

N^o 6493



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COMPLETE SPECIFICATION.

Improvements in Travelling Conveyors for use in connection with Kites and the like.

I, JOHN SAMUEL PARKER, of 128, Holborn, London, E.C., Director, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

5 My invention relates to a conveyor adapted to travel upon the wire or cord of the kite and provided with means for supporting articles thereon and releasing same.

According to my invention I employ a conveyor adapted to travel upon the wire or cord which connects a kite or the like with the ground, which conveyor
10 is adapted to be caused to travel up the cord or wire of the kite by means of the wind acting upon a sail or the like thereon, and is provided with means for suspending or attaching articles thereto and automatic means for releasing such articles when the conveyor has reached the kite. When the article has been
15 released the conveyor is arranged to again descend the wire, the sail or the like, by means of which it is propelled, being automatically furled so that it is no longer supported thereby.

The travelling conveyor comprises a suitable frame having rollers by means of which it may be suspended upon the cord or wire of the kite. Upon this
20 frame is mounted the roller which may be spring-operated, upon which is arranged a sail, blind or suitable piece of fabric which is normally maintained rolled up thereon by means of the spring. When it is desired to send the travelling conveyor up the line of a kite the runners are placed thereon so that the conveyor is suspended by them from the line, a sufficient quantity of the sail or blind is drawn off from the roller and the free end thereof is secured to a catch
25 on the frame, and a further catch is set to prevent the blind roller from rewinding, thus regulating the amount of slack in the blind or sail. Means are also provided for suspending articles upon the conveyor, which means are adapted to be released when the conveyor reaches the kite or an abutment upon the line thereof so that the said articles either fall by gravity or fly away in the air
30 according to whether they are heavier or lighter than the atmosphere. These catches are adapted to be operated by means placed upon the front end of the frame, and which when the travelling conveyor strikes against an abutment placed on the line near the kite, will release any article such as a bomb or other explosive or incendiary device, balloons, model aeroplanes, gliders or other
35 devices intended to act as targets for shooting practice, packages, messages or any other such articles; at the same time the catches holding the roller and the free end of the blind or sail will similarly be released so that the blind or sail will be rolled up and no longer act to support the travelling conveyor, which will then travel down the line of the kite under the influence of its own weight.

40 In order that my invention may be more readily understood, reference is had to the accompanying drawings in which:—

[Price 6d.]

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Fig. 1 is a diagrammatic illustration showing my improved travelling conveyor upon the line of a kite.

Fig. 2 is a front elevation of the conveyor with the sail or blind rolled up.

Fig. 3 is a detailed sectional view through the centre of the device.

Fig. 4 is a part cross section showing the sail or blind roller and the means for adjusting and releasing same.

Figs. 5 and 6 are details.

Referring to the drawings, the frame 1 of the travelling conveyor is provided with a pair of wheels 2 by means of which it is suspended upon and adapted to run on the line 3 of the kite 4, an abutment 5 being provided upon this line near the kite to engage and operate a forked arm for the purpose of releasing the catches on the conveyor.

The frame of the conveyor comprises a central longitudinal member 6 and a cross member 7 secured thereto near the forward end. The running wheels 2 are mounted in brackets 8 at each end of the longitudinal member 6, and these brackets 8 have a hinged spring gate 9 in one side to enable the device to be readily placed upon and removed from the kite line. Upon the cross member 7 is mounted a spring-operated roller 10 adapted to rotate about the axle 11 which is secured in the brackets 12 at each end of the cross member 7. Upon this roller 10 is arranged the blind or sail 13 which is provided with a stiffening rod or lath 14 at its free end. Connected to this rod or lath 14 is a cord or loop 15 adapted to be engaged with a catch near the rearward end of the longitudinal member 6 when the blind is drawn off the roller 10. This catch comprises a rod 16 mounted upon the longitudinal member 6 in brackets 17 and adapted to slide endwise therein. This rod 16 which is shown more particularly in Fig. 3 is bent over at its forward end and passes through a slot 18 in the longitudinal member 6 and is provided with an eye at its end 19 which engages with a pair of links 20 connected to a forked lever 21 pivoted in the bracket 22 upon the front of the longitudinal member 6. The forked upper end 23 of this lever 21 engages upon either side of the kite line 3 so that when it strikes against the abutment 5 on this line it will be pressed back into the position of the dotted lines to the position shown in full lines in Fig. 3, thus drawing forward the rod 16 and releasing the loop or cord 15 from the lower end thereof to enable the sail or blind to be wound up upon the spring roller.

The extreme lower end 24 of the pivoted lever 21 is perforated to receive the end of the wire loop 25 which is pivoted to the longitudinal member 6 at 26. This wire loop 25 is provided for the purpose of suspending articles such as bombs, explosives, packages, messages, aeroplanes, gliders, or other articles therefrom, and when the upper end 23 of the lever 21 is pressed back the wire loop 25 will be disengaged from the end 24 of the said lever, thus allowing the articles upon this loop to be released therefrom.

In order to regulate the amount of slack in the sail or blind 13 and consequently to vary the effect exerted by the wind thereon, I provide a releasable catch upon the cross member 7 to engage against an abutment on the spring roller 10 and thus prevent same from re-winding when a suitable amount of sail or blind has been drawn off from the same. For this purpose I provide a rod adapted to slide endwise in the brackets 28 on the cross member 7. This rod at its inner end is connected to one end 29 of a bell-crank lever 30, the other end 31 of which is adapted to engage against an abutment 32 on the sliding rod 16 on the longitudinal member. The other end 33 of the rod 27 projects through a slot 34 in the cross member 7 and is adapted to engage the projecting end 35 of a band or strip 36 clamped around the spring roller 10. A spring catch 37 is provided on the cross member 7 to engage against the end 29 of the bell-crank lever 30 so as to normally hold the end 33 of the rod 27 out of the path of the projection 35 on the blind roller 10. When however this spring catch 37 is depressed, a spring 38 upon the pivot of the bell-crank lever 30 forces the end 29 in such a direction as to cause the rod 27 to slide in the bracket 28

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until the end 33 of the said rod is arrested by the end of the slot 34, in which position it will engage the projection 35 on the spring roller 10 and prevent same from being re-wound by its spring.

To use the travelling conveyor for the purpose of conveying articles up to the kite to be then released, the sail or blind 13 is unwound from the roller 10 until the end of the loop 15 may be engaged with the end of the rod 16 in the manner indicated in Fig. 3. The sail or blind is then further unwound from the spring roller until a sufficient amount of slack is provided to allow the same to belly out under the influence of the wind, which amount of slack will vary in accordance with the strength of the wind available to propel the conveyor along the kite line. When a sufficient amount of slack has been drawn from the blind roller the catch 37 is depressed, thus releasing the bell-crank lever 30 and allowing the spring 38 to operate to press the end 33 of the rod 27 into the path of the projection 35 on the spring roller 10, thus preventing same from being again rotated by the spring to wind up the sail or blind. The articles to be conveyed to the kite and there released are suspended or secured upon the loop 25, the end of which is engaged in the end 24 of the lever 21. The device is then placed upon the kite line by passing the line through the spring gates 9 in the brackets 8 so that it is suspended upon the said line by means of the wheels 2. If the device be now released, the wind or air pressure acting upon the sail 13 will cause same to travel up the line 3 until the forked end 23 of the pivoted lever 21 upon the front of the longitudinal member 6 of the frame, strikes against the abutment 5 upon the said line 3. When the end 23 of this lever 21 strikes the abutment 5 it will be pressed back to the position shown in full lines in Fig. 3, thereby disengaging the wire loop 25 and releasing any articles contained thereon which will either fall by gravity or fly away as the case may be. The operation of the lever 21 will also act through the links 20 to cause the rod 16 to slide endwise in its bracket 17, thus withdrawing its rearmost end from the loop 15, thus releasing same. At the same time the abutment 32 on the sliding rod 16 will act against the end 31 of the bell-crank lever 30, thus drawing the rod 27 inwards and causing its end 33 to disengage the projection 35 on the spring roller 10. The spring roller being now no longer restrained, rotates upon its axis and winds up the sail or blind. As there is now no longer any sail or supporting surface upon which the wind or air pressure may act to support the conveyor, the same will slide down the kite line under the influence of its own weight, and may be re-set for a further journey to the kite.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

(1) A travelling conveyor for use in connection with kites or the like; comprising a frame adapted to be suspended upon the line of the kite or the like, a sail or blind which may be spread out to comprise the supporting surface, against which the wind or air pressure acts to slide the travelling conveyor up the kite line, means for supporting articles upon the conveyor adapted to be released upon striking an abutment on the line, and means for furling or rolling up the sail when the articles have been released so that the conveyor being no longer supported by the wind or air pressure will again travel down the line under the influence of its own weight.

(2) In a travelling conveyor for use in connection with kites or the like as claimed in Claim 1; mounting the sail or blind upon a spring roller on the frame, and providing catches to which to secure the free end of the sail or blind when drawn from the roller and to prevent the latter from rewinding until the articles have been released from the conveyor.

(3) In a travelling conveyor for use in connection with kites or the like as claimed in Claim 1 or 2; a frame comprising a longitudinal member, having

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a cross member secured thereto near its forward end, a rod mounted upon the longitudinal member and connected at its forward end to a lever mounted upon the front of the longitudinal frame member, which lever is provided with a forked upper end to engage upon each side of the kite line, the rearmost end of the longitudinal rod being adapted to engage in and hold a loop connected to the free end of the sail or blind, the rod being adapted to be drawn forward to release this loop and consequently the sail or blind when the forked end of the lever upon the front of the frame member strikes against the abutment on the kite line. 5

(4) In a travelling conveyor for use in connection with kites or the like as claimed in Claim 3; means for releasably attaching the articles to be conveyed, comprising a loop hinged at one end to the frame and adapted to engage at its other end in an aperture in the lower end of the forked lever mounted upon the forward end of the longitudinal frame member so that when the upper end of the said lever is forced back by striking the abutment on the kite line the loop will be disengaged from the lower end of the lever and the articles thereon released. 10 15

(5) In a travelling conveyor for use in connection with kites and the like as claimed in Claim 2, 3 or 4; means for regulating the amount of slack in the sail or blind comprising a stop or projection upon the spring roller on which the sail or blind is wound, a removable stop adapted to engage this projection to prevent the sail or blind from being rewound upon the roller, and means for releasing this stop from the projection when the articles upon the conveyor have been released so as to enable the sail or blind to be rewound upon the roller so as to allow it when no longer supported by the sail to slide down the kite line under the influence of its own weight. 20 25

(6) in a travelling conveyor for use in connection with kites and the like as claimed in Claim 3 or 4; a projection upon one end of the sail or blind roller, a sliding rod upon the frame, the end of which is adapted to engage in the path of the projection on the end of the blind roller, a bell-crank lever to one end of which this sliding rod is connected pivoted upon the frame whilst the other end is adapted to engage against an abutment on the rod on the longitudinal frame member so that the portion of this longitudinal rod will act upon the bell-crank lever to withdraw the stop from the path of the projection on the roller so as to release same when the sliding rod is operated to release the further end of the sail or blind. 30 35

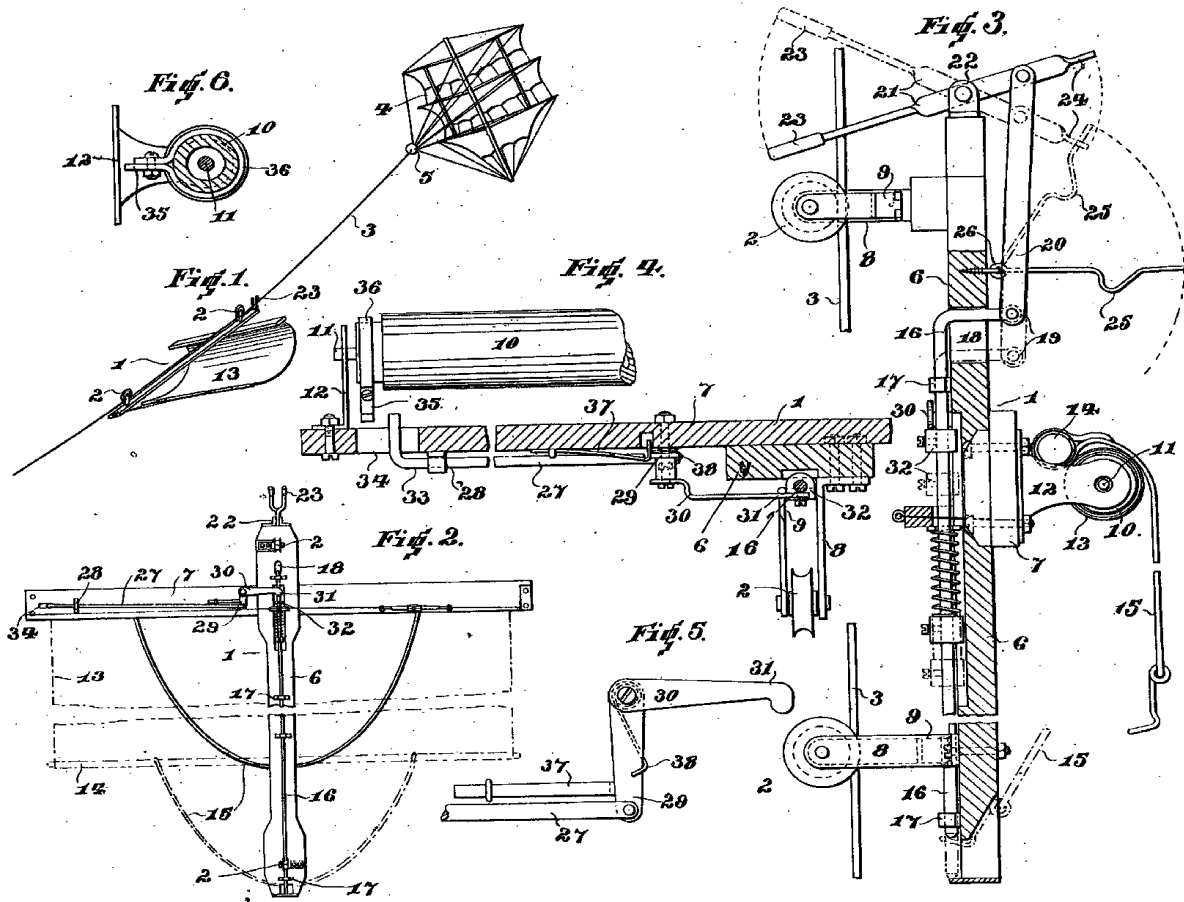
(7) In a travelling conveyor for use in connection with kites and the like as claimed in Claim 6; a spring catch mounted upon the cross member and adapted to engage against one limb of the bell-crank lever for the purpose of holding the stop out of engagement with the projection on the roller when desired. 40

(8) In a travelling conveyor for use in connection with kites and the like as claimed in Claims 1 to 7; mounting the conveyor upon the kite line by means of wheels mounted in brackets at each end of the frame, which brackets are provided with spring gates in one side to enable the device to be suspended upon the kite line without the necessity for threading the said line through the brackets. 45

(9) The improved travelling conveyor for use in connection with kites and the like substantially as described in the specification with reference to the accompanying sheet of illustrative drawings.

Dated this 30th day of April, 1915. 50

RAYNER & Co.,
5, Chancery Lane, London,
Agents for the Applicant.



[This Drawing is a reproduction of the Original on a reduced scale.]

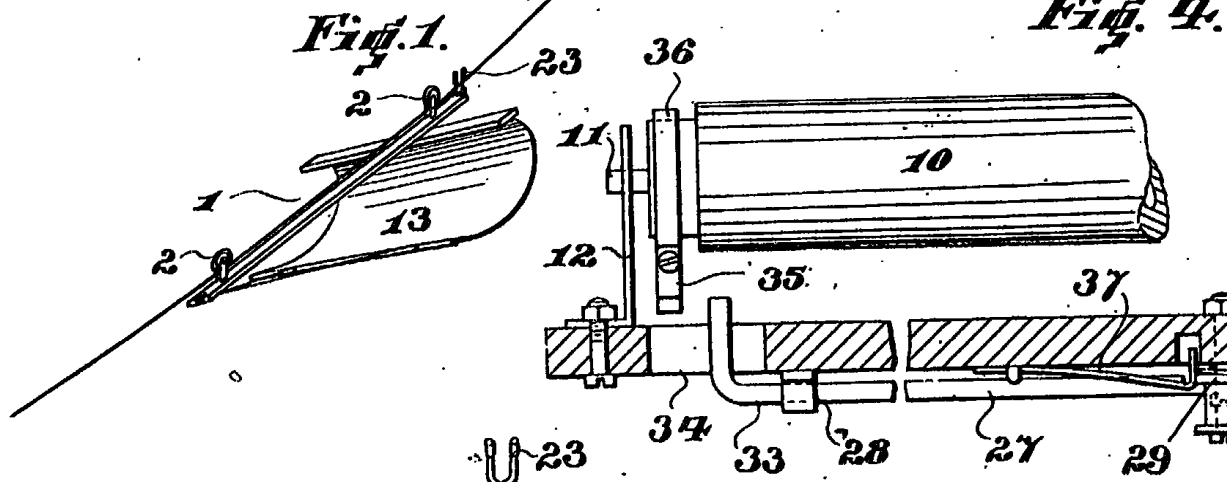
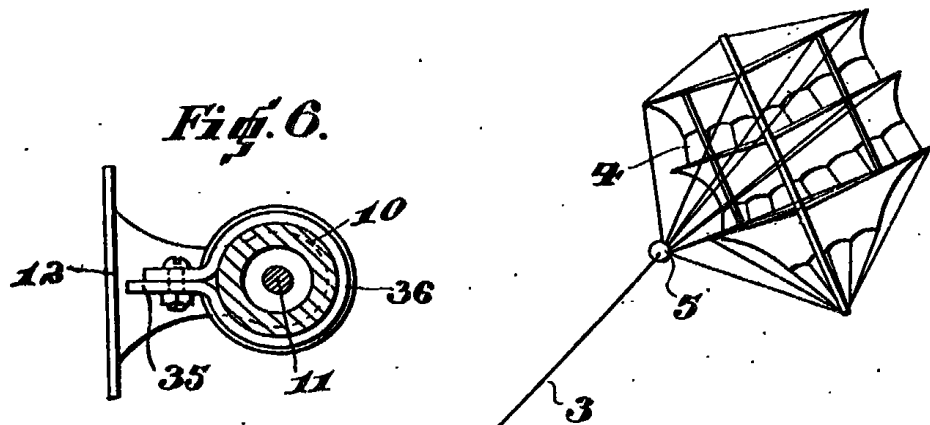
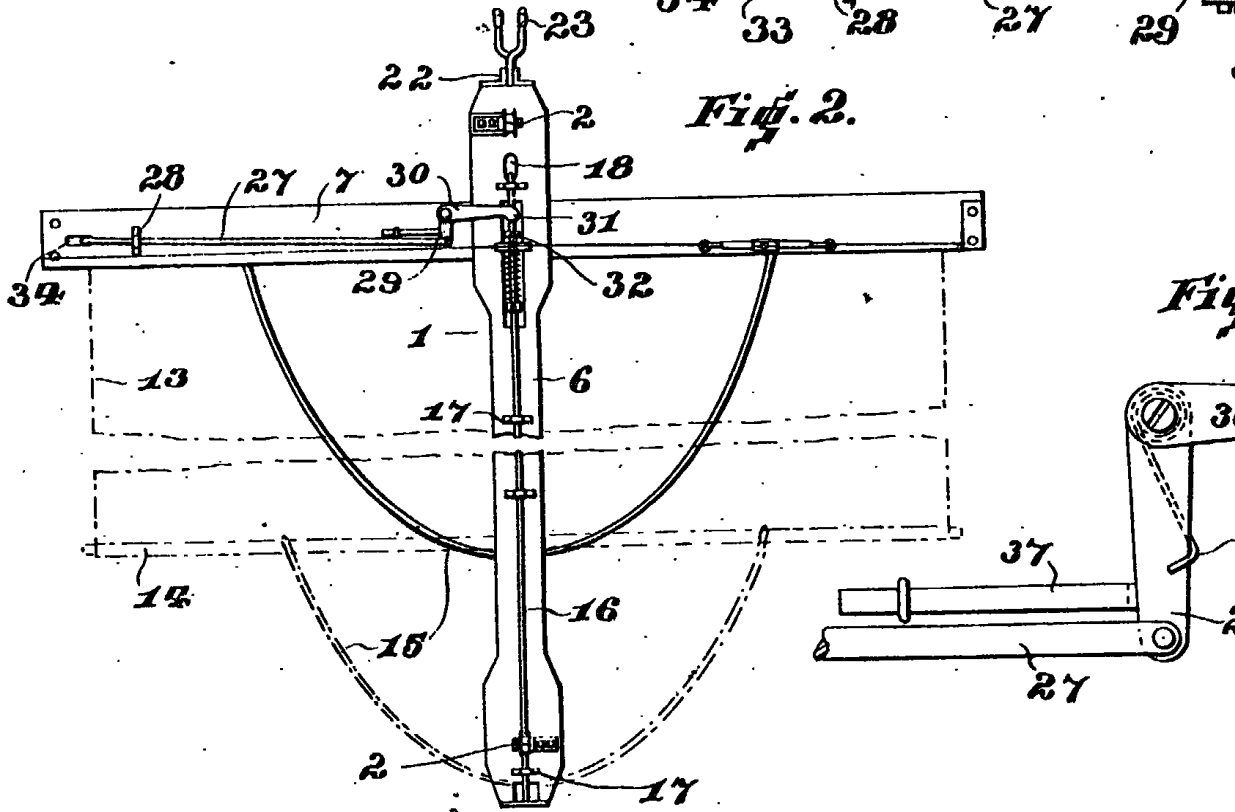


Fig. 4.



[This Drawing is a reproduction of the Original on a reduced scale.]

Fig. 3.

