LE ROY S. PATCHEL.

KITE.

APPLICATION FILED OCT. 29, 1914.

1,131,076.

Patented Mar. 9, 1915.

2 SHEETS—SHEET 1.

Fig. 1.

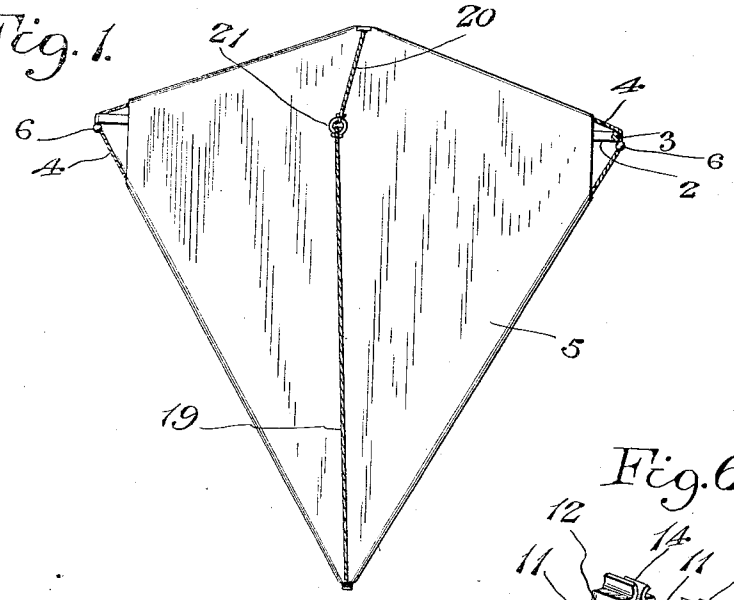


Fig. 6.

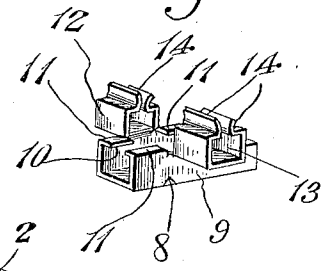
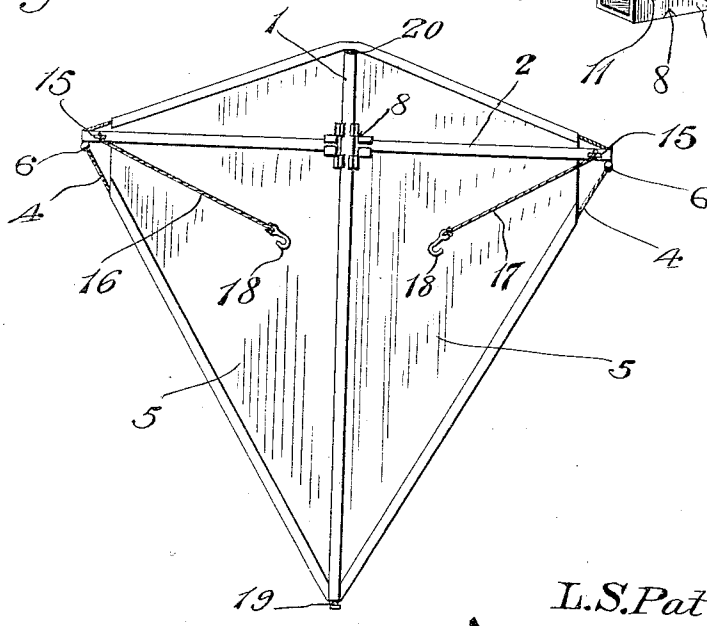


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 4.

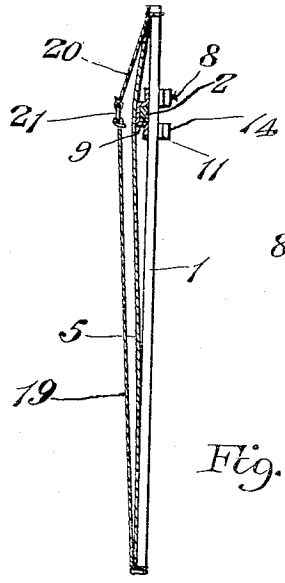


Fig. 7.

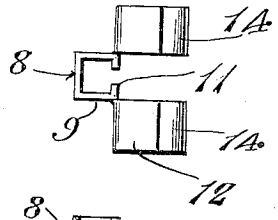


Fig. 8.

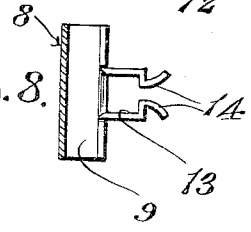


Fig. 5.

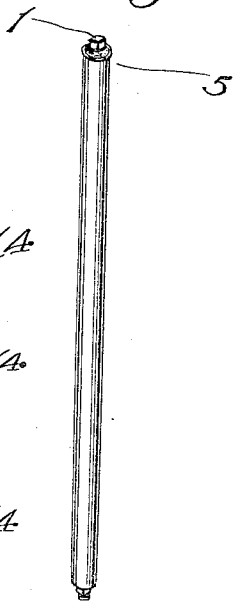


Fig. 3.

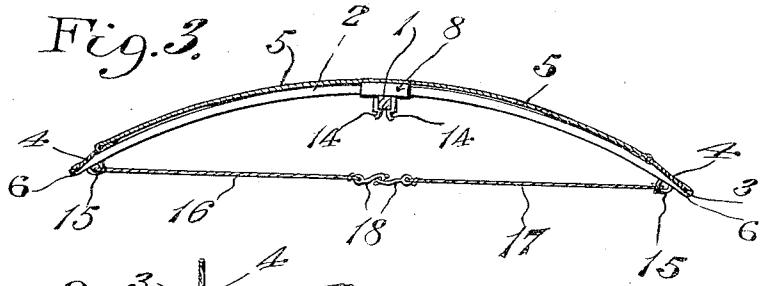
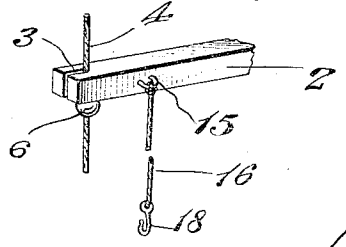


Fig. 9.



Witnesses:-

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LE ROY S. PATCHEL, OF DARBY, PENNSYLVANIA.

KITE.

1,131,076. Specification of Letters Patent. Patented Mar. 9, 1915.

Application filed October 29, 1914. Serial No. 869,263.

To all whom it may concern:

Be it known that I, LE ROY S. PATCHEL, a citizen of the United States, residing at Darby, in the county of Delaware and State of Pennsylvania, have invented certain new and useful Improvements in Kites; and I do hereby 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 the primary object of the invention is the provision of a kite which may be rolled to form a compact device for shipment.

Another object of this invention is to provide a kite which may be taken down and rolled or folded up for flying whenever desired and to provide a resilient bow for the cross arm of the kite by means of which the kite body may be bowed outwardly for providing a suitable shaped kite for filling with the breeze for lifting the kite.

Another object of this invention is the provision of a novel form of resilient detachable bracket for connecting the vertical arm and the cross arm of the kite skeleton.

With the foregoing and other objects in view this invention consists in such novel features of construction, combination and arrangement of parts as will be hereinafter more fully described, illustrated in the accompanying drawings and claimed.

In describing the invention in detail reference will be had to the accompanying drawings wherein like characters designate like or corresponding parts throughout the several views, and in which:—

Figure 1 is a front view of the kite showing the same in an open position, Fig. 2 is a rear view of the kite, Fig. 3 is a top plan view of the kite showing the cross piece bowed, Fig. 4 is a vertical sectional view through the kite, Fig. 5 is a side elevation of the kite showing the same in a rolled position, Fig. 6 is a detail perspective view of the vertical and cross bars supporting bracket, Fig. 7 is a plan view of the bracket, Fig. 8 is a sectional view through the bracket, and Fig. 9 is a perspective view of a fragment of the cross bar of the kite.

Referring more particularly to the drawings, 1 designates the vertical bar of the kite skeleton which has detachably connected thereto adjacent its upper end the cross arm 2. The cross arm 2 of the kite structure is composed of resilient material and it has its ends slotted as is shown at 3 in Fig. 9 of the drawing. The slots 3 which are formed in the ends of the resilient cross piece or bow 2 of the kite skeleton are provided for receiving strings 4 which form the outer marginal edge of the kite and to which the paper sheet 5 which forms the body of the kite is attached. The strings 4 have lugs or balls 6 mounted thereupon for engaging the under surface of the cross arm or bow 2 of the kite for properly positioning the paper body 5 upon the kite skeleton.

The vertical arm 1 and the cross arm 2 of the kite skeleton are connected one to the other by means of a detachable resilient bracket 8. The detachable resilient bracket 8 is composed of a main body portion 9 which is substantialy rectangular in cross section having a portion of its upper side cut away, intermediate of its upper corners as is clearly shown at 10 in Fig. 6 of the drawing, for permitting of the insertion of the vertical standards or arm 1 therein, by spreading the ends 11 apart and inserting the vertical arm into the hollow portion of the body portion 9. After the arm 1 has been properly inserted therein the resiliency of the body portion will cause the same to spring back to its normal position and firmly engage the outer surface of the vertical arm 1. The body 9 of the bracket 8 has secured to the side edges the upper edges of the kite thereof substantially equidistant of the ends of the body 9 two brackets 12 and 13 which are identical in shape, being substantially rectangular in cross section and having its upper end slit to form an inserting portion for the cross arm. The marginal edges of the upper portion of the brackets 12 and 13 are curved outwardly for forming guides 14 for insuring the proper positioning of the cross arm within the brackets 12 and 13.

The cross arm or bow 2 has staples or eyelets 15 secured thereto, to which are attached flexible members 16 and 17. The flexible members 16 and 17 have hooks 18 mounted upon their free ends, which hooks are provided for engagement one with the other for bending the cross arm or bow 2 of the kite skeleton for concaving the surface of the body portion 5 of the kite for rendering it more susceptible to the action of the breeze or wind for lifting or floating the kite. The vertical arm 1 has secured to its

upper and lower ends strings 19 and 20 which are connected at 21 to each other and to a main lead line of the kite.

When it is desired to ship or transport the kite from place to place, the cross arm or bow 2 is disconnected from attachment to the bracket 8 and is placed in alinement or with an abutment against the vertical arm 2. The strings 4 are, prior to the disconnecting of the cross arm from the bracket removed from the slots 3 and the paper body 5 of the kite is rolled about the arms 1 and 2 for assuming the position shown in Fig. 5 of the drawing.

In reducing the invention to practice, certain minor features of construction, combination, and arrangement of parts may necessitate alteration, to which the patentee is entitled provided such alterations are comprehended within the scope of what is claimed.

What is claimed is:—

In a kite structure, a vertical arm, a bracket detachably carried by said vertical arm and comprising a socket for engagement with said vertical arm, a transversely extending socket formed integrally therewith, said first named socket having its marginal edges bent inwardly for engagement with the front side of said vertical arm, a resilient cross arm carried by said transversely extending socket, said cross arm having its ends slotted, a kite body, a string extending about the marginal edges of said kite body and seated in said slotted ends, lugs carried by said string for engagement with the under surface of said cross arm for preventing sliding movement of said string through said slotted ends, and means secured to said cross arm for bowing the same for bowing out the body of the kite.

In testimony whereof I affix my signature in presence of two witnesses.

LE ROY S. PATCHEL.

Witnesses:

GEO. G. PATCHEL,

CHAS. N. GORTON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."