

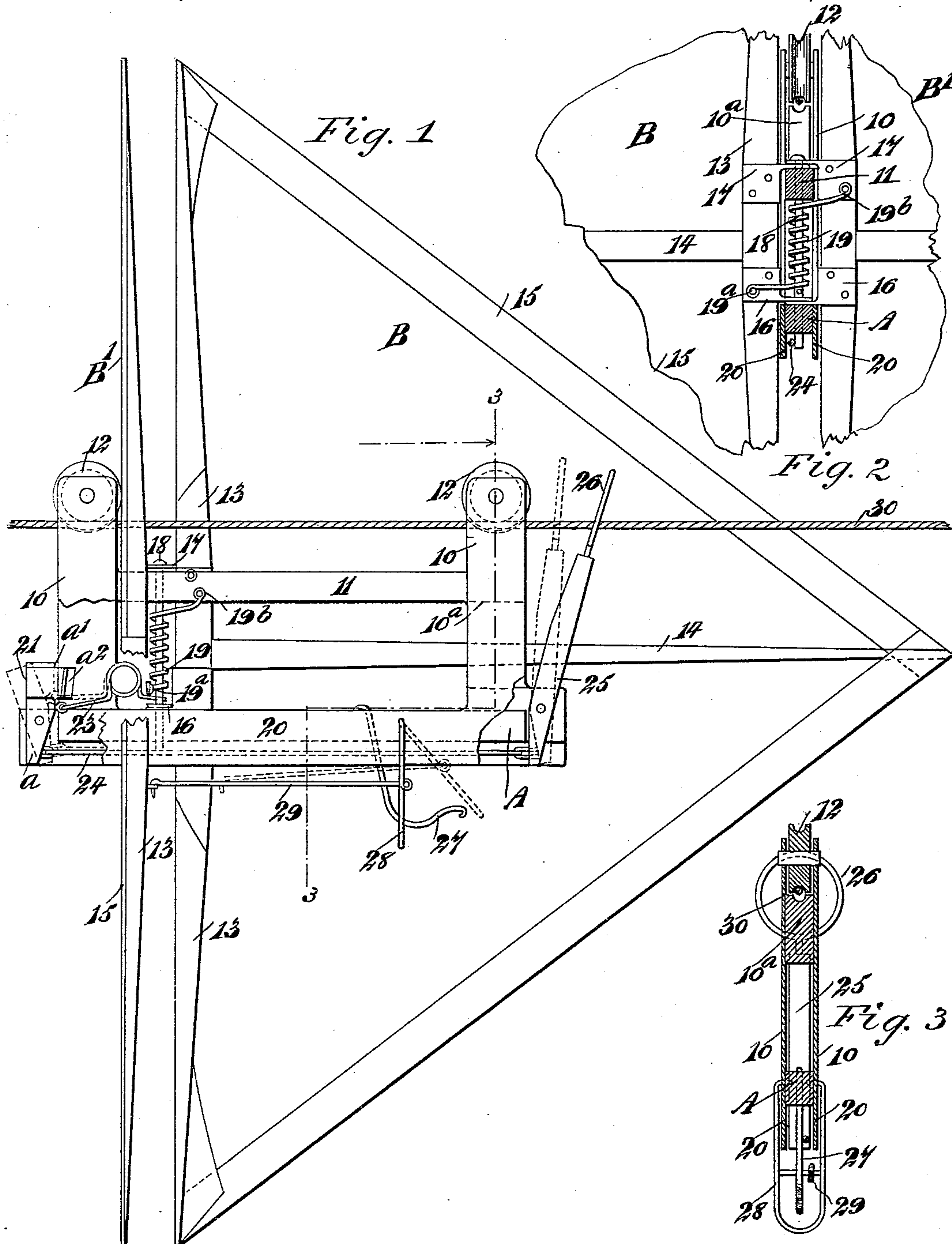
(No Model.)

2 Sheets—Sheet 1.

T. J. ROGERS.
TROLLEY FOR KITES.

No. 563,066.

Patented June 30, 1896.



WITNESSES:

J. B. Waller.
J. H. Archer.

INVENTOR

T. J. Rogers.

BY

Munn

ATTORNEYS.

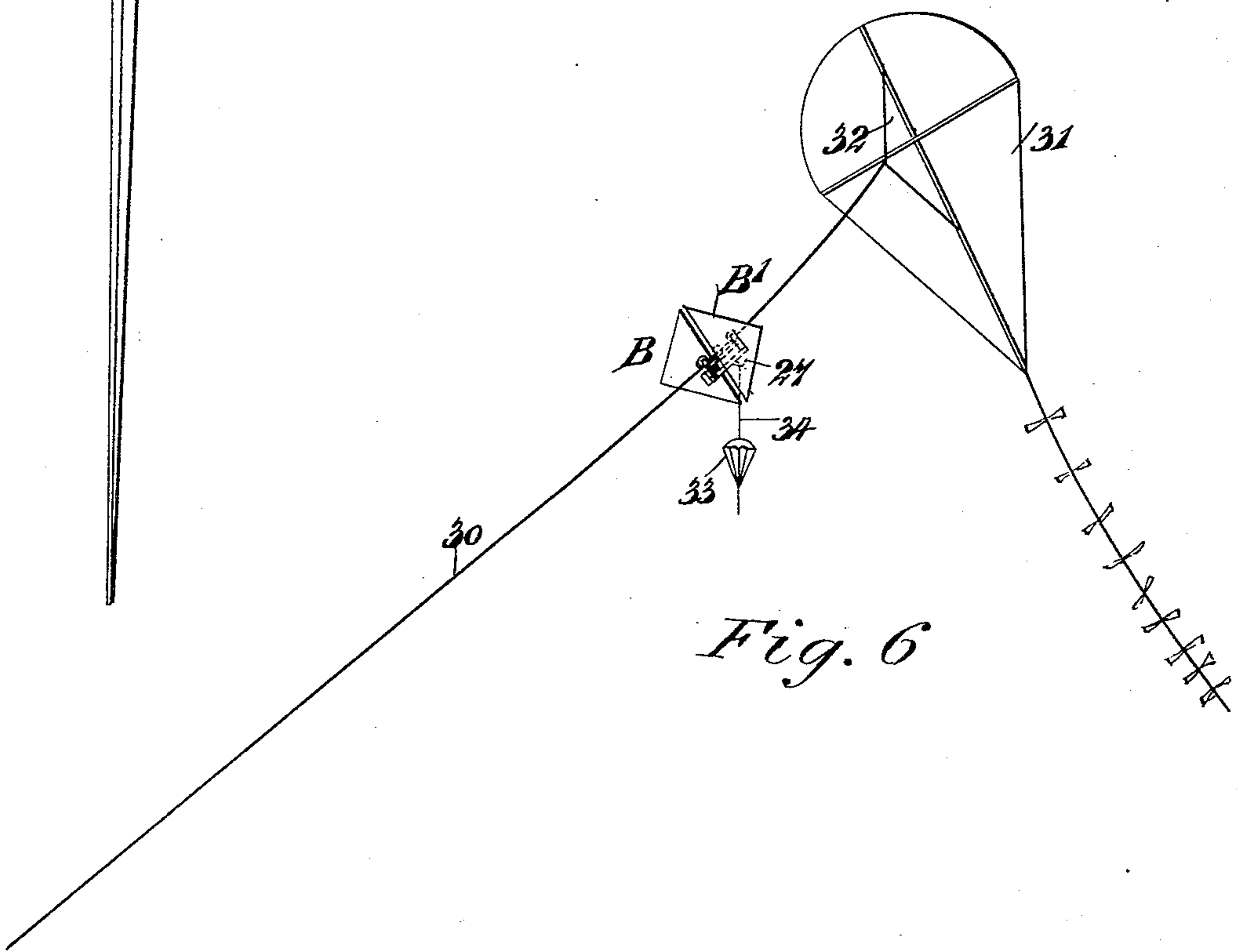
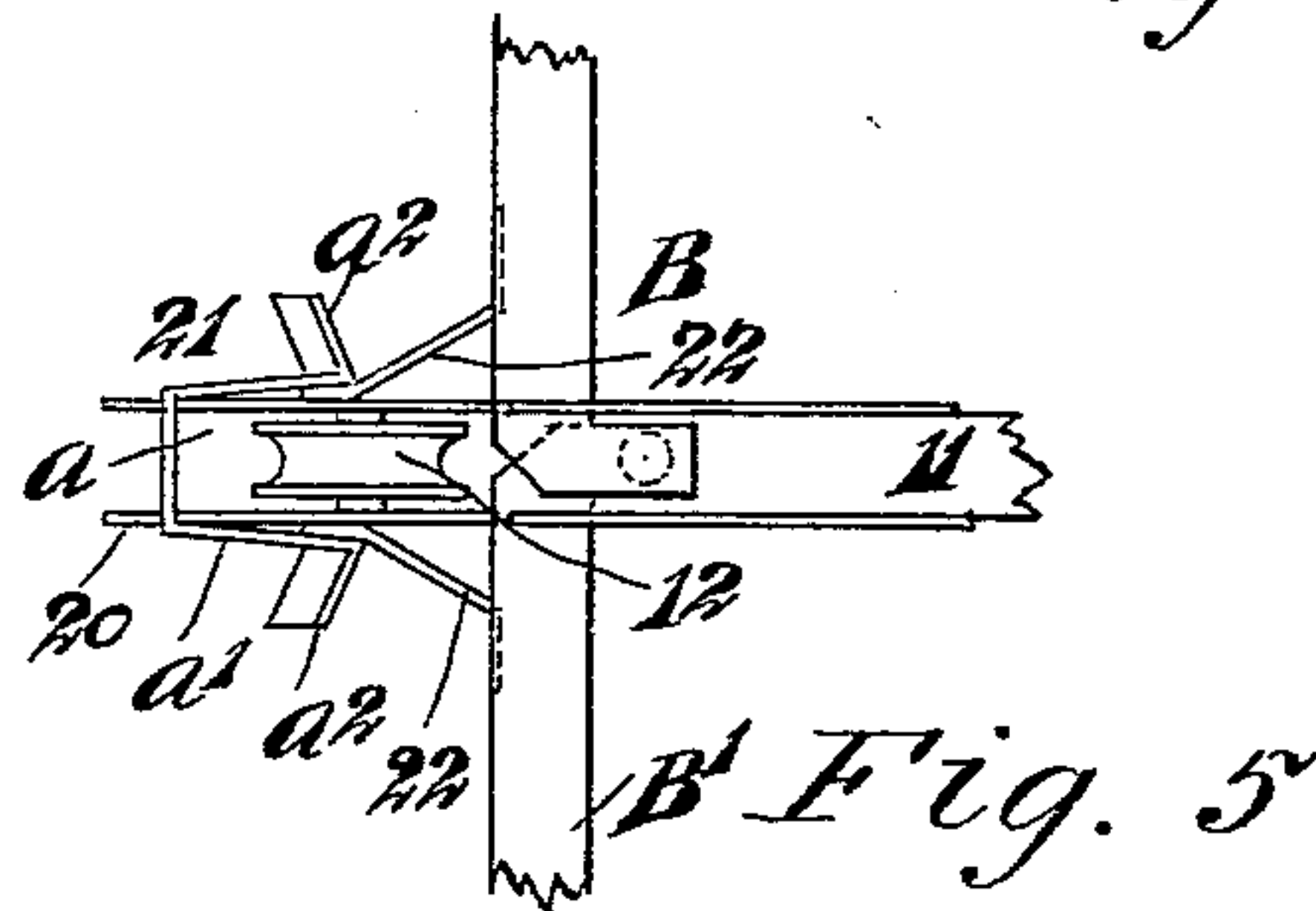
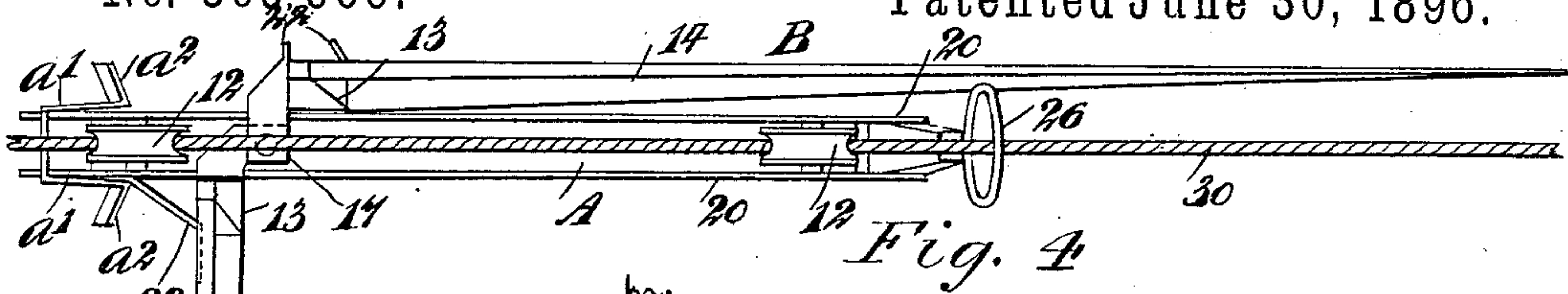
(No Model.)

2 Sheets—Sheet 2.

T. J. ROGERS.
TROLLEY FOR KITES.

No. 563,066.

Patented June 30, 1896.



WITNESSES:

J. B. Waller
J. H. Aiken

INVENTOR

T. J. Rogers

BY

Munn
ATTORNEYS.

UNITED STATES PATENT OFFICE.

THOMAS JEFFERSON ROGERS, OF JACKSONVILLE, ILLINOIS.

TROLLEY FOR KITES.

SPECIFICATION forming part of Letters Patent No. 563,066, dated June 30, 1896.

Application filed January 18, 1896. Serial No. 575,956. (No model.)

To all whom it may concern:

Be it known that I, THOMAS JEFFERSON ROGERS, of Jacksonville, in the county of Morgan and State of Illinois, have invented a new and useful Trolley for Kites, of which the following is a full, clear, and exact description.

My invention relates to a toy which is in the nature of a trolley, it being adapted to travel on the string attached to a flying kite, and the object of the invention is to provide the trolley with wings which when spread will serve to carry the trolley up the kite-string by the pressure of the air on the wings, and furthermore to so construct the trolley that a parachute, balloon, or any equivalent small object may be carried upward by the trolley, and whereby when the trolley approaches the bow-string on the kite a trip will be operated which will permit the wings of the trolley to close and at the same time release the object carried upward by the trolley, permitting it to drop to the ground. When the wings of the trolley are closed, said trolley will slide down the string and be returned to the person flying the kite in order that it may be again sent up, if so desired.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improved trolley, one of the wings being opened and the other closed. Fig. 2 is a sectional view through the body portion of the trolley, taken immediately at the rear of the wings and illustrating a portion of the inner face of the same and particularly the spring controlling the wings. Fig. 3 is a vertical section taken substantially on the line 3 3 of Fig. 1. Fig. 4 is a plan view of the trolley, one wing being closed and the other open. Fig. 5 is a detail plan view of the front extension of the trolley-body, illustrating the manner in which the wheels are locked in their open position; and Fig. 6 is a perspective view of the trolley represented as being carried up along the string of the kite.

In carrying out the invention, the body of the trolley may be said to comprise a base-beam A, standards 10 projected upward from the end portions of the said beam, and a cross-bar 11 connecting the aforesaid standards between their ends. Each standard 10 is usually constructed of two parallel upright metal plates, as shown in Fig. 1, and between the plates at the top of each standard a peripherally-grooved pulley 12 is journaled, while below each pulley a spacing-block 10^a is secured in each standard, as shown in Fig. 2.

The body of the trolley is provided with two wings B and B', located at what may be termed its "forward" or "outer" end. These wings are preferably triangular in shape, and their base portions are made to face one another, and are placed parallel with opposite sides of the body of the trolley; but the wings may be given any other desired shape, if in practice it is found desirable. When the wings are of triangular shape, each wing consists of an upright 13, constituting the inner edge of the wing, and a horizontal bar 14, which is projected from the central portion of the edge bar 13. Thus a T-frame is provided for each wing, over which paper or other material may be stretched to constitute the body 15 of the wing. Each wing is preferably provided with two knuckles 16 and 17, located one above the other at each side of its center, the said hinges being secured, preferably, to the inner faces of the edge bars 13 of the wings, as shown in Fig. 2. The corresponding knuckles of the two wings are made to overlap the upper knuckles, engaging with the upper face of the cross-bar 11 of the body of the trolley, and the lower knuckles being in like engagement with the upper face of the lower bar A, both sets of knuckles being pivotally connected by a common pivot-pin 18.

A spring 19 is coiled around this pivot-pin, as shown in Figs. 1 and 2, and the terminals 19^a and 19^b of this spring are carried outward in opposite directions and are secured one to each of the wings B and B', the attachment being so made that the spring will act to draw the wings together at each side of the body of the trolley, folding them against the same. A metal plate 20 is usually secured to each side of the base-bar A of the trolley-body, and

these plates may be integral with the places forming the standards 10. The plates 20 extend below the bottom of the base bar or beam A, forming a channel at that point, and the plates are furthermore carried beyond the forward or outer end of the base beam or bar A, as shown in Fig. 4, a keeper 21 being pivoted between the forward extremities of the aforesaid plates. The said keeper consists of a body member a , which may be of wood or other like material, and this member is pivoted between the aforesaid plates 20, extending above the same. A yoke-like head a' , preferably made of spring metal and provided at its extremities with feet a^2 , is secured to the body of the aforesaid latch. The said feet a^2 face the wings, and are given a decided inclination. A projection 22, preferably of angular construction and constituting a latch, is secured to the outer face of each wing B and B', and when the wings are opened out so as to be at a right angle to the body of the trolley the latches will engage with the feet of the aforesaid keeper, and will pass forwardly between the head of the keeper and the outer faces of the forward upright 10, as the feet of the keeper extend over this upright. The wings will thus be locked in their open position.

A trip-bar 24 is secured to the lower end of the pivoted keeper 21, and extends rearwardly in the channel at the bottom of the base-beam A to a connection with a lever 25, pivoted at the forward end of the body, and terminating, preferably, at its upper end in an eye 26. A hook 27, or other form of hanger, is secured to the base-beam A and extends outwardly therefrom, as shown in Figs. 1 and 3. This hook is adapted to receive the parachute 33, balloon, or other object that is to be sent up to the kite 31, and ordinarily the parachute will be connected with the hanger 27 by a cord 34 or its equivalent.

A shifting lever 28, preferably of a loop form, is pivoted upon the base-beam A and passes around the hanger 27, and the said shifting lever is connected by a link 29, or its equivalent, with one of the wings, as shown in Fig. 1, so that when the wings are closed the shifting lever will pass rearward from the hanger, as shown in dotted lines in Fig. 1, and sweep the parachute or other object from the hanger.

The string 30, employed in flying the kite, serves as the track for the trolley, and is placed between the spacing-blocks and the wheels 12. The wings of the trolley are opened and locked in their open position, and the object to be carried up is placed upon the

hanger. The wind striking the front of the wings will cause the trolley to ascend the kite-string 30, as shown in Fig. 6, and when the trip-lever 25, through the eye of which the kite-string passes, strikes the bow-string 32 on the kite, the said lever will be carried forward and will draw the inner end of the keeper inward, thereby releasing the upper portion of the keeper from locking engagement with the wings. The spring will then immediately act to close the wings, and the shifting lever will discharge the article carried up from connection with the trolley, permitting said article to drop to the ground. After the wings of the trolley are folded up, said trolley will offer such a slight surface for the wind to act upon that the trolley will travel downward to the point from which it started.

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

1. A trolley provided with wings, a pivoted locking device for the wings, and a releasing mechanism for the locking device consisting of a trip-bar having its forward end secured to said locking device, arranged to be brought into operation by impact with an object in the path of the trolley, as and for the purpose specified.

2. A trolley provided with wings, a spring normally acting to hold the wings in a closed position, a pivoted keeper, latches carried by the wings and adapted for engagement with the said keeper to hold the wings in their open position, and a releasing mechanism connected with the aforesaid keeper consisting of a trip-bar pivotally connected at its rear end to a lever designed to operate by impact with an object in the path of said trolley, as and for the purpose specified.

3. A trolley provided with wings, means for opening and closing the same, a hanger adapted to support the object to be carried, and a sweep actuated by the wings and operated to remove an object from the said hanger, as and for the purpose set forth.

4. A trolley, provided with spring-controlled wings, a hanger, a sweep adapted to have movement over the hanger to remove an object therefrom, and a connection between the sweep and a wing, the said connection acting to carry the sweep over the hanger when the wings are closed, substantially as described.

THOMAS JEFFERSON ROGERS.

Witnesses:

D. WEBSTER GEORGE,
ELEANORE ROGERS.