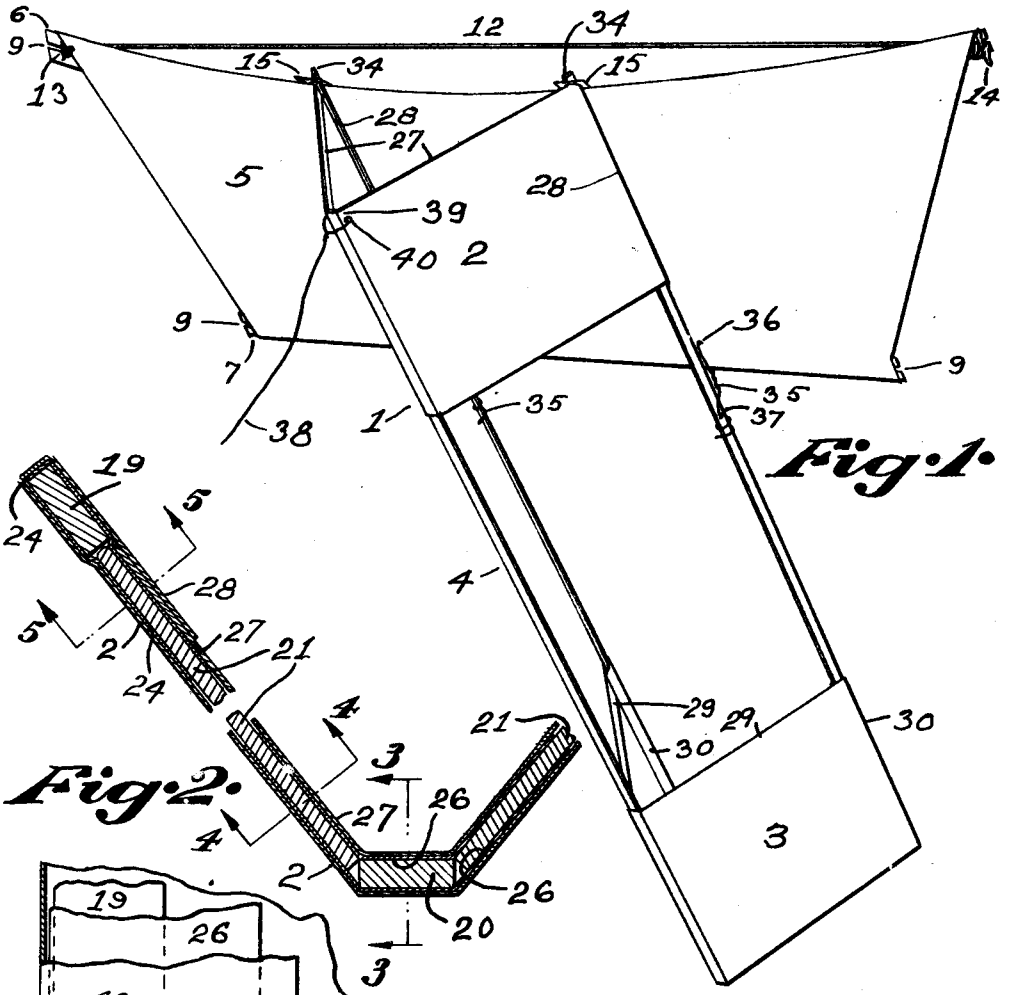
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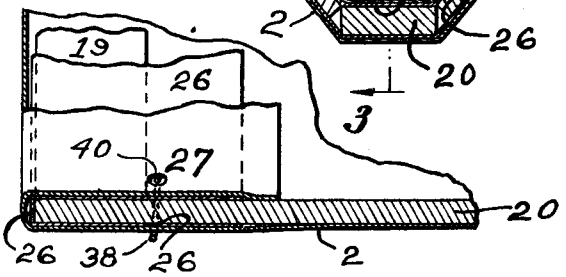
KITE

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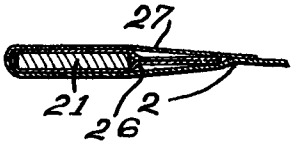


Fig·1.

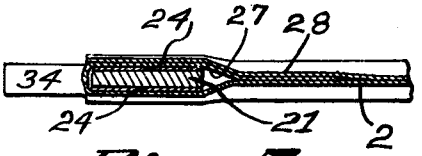
Fig·2.



Fig·3.



Fig·4.



Fig·5.

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Fig. 6.

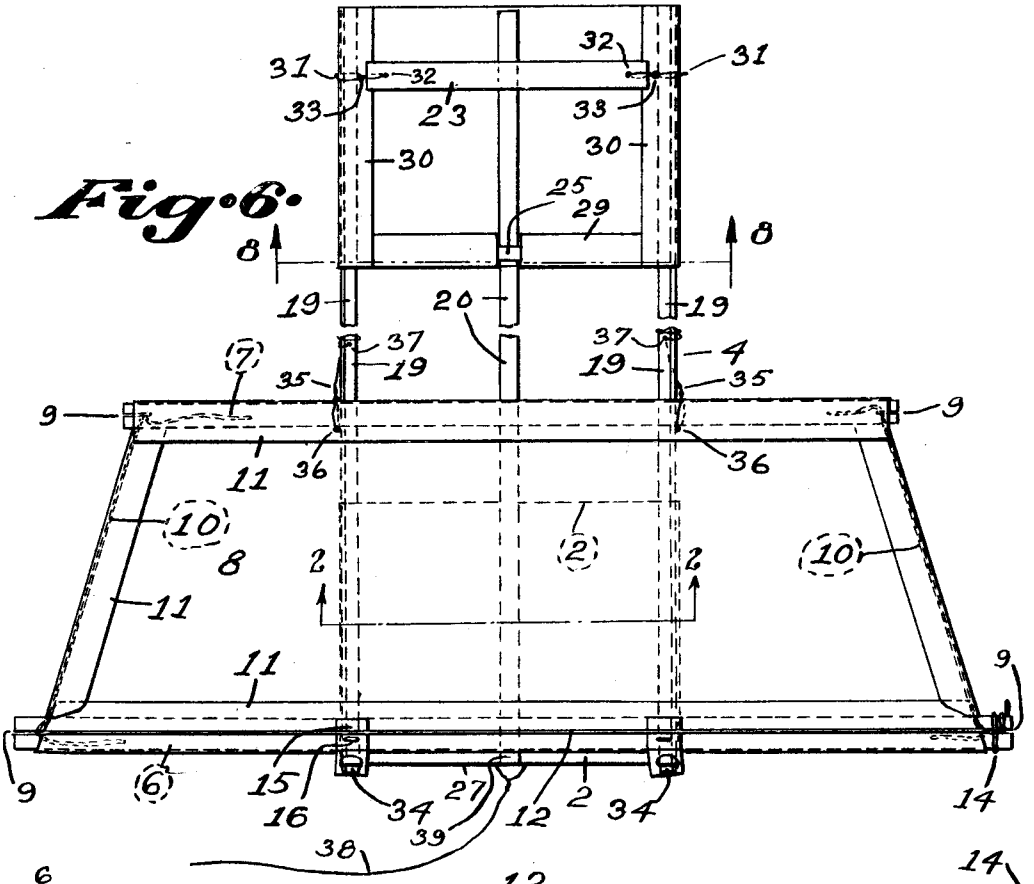


Fig. 7.

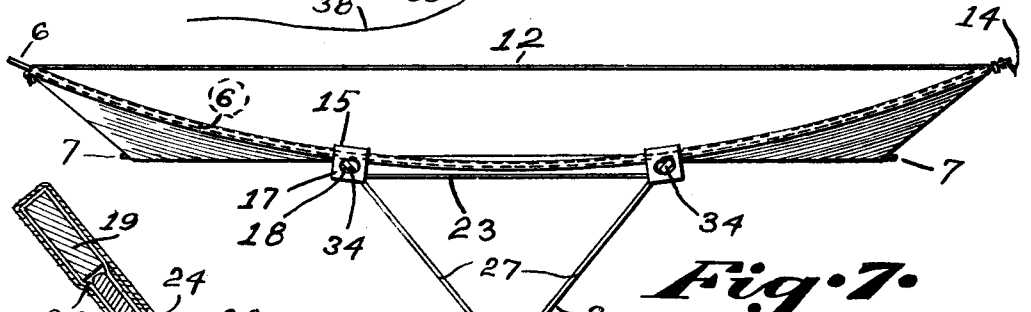
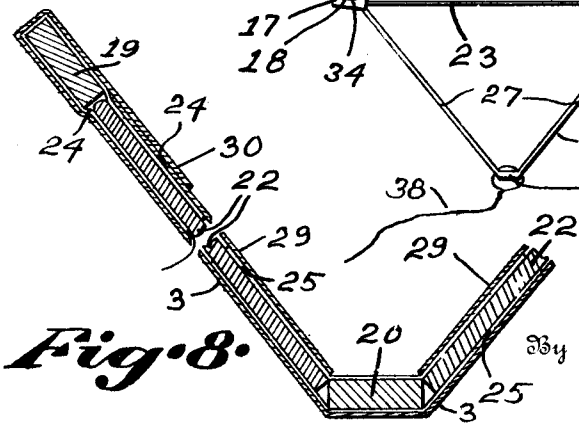


Fig. 8.



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UNITED STATES PATENT OFFICE.

EDWARD B. WILDER, OF ST. LOUIS, MISSOURI.

KITE.

Application filed November 5, 1927. Serial No. 231,283.

This invention relates to kites, and has more particular reference to a kite arranged to simulate an aeroplane.

One of the objects of the present invention is the provision of a kite of the character described that will automatically maintain itself in a condition of equipoise when being floated in the air with its flying line under tension, no tail being needed.

Another object is to provide a kite of the character stated that may be easily assembled or disassembled, and which, when disassembled, will occupy very little space.

Another object is the provision of a simple frame structure for the kite that combines rigidity with lightness.

Other objects and advantages will appear in the course of the following description of an embodiment of the invention that has been selected for the purpose of illustrating the invention, but not for the purpose of limiting the invention thereto.

In the accompanying drawings forming part of this specification, in which like numbers of reference denote like parts wherever they occur,

Figure 1 is a perspective view of the kite;

Figure 2 is a fragmentary enlargement sectional view taken on the line 2—2 in Figure 6;

Figures 3, 4, and 5 are fragmentary enlargement sectional views taken on the lines 3—3, 4—4, and 5—5, respectively, in Figure 2;

Figure 6 is a plan view of the kite;

Figure 7 is an anterior end view; and

Figure 8 is an enlargement sectional view taken on the line 8—8 in Figure 6.

The kite comprises a body or fuselage 1 having a head 2 and a tail 3 separated by an open frame 4, in combination with a wing 5 at the head 2 that is elongated laterally to extend from both sides of the head. The wing 5 comprises spaced-apart anterior and posterior struts 6 and 7, respectively, that are connected by an intervening web or sheet 8. The said struts are preferably in the form of light, thin and comparatively wide wood sticks having longitudinally extending slits 9 in their ends to receive the ends of strings or flexible ties 10 that connect the respective corresponding ends of the struts 6 and 7. Strut 7 is preferably shorter than strut 6, so that the ties 10 are disposed obliquely to the struts. The struts 6 and 7 and the strings 10 define the edges of the wing 5, and are secured to the sheet 8 by enclosing them between the sheet and the folded-over marginal portions 11 of the sheet, the sheet and the overlapped marginal portions thereof being preferably secured together and to the respective strings or sticks by some suitable adhesive. The anterior strut 6 is preferably bowed by means of a chord string 12 so that the anterior portion of the wing presents a convex face. The ends of string 12 pass through the slits 9, one end being enlarged by a knot 13 to prevent slippage through the slit thereat and the other end 14 being tied around the engaged end of the stick 6. The length of the chord portion of the string 12 determines the degree of curvature of the stick 6 and this may be adjusted by wrapping more or less of the string 12 around the end of the stick 6. The slits 9 are narrower than the strings 10 and 12 so that the ends of the strings will be held therein by friction. A pair of tabs 15, preferably formed of stout card board, are attached by wire staples 16 or other suitable fastening means to the upper side of the stick 6 near and at equal distances from the middle of the wing. The anterior end 17 of each tab 15 projects forwardly of the wing and declines therefrom and is perforated to form an eye or socket 18 adapted to receive an anteriorly directed projection of the fuselage, as will presently appear. Sheet 8 may be formed of light strong paper or other suitable material.

The frame 4 of the fuselage comprises a pair of spaced-apart substantially parallel upper struts 19, a third strut 20 disposed substantially parallel to and intermediary of the said pair of struts 19 but lower than the plane of the latter, a pair of more slender oblique struts 21 that connect the anterior end of strut 20 with the anterior ends of the struts 19, respectively, a similar pair of oblique struts 22 that connect the strut 20 with the struts 19, respectively, at the anterior end of the tail 3 of the fuselage 1, and a strut 23 that connects the rear ends of the struts 19. The struts are preferably formed of light strong wood sticks. Struts 19 are flexibly attached to struts 21 and 22 by adhesive tape 24 or other suitable means, and struts 22 are flexibly attached to strut 20 by a pair of adhesive tapes 25 on respective opposite sides of the struts.

Strut 20 is flexibly attached to struts 21 by adhesive tape 26 that is bent at the anterior edges of the struts to straddle them and adhere to the opposite sides thereof. A sheet of paper or other suitable material extends from the strut 20 to the struts 19 on either side under the wing 5 to form the head 2 of the fuselage. The anterior edge 27 of sheet 2 is folded over to cover the struts 21 and the anterior end of strut 20 and the associated tapes, and the lateral edges 28 of the sheet are folded over to cover the struts 19, the folded edges being secured to the body of the sheet and to the struts and tapes by adhesive or other suitable means. Another sheet of paper or other suitable material extends from the strut 20 to the struts 19 on either side at the rear end of the frame to form the tail 3 of the fuselage. The anterior edge 29 of of sheet 3 is folded over to cover the struts 22 and associated tapes, and the lateral edges 30 of sheet 3 are folded over to cover the struts 19, the folded edges being attached to the body of the sheet and to the struts and tapes by adhesive or other suitable fastening means. Strut 23 is preferably secured to struts 19 by means of flexible wires 31 that pass through apertures 32 in the ends of the strut 23 and through apertures 33 in the sheet 3 and that are tied around the struts 19. The anterior ends 34 of struts 19 project beyond the edge 27 of the head 2 and are adapted to enter the sockets 18 of the wing 5. To attach the fuselage to the wing, the projections 34 of the fuselage are inserted into the sockets 18 of the wing so that the sticks 19 lie against the face of the wing. Flexible wires 35 are tied around the stick 7 in juxtaposition to the sticks 19, being passed through holes 36 in the sheet 8 and their free ends being drawn through holes 37 in the sticks 19 until stick 7 is pulled sufficiently rearward to spread the sheet 8 taut and to pull tabs 15 tightly against the anterior edge 27 of the head 2 so that ends 34 of sticks 19 will be securely lodged in the sockets 18, the free ends of the wire then being securely tied or wrapped around the sticks 19 to maintain the wing in its taut condition. A flying line or string 38 is secured to the nose 39 of the fuselage, being passed through holes 40 therefor in the tape 26 and sheet 2 and being tied around the stick 20. It will be observed that the hole 40 in tape 26 reinforces the superposed hole 40 in sheet 2.

It will be observed that the flexible tape joints that connect the component elements of the fuselage frame enable the fuselage, when detached from the wing, to be closed like a book from its V-shape to a compact shape in which the sides of the fuselage are superposed on one another. The wing 5, when detached, may, also, on account of its transverse flexibility, be rolled or folded to economize space in storing or shipping. Moreover, the wing and fuselage may be easily assembled for use by simply inserting the projections 34 of the fuselage into the sockets 18 of the wing and adjusting the wires 35. The obliquely disposed converging sides of the fuselage and the convexity of the face of the wing tend to maintain the face of the kite squarely against the wind and the rearwardly elongated fuselage tends to balance the resultant of the force exerted by the pressure of the wing and the pull of the flying string to maintain the kite in a condition of equipoise when it is being flown. The posterior strut 7 is normally straight, thereby aiding the lift of the kite, and, being wide and thin, is flexurally resilient, so that it will yield and render the anterior portion of the face of the wing convex in proportion to the wind pressure thereon, thereby automatically adjusting the wing for a condition of equipoise suitable to the wind pressure. The bowing of the wing, also, renders it more rigid and stiffens it against the pressure of the wind without adding to the weight of the frame. The anterior portion of the wing being longer than the posterior portion results in a better balancing of the kite.

The present application does not claim broadly a kite in general having a resiliently bowable frame, as this feature is claimed in applicant's companion application for another form of kite and designated as Case A, the instant application being distinguished therefrom by the appendage to the title of the term Case B.

Having thus fully described this invention, I hereby reserve the benefit of all changes in form, arrangement, order, or use of parts, as it is evident that many minor changes may be made therein without departing from the spirit of this invention or the scope of the following claim.

I claim:

A kite of the character described comprising a fuselage, and a wing disposed rearwardly thereof and extending laterally thereacross and provided with spaced-apart sockets at its anterior portion, the said fuselage bearing anteriorly directed projections adapted to enter the said sockets, and means connecting the posterior portion of the wing to the fuselage and adjustable to urge the fuselage forwardly so that the projections thereon enter the said sockets.

In testimony whereof I hereunto affix my signature.

EDWARD B. WILDER.