

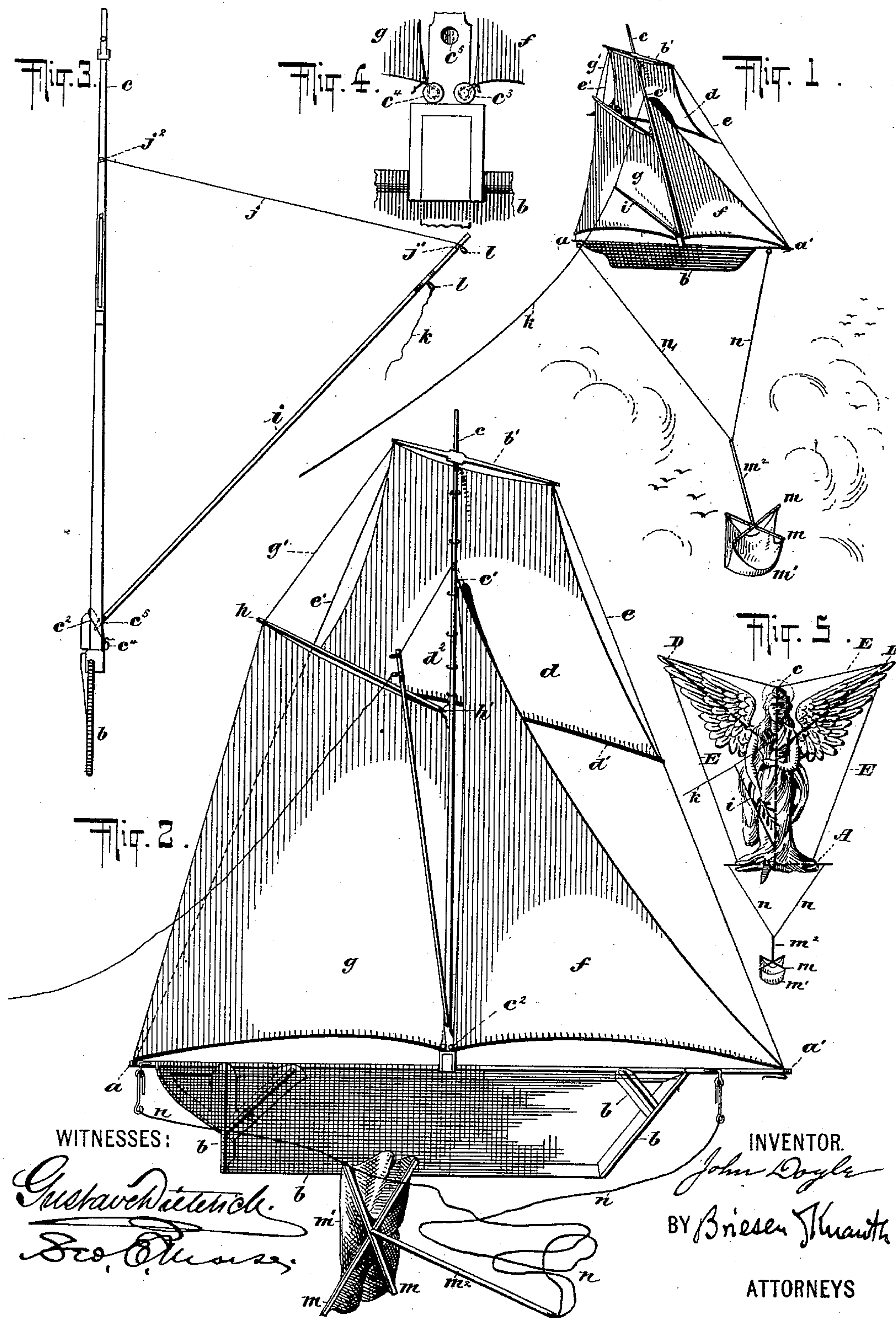
No. 606,960.

Patented July 5, 1898.

J. DOYLE.  
KITE.

(Application filed Jan. 24, 1898.)

(No Model.)





# UNITED STATES PATENT OFFICE.

JOHN DOYLE, OF HOBOKEN, NEW JERSEY, ASSIGNOR OF ONE-HALF TO  
EDWARD I. HORSMAN, OF NEW YORK, N. Y.

## KITE.

SPECIFICATION forming part of Letters Patent No. 606,960, dated July 5, 1898.

Application filed January 24, 1898. Serial No. 667,838. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN DOYLE, residing at Hoboken, in the county of Hudson and State of New Jersey, have invented certain  
5 new and useful Improvements in Kites, of which the following is a specification.

My invention relates to kites, and has for its object to produce a new improved kite.

My invention consists of the construction  
10 hereinafter claimed.

My invention will be understood by referring to the accompanying drawings, in which I have shown forms of kites embodying my invention, wherein—

15 Figure 1 shows the kite as it appears when in the air. Fig. 2 is a front or face view of the kite. Fig. 3 is a side view thereof. Fig. 4 is a detail view of a part of the kite, and Fig. 5 is a front view of another shape of kite em-  
20 bodying my invention.

I will particularly describe the forms of kites shown for the purposes of clearness.

The kite shown in Figs. 1, 2, 3, and 4 is made to represent a vessel, being shown in  
25 the present instance as a sloop, with an enlarged square topsail, with the jib and mainsail fore-and-aft rigged, as is usual in sloops.

In the drawings, *a* is a transverse brace or stick, which is the main brace of the kite, from  
30 which a canvas-covered frame *b* depends, which canvas-covered frame *b* is in the present instance shown as in the form of a hull and flat. It will be understood, however, that instead of making the hull flat it may be  
35 given any desired shape. Rising from the main brace *a* is an upright brace or stick *c*, of which there may be a plurality, which serves to support the sails or wings of the kite, which are above the main horizontal bar or  
40 brace *a*.

*b'* is a cross-brace secured to the vertical brace or mast *c* and is in the form of a top-  
sail-yard, from which depends the wing or top-  
sail *d*, which is guyed in any usual manner  
45 by a guy or string *e*, running from the brace *b'* to the main horizontal brace *a*, preferably at or near the bowsprit extremity *a'* of the said main bar or brace. The lower edge or  
50 tack *d'* of the wing or sail *d* is preferably se-  
cured to the fore guy *e* and may be provided with a boom or yard, if desired. It is pref-

erable to secure this sail or wing *d* to the mast or upright brace *c*—as, for instance, by means of loops or hoops *d'*. Somewhat the same result may be obtained by employing a  
55 yard along the lower edge of the sail or wing instead of a boom. The rear end of the yard or stick *b'* is preferably guyed, as by means of an after guy *e'*, preferably running to the rear end of the horizontal brace *a*. *f* is an-  
60 other wing, which is shown in Fig. 1 as in the form of a jib or foresail, which jib or foresail is preferably connected to the end of the bowsprit at the point *a'* and is connected at its head to the mast or upright stick at *c'* and  
65 at its rear end or clue to the base or foot of the mast at the point *c'*.

By referring to Fig. 4 a preferred mode of connection will be seen. In this figure *c'* is a button or belaying-pin to which the clue of  
70 the sail is secured. *g* is another sail or wing of the kite, shown in the present instance as the mainsail of the sloop. This mainsail is shown as incorporated in the kite structure as follows: The luff of the said sail is con-  
75 nected to a pin *c'* at the base of the mast or upright stick, and the head of the sail is connected to a gaff *h*, the jaws *h'* of which gaff are preferably rigidly fastened to the mast. The clue of the sail *g* is preferably secured  
80 to the main horizontal stick or bar of the kite. The gaff is preferably guyed by means of the topsail-guy *g'*, as shown, the after guy *e* serving to assist in bracing the gaff, as will be  
85 seen by inspecting the drawings.

By referring to Figs. 1, 2, and 3 it will be observed that instead of employing the usual form of bridle I employ a bridle comprising a stick or rod *i*, which is preferably socketed in the socket *c'* of the mast or upright *c* and ex-  
90 tends upward and outward from the face of the kite and is guyed by a guy *j*, which is secured at its forward end *j'* to the said bridle-rod *i* and at its rear end *j'* to the upright or mast *c*. *k* is the kite-string, which is secured  
95 to the bridle structure just described, preferably by being tied into the ring or rings *l*. The socketed end of the stick or rod *i* may be suitably bound to the upright *c*.

Instead of employing the ordinary and  
100 cumbersome tail heretofore usually employed with kites I have devised and provided a bal-



ancing device comprising an anchor of a general parachute form—that is to say, I provide a plurality of arms  $m$ , preferably radiating from a common center and having their ends connected by a baggy fabric  $m'$ , the structure being provided, if desired, with a stick  $m^2$ , as shown. This anchor may be collapsible—as, for instance, by securing the arms  $m$  and the upright stick  $m^2$  together by means of a nail or other pivotal connection passing through the said arms and entering the upright  $m^2$ . I preferably secure this balancing device to the kite by means of a bridle  $n$ , secured to the horizontal bar or stick of the kite.

In Fig. 1 I have clearly shown the mode of using the kite which I have reduced to practice and have found to be very efficient for the purpose.

In Fig. 5 I have shown the shape of kite, wherein instead of making the kiteship shape I have modified the arrangements of the sticks and have given the fabric portion of the kite the form or shape of an angel. This view is to a degree diagrammatic to show the principle thereof. In this view A is the horizontal stick of the kite, C is the upright stick of the kite, and D are laterally-extending sticks secured to the upright stick. The said sticks are preferably guyed together, as by means of guys E, and the bridle device and balancing device heretofore described employed. The fabric, as before mentioned, is made in the form of an angel and suitably connected to the sticks, employing additional guys and sticks where necessary. It will be observed, however, that the fabric parts extend both above and below the horizontal or transverse stick A, as in the former case the sails of the vessel extend above the horizontal or transverse stick  $a$  of the kite and the hull of the ship extends below the said transverse stick.

I will have it understood that I have employed the word “sticks” herein to designate the more rigid bars or braces of the kite. However, these sticks may be made of any desired form and of any desired material without departing from the spirit of my invention.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A kite provided with a kite-string-attaching means comprising an upwardly-projecting stick connected at one end to the body of the kite by which the said kite receives the thrust of the stick, and guyed to the kite so that the said kite receives the pull of the free end of the stick, substantially as described.

2. A kite structure of the character described, comprising a kite-body, a bridle secured thereto comprising a rigid stick bringing a thrusting force to bear upon the kite structure by one of its ends having its free portion guyed to the kite and bringing a pulling strain upon the said guy and a bifilarly-suspended inverted-parachute balancing device, substantially as described and for the purposes set forth.

3. A kite structure comprising a hull, a mast provided with sticks after the manner of yards or gaffs and independent sails secured to the said mast and yards or gaffs.

4. A kite comprising in its structure the hull  $b$ , the transverse stick  $a$ , the vertical stick or mast  $c$ , the yard  $b'$ , the gaff  $h$ , sails  $d, f, g$  and guys for securing the parts together, substantially as described and for the purposes set forth.

JOHN DOYLE.

Witnesses:

GEO. E. MORSE,  
MAURICE BLOCK.