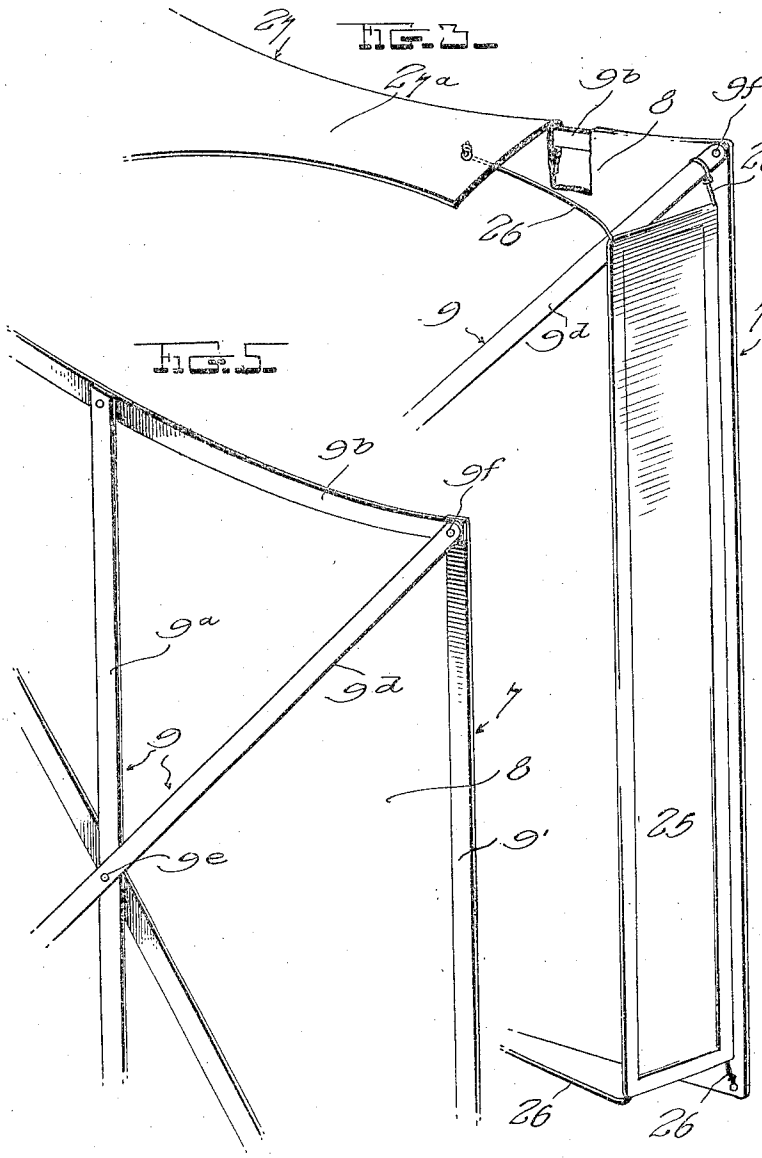


FIG. 4.

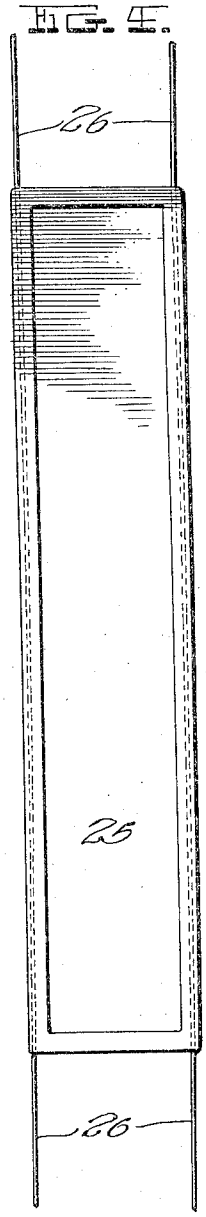
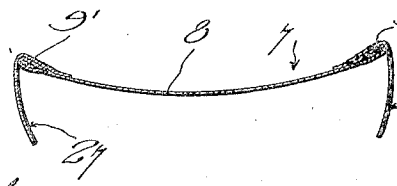


FIG. 5.

FIG. 6.



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MILITARY KITE.

1,326,434. Specification of Letters Patent. **Patented Dec. 30, 1919.**

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To all whom it may concern:

Be it known that I, ELIAS BERGHER, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Military Kites; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to kites, and it relates more specifically to an improved military kite and its adjuncts.

One object of the invention is to provide a kite which has a relatively great buoyancy or lifting power and requires only a slight force of wind to keep it elevated;

Another object is to provide a kite having a rudder that is attachable alternately to the right or left side of the kite-body, for causing the kite to move laterally to the right or left;

Another object is to provide a receptacle in such relation with the kite-body that it also constitutes a steadying element;

Another object is to provide a kite-body which is especially adapted to support and properly hold the aerial or antenna of a wireless telegraphing or telephoning outfit, and other electrical devices;

Another object is to combine a wireless aerial with a kite so that the aerial may be quickly and easily elevated to any desired altitude.

Other objects and advantages may become apparent to persons who read the following details of description in connection with the accompanying drawings in which:

Figure 1 is a perspective view of my improved kite in its operative position;

Fig. 2 is a perspective view of a kite in its reversed position, that is, the back or upper side being viewed in connection with the aerial disposed thereon;

Fig. 3 is a perspective detail view illustrating more particularly the guiding vane or steering plate and the manner in which it is secured to the kite-body;

Fig. 4 is an enlarged side elevation of a detachable and adjustable vane;

Fig. 5 is a detail perspective view illustrating more particularly the construction of the kite-frame; and

Fig. 6 is a sectional view along the line 6—6 of Fig. 1.

Referring to these drawings in detail, in which similar reference characters correspond with similar parts throughout the several views, the kite-body 7 is formed of a light and thin sheet of canvas, paper or other appropriate material 8, and a frame 9 which may be constructed of strips or rods of wood or other suitable material. There are preferably seven of these strips, as follows: Two number 9′ at the lateral vertical edges, one 9^a at the middle of the frame and extending from the bottom to the top thereof, one 9^b connecting the top ends of the elements 9′ and 9^a, one 9^c connecting the bottoms of the elements 9′ and 9^a, and two 9^d crossing each other and the strip 9^a at the middle of the frame and being secured together by suitable means at 9^e, the ends of the strips 9′, 9^b, 9^c and 9^d being secured together by suitable means 9^f. The covering 8 of paper or fabric may be secured to the frame in any well known or appropriate way.

The upper end of the kite-body is bowed so that its front surface is convexed and its rear surface is concaved. The bowing of the upper end is effected by means of a strip, wire or cable 10 which may have its ends secured to the fastening elements 9^f, this member 10 being held taut by means of the spring action of the kite frame and the consequent tendency of the frame to straighten itself. The lower end of the kite-body is also slightly bowed by means of a somewhat taut supporting element 11 which may have its ends secured to the lower fastening elements 9^f. This element 11, preferably comprises two flexible elements 11′ and a rigid element or bar 11^a. This bar 11^a coöperates with a similar bar 12 to support two wires 13, the bar 12 being supported by means of the supporting element 10 through the medium of links 14. The wires 13 together with their supporting elements constitute the aerial or antennæ of a wireless communicating outfit, and a pair of wires 15 connect the antennæ with the remainder of the outfit (not shown). These wires 15 ex-

tend through the kite-body at its central portion, and extend thence down the kite string 16, a flexible tube or hollow cable 17 carrying the wires 15, this cable being parallel with and secured to the kite string.

A pair of signal lamps 18 may be carried by the kite-body, wires 19 being provided therefor, and a pair of search lights 20 are preferably located at opposite lower corners of the kite-body and provided with conducting wires 21. The conducting wires 19 and 21 extend through the cable 17 with the conducting wires 15; or else, the conducting wires 15, 19 and 21 are insulated from one another formed into a cable and attached to a kite string 16 by any suitable means.

The box 22 is suspended from the lower end of the kite by means of strings or other flexible elements 23 and 24, and this box 22 not only comprises a receptacle which may carry articles intended to be transported to an otherwise inaccessible person or persons, but it is also useful for steadying the kite-body. This box may be made of any suitable thin and light sheet material, and ballast may be placed therein according to the desires or requirements of the operator.

A guiding sheet, plate or vane 25 may be constructed of any thin and light sheet material, and while it may be somewhat flexible, it is sufficiently rigid to hold its quadrangular shape. This vane 25 is provided with strings, strips, or other suitable fastening means 26 whereby it may be attached to the kite-body and its adjuncts as more clearly disclosed in Figs. 1 and 3. This vane may be attached to the right hand side of the kite-body or to the left hand side, and it may be positioned at different angles, so that the kite may be guided thereby in a rightward or leftward direction.

In order that the kite-body may have the greatest amount of buoyancy or lifting power, I provide the same with a hood 27 of somewhat flexible and collapsible sheet material. As the hood is required to be light, strong and somewhat rigid, it may be constructed of paper, buckram or other fabric which has been treated with stiffening material. The material employed for this hood will depend upon the size of the kite and the conditions under which it is intended to be used. This hood is preferably of substantially the shape disclosed in the drawings, that is, comprising two deep pockets 27′ at its upper corners, these pockets being united by a connecting portion 27ª, and the outer sides of the pockets extending downward substantially or approximately to the middle of the side strips 9′. The rear edge of the hood is secured substantially throughout its length to the kite-body while its front edge extends forward from the kite-body and coöperates therewith to gather wind thereunder so as to lift the kite-body and its adjuncts.

In order that the operator may view objects which are otherwise obscured from his vision, the kite-body is provided wth a mirror or reflector 28 which may be secured to the kite-body by any suitable means and in any desired position.

From the foregoing, it will be seen that I have provided a device whereby an officer in one division of an army may communicate with an officer in another division or section; also that this device is capable of locating armies, fleets or portions thereof at night by means of the search-lights 20, and in the day time by means of the mirror 28.

Although I have described this embodiment of my invention very specifically, it is not intended to limit my invention to these exact details of construction and arrangement of parts, but I am entitled to make changes within the scope of the inventive idea disclosed in the foregoing description and following claims.

What I claim as my invention is:

1. In combination, a kite-body having a concaved side, supporting cables spanning the concaved side of the kite-body and being supported adjacent to the upright edges of said body, an aerial supported by the intermediate portions of said cables, and electric conducting means connected to said aerial and supported by the kite-string.

2. In combination, a kite-body having a concaved upper surface, supporting elements spanning the concaved upper surface, an aerial supported by said supporting elements above said upper surface, and electrical conducting means connected to said aerial and extending through said kite-body and being supported by the latter and by the kite-string.

3. A kite comprising a kite-body, and a forwardly projecting wind-engaging hood extending across the face of said kite-body.

4. A kite comprising a kite-body, and a pair of wind-engaging pockets disposed at the opposite upper portions of the kite-body and projecting forwardly from the face of the latter but not projecting laterally outward beyond the upright edges of the kite-body.

5. A kite comprising a kite-body, a pair of wind-engaging pockets disposed at the opposite upper portions of the kite-body and extending down the opposite edges of the kite-body approximately half way from the bottom to the top.

In testimony whereof I have hereunto set my hand.

ELIAS BERGHER.