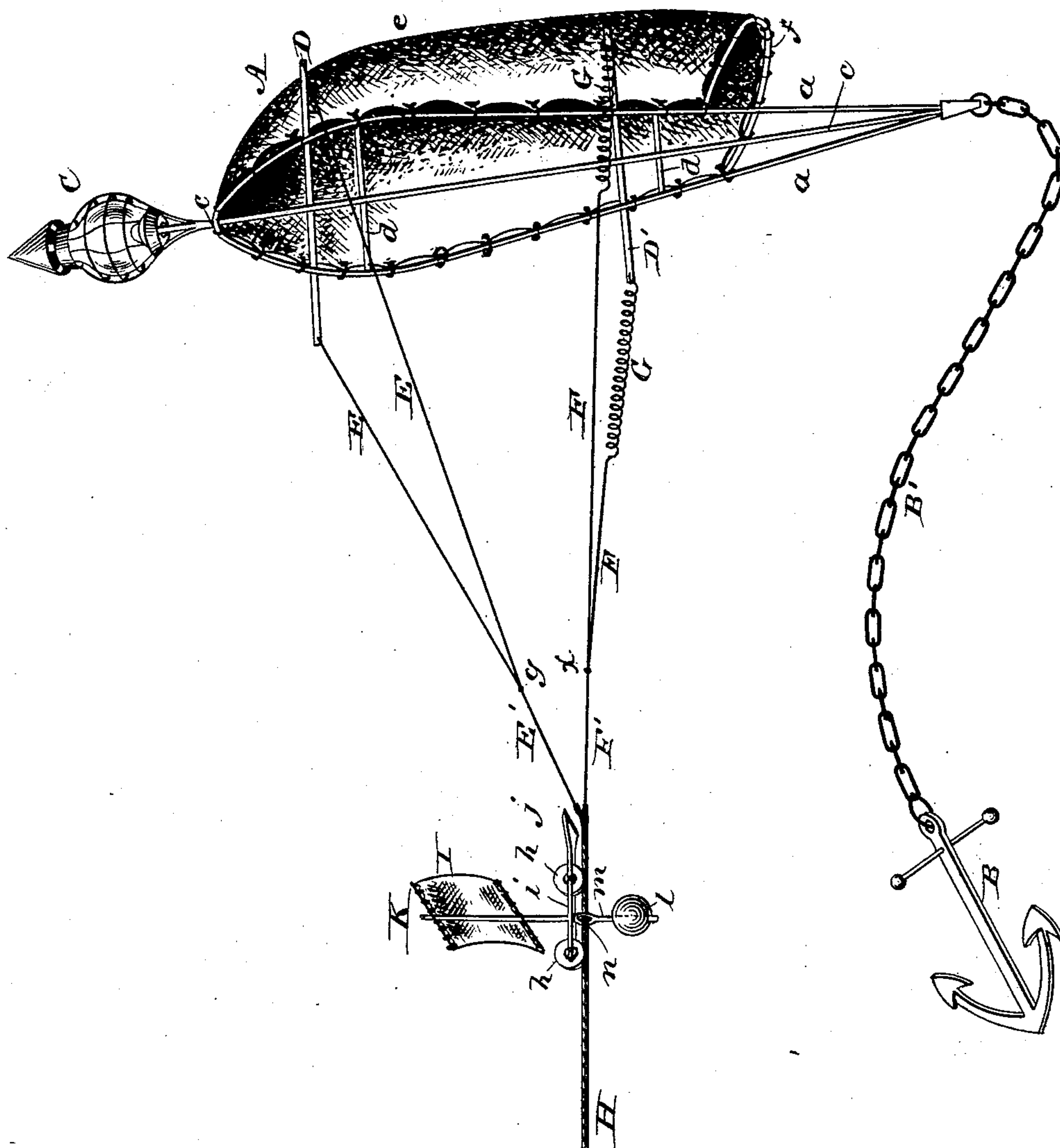


(No Model.)

A. F. ROCKWELL.  
LIFE SAVING APPARATUS.

No. 434,725.

Patented Aug. 19, 1890.



WITNESSES

H. C. Newman,  
Enos Newman,

INVENTOR

Albert F. Rockwell,  
By *his* Attorneys  
Baldwin Hopkins & Peyton

# UNITED STATES PATENT OFFICE.

ALBERT F. ROCKWELL, OF JACKSONVILLE, FLORIDA, ASSIGNOR OF ONE-HALF TO LUCIUS R. TUTTLE, OF SAME PLACE.

## LIFE-SAVING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 434,725, dated August 19, 1890.

Application filed March 6, 1888. Renewed May 1, 1889. Again renewed January 14, 1890. Serial No. 336,867. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT F. ROCKWELL, of Jacksonville, Duval county, Florida, have invented certain new and useful Improvements in Life-Saving Apparatus, of which the following is a specification.

The object of my invention is to provide improved apparatus for conveying a line or cable from one place to another—as from a wrecked vessel to the shore—whereby an aerial conveyer may be constructed for transporting persons and things.

Various kinds of apparatus have heretofore been invented for saving the lives of shipwrecked persons, the most common being that in which a line is thrown from a small cannon on shore to the wrecked vessel, which, when securely fastened to the vessel and to the shore, affords an aerial conveyer adapted to carry a breeches-buoy or a car containing human beings. This apparatus has been very successful in many instances; but it has often been found inadequate, inasmuch as it is difficult to throw a line from the shore to the wrecked vessel against a strong wind, owing to the resistance of the wind and to the fact that the great force given to the projectile often severs the line before it reaches the vessel. It is well known that wrecks most often occur on the lee shore—i. e., the wind blows from the vessel to the shore,—hence it is desirable to provide apparatus to convey the line from ship to shore. It has been proposed to send a line from ship to shore by means of a small boat to which a sail or kite is attached by a line of sufficient length to keep the kite out of the water. The difficulty in the use of this apparatus is that the boat is necessarily compelled to draw the line through the water, which offers great resistance and often parts the line.

My invention consists in providing the line with a kite adapted to carry the line from ship to shore through the air. It also consists in devices for lowering the line to the shore and in certain details of construction which will be hereinafter set forth.

In the accompanying drawing, which is a perspective view of an apparatus illustrating my invention—

A indicates the kite, preferably consisting of a frame *a*, of steel or other suitable material, a central longitudinal brace *c*, cross-braces *d*, and a covering *e*, preferably of strong canvas, attached to the frame *a*. The lower end of the canvas is preferably secured to a frame *f* projecting from the frame *a* a short distance above its lower extremity.

B indicates an anchor secured to the lower extremity of the kite-frame by a chain *B'*. The purpose of the anchor is to balance the kite, and it also serves to secure it to the shore when the kite is lowered.

C indicates a lantern secured to the top of the brace *c*, serving to indicate the position of the kite when in the air, and also to indicate its position on shore when the kite is lowered.

D D' are cross-rods extending from the frame of the kite, and to which the guy-lines are attached.

E indicates the upper guy-lines secured to the top cross-rod D, and joined at *g* to a single connecting-line E', which is of a material easily severed, yet sufficiently strong.

F indicates the lower guy-lines secured at *x* to the connecting-line F' and to springs G, which are secured to the ends of the lower cross-rod D'. The springs permit the kite to automatically adjust itself to accommodate variations in the strength of the wind.

H indicates the main line or cable. The main line and the guy-lines may be made of stout rope or of metallic cables or wire. They are preferably of steel-wire cables. The line E' should, however, be made of material easily severed, yet of sufficient strength to stand the strain.

I indicates the knife-carrying apparatus, in this instance shown as a small carriage propelled by the wind, and carrying a knife adapted to cut the guy-lines at E', and thereby cause the kite to assume a position to afford but little resistance to the wind, so that it will immediately fall. The carriage I, as shown in the drawing, consists of wheels *h* journaled in a frame or body *i*, to which is attached a knife *j*.

K indicates a sail secured to the carriage-body, and *l* indicates a balance-weight suspended by a hanger *m* from the body *i*. The



hanger *m* is provided with an aperture *n*, through which extends the main line. The carriage *I* is adapted to travel along the line from the ship to the kite. The wind acting on the sail affords the propelling-power. By the time the carriage has reached the guy-ropes of the kite it has acquired sufficient force to cause the knife to sever the guy-ropes, thereby causing the kite to fall.

It is obvious that this apparatus may be employed between the main shore and an island, or in other places where help is needed.

If the line carried by the kite is not strong enough to sustain the weight of the breeches-buoy, &c., it may be used to haul a stronger line, which may be secured in place in the usual way.

I claim as my invention—

1. The combination of the kite, the main line connected thereto, the guy-lines connected to the main line and to the kite, and the knife-carrying carriage adapted to traverse the main line and sever the guy-lines, substantially as set forth.

2. The combination of the kite, the main

line connected thereto, the guy-lines connected to the main line and to the kite, the knife-carrying carriage, and its sail and balancing-weight adapted to traverse the main line, substantially as set forth.

3. The combination of the kite, the anchor attached thereto, the main line connected to the kite, the guy-lines connected to the main line and the kite, and the knife-carrying carriage adapted to traverse the main line, substantially as set forth.

4. The combination of the kite frame and braces, the signal-lantern carried thereby, the covering for the frame, the cross-rods attached to the frame, the guy-lines connected to the frame and main line, the springs for securing the lower guy-lines to the lower cross-rod, the main line, and the knife-carrying carriage adapted to traverse the main line, substantially as set forth.

In testimony whereof I have hereunto subscribed my name.

ALBERT F. ROCKWELL.

Witnesses:

ROBINSON WALLACE,  
T. P. ROSS.