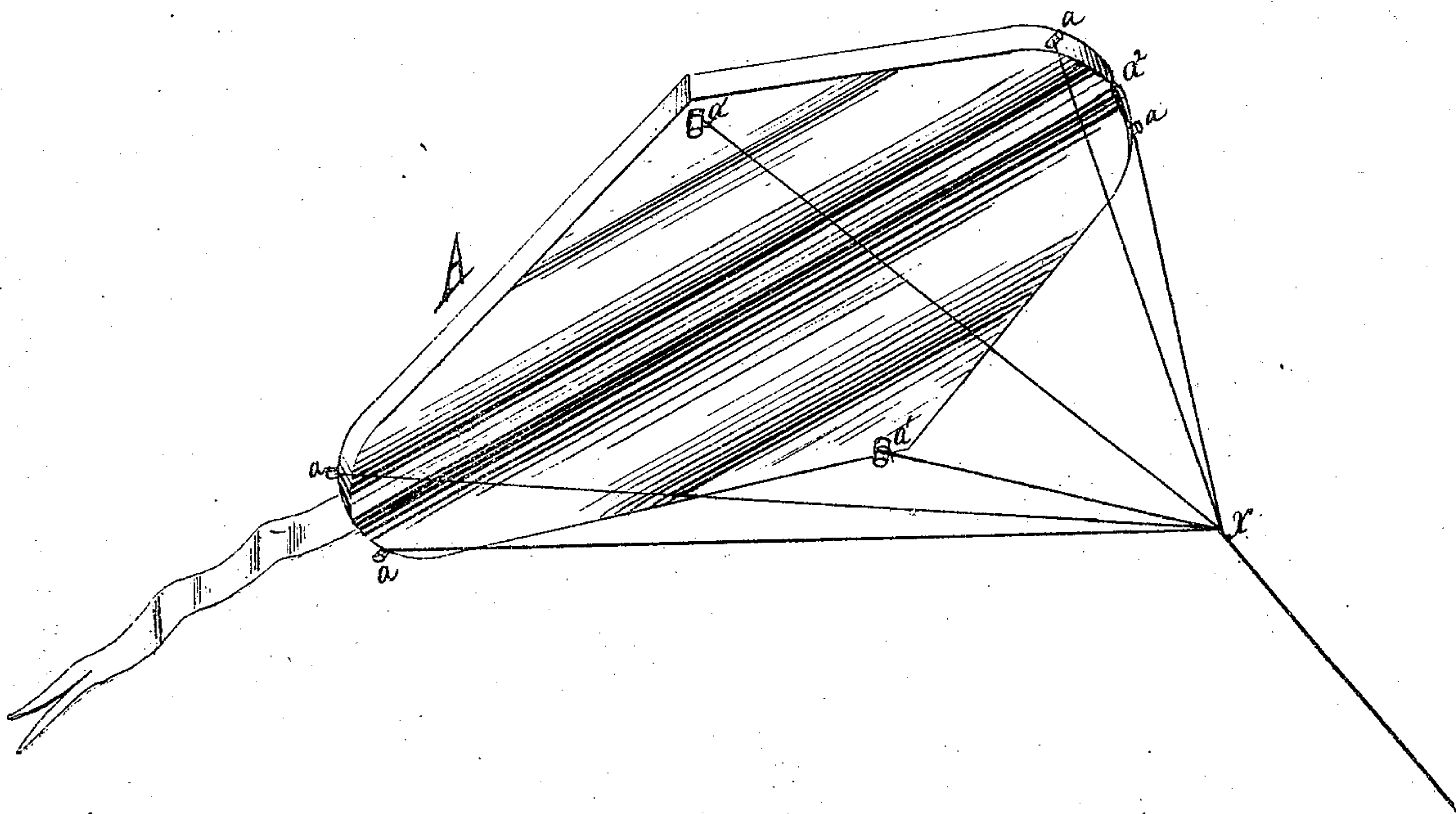


Isaac Ferris' Improved Kite.

117270

PATENTED JUL 25 1871



R Van Kannel }  
J. F. Smith. } Attest

Inventor

Isaac Loring

# UNITED STATES PATENT OFFICE.

ISAAC FERRIS, OF CINCINNATI, OHIO.

## IMPROVEMENT IN KITES.

Specification forming part of Letters Patent No. 117,270, dated July 25, 1871; antedated July 18, 1871.

*To all whom it may concern:*

Be it known that I, ISAAC FERRIS, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Improved Kite; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawing making a part of this specification.

The nature of my invention relates to a kite, having the shape and appearance usually given to toys of this kind, and inflated with a gas which will render it lighter than the surrounding air, which assists it in rising and sustains it in the air, although there may be little or no wind blowing at the time. The advantage of this arrangement is that the first part of the operation in flying the kite is made less difficult, until it has risen a sufficient height to be moved upward by the current of air.

The accompanying drawing represents my kite in a perspective view, and is constructed as follows:

A is the body of the kite, which is made of any suitable material, such as rubber, being made thin to give it lightness, and sufficiently strong to resist the pressure of the gas within. At *a a* are left small pendants, to which the strings are attached, all of which converge to the point *x*, continuing from thence in a single strand. *a<sup>1</sup> a<sup>1</sup>* are flexible necks, communicating between the interior of the kite and the free air without. A string or fine strong thread is tied around the necks *a<sup>1</sup> a<sup>1</sup>* after the gas has been let within to keep the

kite closed. The body of the kite is divided into two lobes by the junction of the top and bottom walls, as seen at *a<sup>2</sup>* in the drawing. It may be necessary to connect the two walls by one or more additional connections, to prevent the kite from assuming too round a shape.

The operation of my invention becomes obvious. When the kite has been filled with gas, and the neck *a<sup>1</sup>* secured, as described, it will be sufficiently light to rise in the air without the necessity of drawing it rapidly along, as in the usual way. It is not intended to depend on the lightness of the kite to elevate it to any great height, or more than will be enough to bring it in contact with the currents of air above the ground, at which place it will then be taken up further by the wind, as other kites.

The amusement thus offered to the young will be greatly increased by the greater ease of starting the kite, and also its tendency to fly lighter, owing to its lightness compared with the surrounding air.

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

A kite, constructed of two parallel walls connected by a strip of the same material and properly stayed to keep the kite-shape, the space between the walls to be filled with gas lighter than common air, substantially as described.

Witnesses: ISAAC FERRIS.

T. VAN KANNEL,  
ABR. VAN KANNEL.