

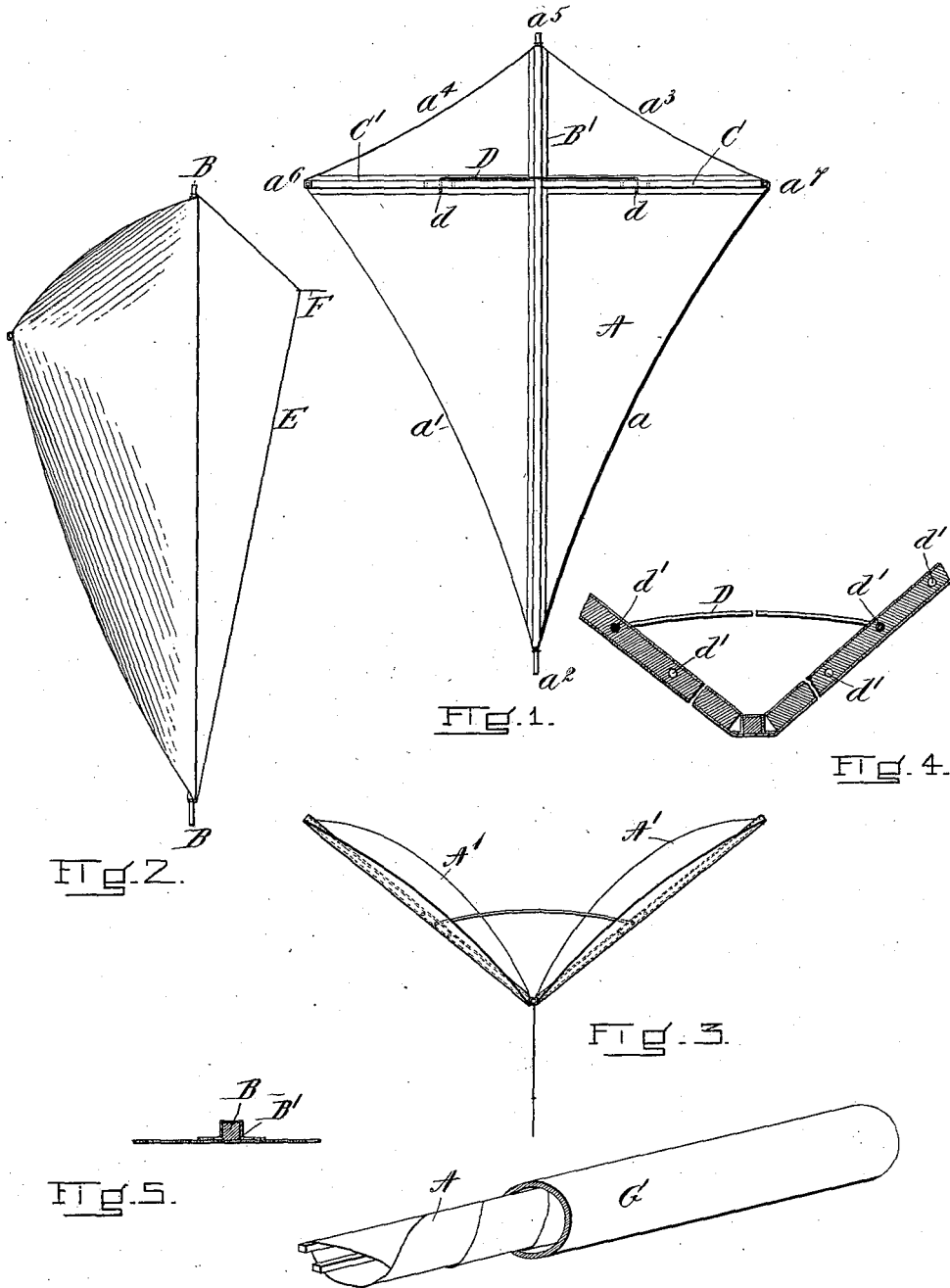
H. P. GUILLO.

KITE.

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1,029,010.

Patented June 11, 1912.



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UNITED STATES PATENT OFFICE.

HARRY P. GUILLO, OF REVERE, MASSACHUSETTS, ASSIGNOR TO FORBES LITHOGRAPH MANUFACTURING COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

KITE.

1,029,010.

Specification of Letters Patent.

Patented June 11, 1912.

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To all whom it may concern:

Be it known that I, HARRY P. GUILLO, of Revere, in the county of Suffolk and State of Massachusetts, a citizen of the United States, have invented a new and useful Improvement in Kites, of which the following is a specification.

My invention relates to what may be termed a knock-down kite, that is, a kite which is capable of being readily taken to pieces and folded for transportation and which may be cheaply constructed so that it may be used for advertising and other like uses, and it comprises, speaking broadly, a kite from which the principal stiffening rib may be easily removed and the rest of the kite rolled up with it for transportation in a tube or folded for transportation in an envelop.

My invention will be understood by reference to the drawings, in which—

Figure 1 is a rear view in elevation of the kite embodying my invention, Fig. 2 being a side view of the kite in condition for flying. Fig. 3 is a top view. Fig. 4 is a fragmentary section taken from below through the lateral arms. Fig. 5 is a cross section showing the pocket for the central rib, and Fig. 6 shows the kite rolled up and packed in a tube for transportation.

The kite cover is indicated at A and comprises as shown a four-sided piece of paper or cloth, preferably of the shape shown; that is, having two long sides a , a^1 converging to the point a^2 at the lower end of the kite, and two short sides a^3 , a^4 converging to the point a^5 at the top of the kite. B is the central rib which is held to the cover A by a stay strip B^1 which may be attached by paste or stitches along the length of the kite to form a channel into which the rib B may be slipped. The points a^6 , a^7 where the sides a , a^3 and a^1 , a^4 join are spread from the rib B by lateral arms C, C^1 which preferably are permanently attached to the cover in any desired way, for example, by glue or by stitching. To hold these parts in extended relation I provide a brace D which may be of wire, the ends of which are bent at right angles to the length of the brace as at d to fit into openings d^1 in the lateral arms. The brace is preferably made of wire which is slightly bent as shown in Figs. 3 and 4 so as to allow the sides of the kite to yield slightly under pressure. The open-

ings d^1 may be located at various places in order that the angle of the two sides of the kite may be adjusted according to the strength of the wind in which the kite is to be flown. If the wind is light the kite should be more nearly flat than when the wind is heavy and when the angle of the two sides of the kite is made more acute the kite may be inclined to belly out considerably as shown at A^1 in Fig. 3, to a greater extent than when the angle is more obtuse. I have found that this bellying-out quality has a tendency to balance the kite and so render the use of a tail or other balancing device unnecessary. The brace D if slightly bent if made of resilient material allows the kite to yield slightly when flying to puffs of wind and so increases its steadiness of flight.

In hanging this kite for use a cord E is attached to each end of the rib B and the cord F with which the kite is flown may be adjusted along the length of the string E according to the elevation at which it is desired to fly the kite. This point will be readily determined by those skilled in the art. As shown in Fig. 6 the rib may be removed and the kite rolled up and put into the tube G. To do this the string E is detached from one end of the rib B and the rib drawn out from its pocket formed by the stay B^1 . One end of the brace D is then detached and laid alongside of one of the arms C and the kite then folded over so that the arms C, C^1 lie side by side with the brace, when the kite can be rolled up around the lateral arms as well as the rib B, or as the rib B is somewhat longer than the combined length of the lateral arms C, C^1 the rib may be laid alongside both arms without folding the kite over, after which the kite may be rolled up. The cheapness of this construction is apparent and the compactness with which the kite may be packed for transportation is also apparent. The lateral arms it will be seen are in two parts so that the kite may be said to be hinged about the rib and this construction renders possible the adjustability of the angle of the sides of the kite by means of the brace, as above referred to.

While I have shown this kite in quadrilateral form, I do not mean to limit myself so much to the shape of the kite as to its mechanical construction in having a remov-

able rib which when in place will give to the length of the kite its proper stiffness and when removed will enable the kite to be rolled up for packing.

5 What I claim as my invention is:—

1. The knock-down kite above described, comprising a cover, a removable rib connectible to said cover, lateral arms independent and unconnected from each other
10 and from said movable rib, and detachable means for holding said arms in extended relation.

2. The knock-down kite above described, comprising a cover, a removable rib connectible to said cover, lateral arms independent and unconnected from each other, and
15 detachable means made of resilient material

for holding said arms in extended relation adjustable upon said arms, whereby the angle of said arms to each other may be adjusted.
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3. The knock-down kite above described, comprising a cover, a removable rib connectible to said cover, lateral arms independent and unconnected from each other,
25 and detachable means made of resilient material for holding said arms in extended relation, said arms being adapted to yield slightly to wind pressure.

HARRY P. GUILLO.

In the presence of—

GEORGE O. G. COALE,
M. E. FLAHERTY.

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