## 0. SEYDEL.

KITE.
APPLICATION FILED JAN. 13, 1911.
1,016,180.
Patented Jan. 30, 1912.


# UNITED STATES PATENT OFFICE. 

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KITE.
$1,016,180$.
Specification of Letters Patent. Patented Jan. 30,1912.
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## To all whom it may concern:

Be it known that I, Otro Seydel, a subject of the German Emperor, and a resident of the city of New York, borough of Man5 hattan, in the county and State of New York, have invented a new and Improved Kite, of which the following is a full, clear, and exact description.

The invention relates to aeronautics, and sition, as shown in Fig. 1. On the cross arms $\mathrm{C}, \mathrm{C}$ and $\mathrm{C}^{\prime}, \mathrm{C}^{\prime}$ are secured the fabric coverings D and $\mathrm{D}^{\prime}$, also fastened at their middle by tacks $\mathrm{E}, \mathrm{E}^{\prime}$ or like fastening deits object is to provide a new and improved kite arranged to insure easy rising from the ground and proper flying in the air, and to permit of conveniently folding the parts into a comparatively small bundle for carrying the kite from or to the field or to extend the parts quickly and accurately without the use of tools. For the purpose mentioned the back-bone is provided with fixed bearings, on which are mounted to swing cross arms carrying coverings, and an operating cord connected with the free ends of the said cross arms and adapted to be removably fastened to one end of the back-bone, the operating cord when disengaged from the back-bone permitting folding of the cross arms and coverings.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the kite in extended position; Fig. 2 is a face view of the folded kite; Fig. 3 is an enlarged cross section of the back-bone and one of the bearings carrying a pair of cross arms; Fig. 4 is a perspective view of one end of the cross arm, a portion of the casing and the operating cord; and Fig. 5 is a perspective view of the fastening for removably attaching the operating cord to the back-bone.

The back-bone A of the kite is in the form of a bar provided with bearings $B, B^{\prime}$ exslightly inclined rearwardly, as plainly shown in Fig. 3. On the bearings $\mathrm{B}, \mathrm{B}^{\prime}$ are pivoted the pairs of upper and lower cross arms or cross bars $\mathrm{C}, \mathrm{C}$ and $\mathrm{C}^{\prime}, \mathrm{C}^{\prime}$, likewise vices to the back-bone A. On the free outer
ends of the cross arms $\mathrm{C}, \mathrm{C}$ and $\mathrm{C}^{\prime}, \mathrm{C}^{\prime}$ are secured eyes or hooks $F, F$ and $F^{\prime}, F^{\prime}$ engaged by an operating cord $G$ for removable engagement with open eyes, hooks or like retaining means H held on the upper end of the back-bone A. The operating cord $G$ extends from the eyes $F^{\prime}$ inwardly and downwardly over the lower end of the back-bone A, at which point the cord $G$ is fastened by being attached to a hook, eye or similar fastening means I. The lower outer corners of the upper fabric covering $D$ are provided with cords $\mathrm{D}^{2}$ terminating in loops $\mathrm{D}^{3}$ adapted to be engaged onto the hooks $F^{\prime}$ on the outer ends of the lower cross bars $\mathrm{C}^{\prime}, \mathrm{C}^{\prime}$. The outer edge of the lower covering ' $D^{\prime}$ is beveled and attached to the converging lower members of the operating cord $G$, as plainly indicated in Fig. 1.

It will be noticed that the bearing $B$ is located a distance from the upper end of the back-bone $A$, and when the operating cord $G$ is engaged with the upper end of the back-bone $A$ then the cross bars $C, C$ and $\mathrm{C}^{\prime}, \mathrm{C}^{\prime}$ are held in extended position and the fabric coverings $D, D^{\prime}$ are held stretched so that the kite is ready for flying with the aid of the usual line (not shown), and connected with the ring $J^{\prime}$ of the flying cord $J$ attached to the back-bone $A$, in the usual manner. The lower edge of the covering $D$ is spaced from the cross arm $C^{\prime}$ and the upper edge of the covering $\mathrm{D}^{\prime}$, so that a free space or opening is had between the coverings D and $\mathrm{D}^{\prime}$ to maintain the kite in equilibrium and prevent it from taking headers. When the kite is in folded position, as shown in Fig. 2, and it is desired to extend the parts, it is only necessary for the user to take hold of the upper portion of the cord $G$ and draw the same upward and engage the cord with the retaining means $H$. In drawing the cord $G$ upward, an upward and outward swinging motion is given to the folded cross arms $\mathrm{C}, \mathrm{C}$ and $\mathrm{C}^{\prime}, \mathrm{C}^{\prime}$, whereby the coverings $D$ and $D^{\prime}$ are extended and the lower covering $D^{\prime}$ is stretched while the upper covering $D$ is likewise stretched to final position on connecting the loops $D^{3}$ with the hooks $F^{\prime}$.

It is understood that by connecting the operating cord $G$ with the retaining means H , the cord is stretched all around and consequently holds the cross arms C, C, and $\mathrm{C}^{\prime}, \mathrm{C}^{\prime}$, in extended position. As the lower 110
covering $\mathrm{D}^{\prime}$ has its ends attached to the lower portions of the cord $G$ this covering $D^{\prime}$ is stretched on stretching the cord $G$ and engaging it with the retaining means H , and
5 in order to finally stretch the covering $D$ it is only necessary to hook the loops $D^{3}$ of the cords $\mathrm{D}^{2}$ onto the hooks $\mathrm{F}^{\prime}$. The kite is now ready for flying.

When it is desired to fold the kite, the 10 operator disengages the loops $\mathrm{D}^{3}$ from the hooks $F^{\prime}$, and then disengages the cords $G$ from the retaining means if to allow the cross arms $\mathrm{C}, \mathrm{C}, \mathrm{C}^{\prime}, \mathrm{C}^{\prime}$, to swing into folded position. As the wings $\mathrm{D}, \mathrm{D}^{\prime}$ fold down-
15 ward on the inward swinging motion of the cross bars $\mathrm{C}, \mathrm{C}^{\prime}$, the folded kite forms a comparatively small bundle which may be readily placed into a bag cover.

Having thus described my invention, I
20 claim as new and desire to secure by Letters Patent:

1. A kite comprising a back bone, upper and lower cross arms mounted to swing on the said back bone, upper and lower fabric
25 coverings secured at their upper edges on the said cross arms and also secured to the back bone, the lower edge of the upper fabric covering being spaced from the lower cross arms, connections between the lower
30 corners of the upper fabric covering and the lower cross arms, and a cord connected with the free ends of the cross arms and adapted to be removably fastened to the end of the back bone, the lower fabric covering
35 having its side edges converging and attached to the said cord.
2. A kite, comprising a back-bone, cross arms arranged in upper and lower pairs and mounted to swing on the said back-bone,
40 an operating cord connected with the free ends of the said cross arms and with one end of the back-bone, the said cord being adapted to be removably fastened on the other end of the back-bone, and fabric covand lower cross arms, and cords connecting the lower corners of the upper covering to the free ends of the lower cross arms.
3. A kite, comprising a back-bone, cross

50 arms arranged in upper and lower pairs and mounted to swing on the said back-bone, an operating cord connecting with the free ends of the said cross arms and with one end of the back-bone, the said cord being apted to be removably fastened on the other end of the back-bone, and fabric coverings attached to the corresponding upper and lower cross arms, and cords connecting the lower corners of the upper covering to
60 the free ends of the lower cross arms, the
said lower covering having its outer end attached to the said operating cord.
4. A kite comprising a back bone, bearings secured to the said back bone and extending sidewise and inclined rearwardly, upper and lower cross arms mounted to swing on the said bearings, coverings respectively attached at their upper edges to the said cross arms and also attached at the middle of their lower edges to the said 70 back bone, the said coverings being spaced apart, an operating cord connected with the free ends of the said cross arms and with the lower end of the back bone, a fastening on the upper end of the back bone for re75 movable engagement by the said operating cord, the lower covering having its side edges converging and attached to the converging lower members of the said operating cord, and means for connecting the lower corners of the upper corering to the lower cross arms.
5. A kite, comprising a back-bone, bearings secured to the said back-bone and extending sidewise and inclined rearwardly, upper and lower cross arms mounted to swing in the said bearings, coverings attached to the said cross arms, an operating cord connected with the free ends of the said cross arms and with one end of the back-bone, a fastening on the other end of the back-bone for removable engagement by the said operating cord, and cords on the upper covering for fastening the upper covering to the lower cross arms, the lower 95 covering being fastened to the operating cord.
6. A kite comprising a back-bone in the form of a bar, upper and lower cross arms mounted to swing on the said back-bone, a fabric covering attached to the upper cross arms, a fabric covering attached to the lower cross arms, the lower edge of the upper fabric covering being spaced from the lower cross arms and the upper edge of 105 the lower fabric covering, means for connecting the lower corners of the upper covering with the free ends of the lower cross arms, and a cord connected with the free ends of the cross arms and one end of the 110 back-bone, the said cord being adapted to be removably fastened to the other end of the back-bone.

In testimony whereof I have signed my name to this specification in the presence of 115 two subscribing witnesses.

OTTO SEYDEL.

## Witnesses:

Theo. G. Hoster,
Jomn P. Davis.

