N° 14,601 A.D. 1915

Date of Application, 15th Oct., 1915
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Complete Specification Left, 15th Apr., 1916
Complete Specification Accepted, 10th Aug., 1916

PROVISIONAL SPECIFICATION.

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

I, JOHN SAMUEL PARKER, of 128, Holborn, London, E.C., Director, do hereby declare the nature of this invention to be as follows:—

My invention relates to improvements in the conveyor adapted to travel on the wire or cord of a kite and provided with means for supporting articles thereon and releasing same as described in the Specification accompanying Patent Application No. 6493/1915. In this patent application 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 frame is mounted the roller which may be spring-controlled, 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 on the frame, and a further catch is set to prevent the blind roller from re-winding, 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 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 devices intended to act as targets for shooting practice, packages, messages or any 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.

According to the present invention a sail or roller blind is mounted upon a spring roller upon a transverse member of the frame and is adapted to be maintained in the opened or extended position by means of a rod or cane connected at one end to the lower bar of the blind and adapted to be engaged at the other end with a catch which will be released when the apparatus reaches a suitable abutment secured upon the line of the kite preferably at a position situated about 100 feet from the kite itself. This rod acts to maintain the roller blind or sail in the extended position at a considerable angle to the frame of the conveyor and consequently to the line of the kite wire or cord. This angle may conveniently be about 45° and the blind is drawn off from the roller upon the inner side thereof so that the action of the wind against the under

[*Price* 6*d*.]

or inclined surface of the sail cannot operate between the blind and the roller to prevent its re-winding when released.

The means for holding and releasing the cane or rod which maintains the blind or sail in the extended position comprises a stout wire loop hinged to the forward end of the longitudinal member and connected by a short link to a sliding rod, the free end of which is cranked and adapted to engage in an eye upon the end of the said rod, a spring acting to normally maintain this end of the sliding rod in engagement with the rod or cane. When the hinged loop upon the forward end of the frame strikes against the abutment provided upon the kite line this loop is pressed backwards, causing the sliding rod to be withdrawn from the rod or cane which maintains the sail or blind in the extended position, thus allowing the blind to immediately roll up under the action of the spring roller and causing the whole apparatus to descend the kite line under the influence of gravity.

On the sliding rod which engages and retains the rod or cane which maintains the sail extended is provided an extension rod or wire adapted to engage in a wire loop secured to a cord or string, the ends of which are connected to the lower corners of the sail or blind, and a wire link or catch also engages in this wire loop and is employed to support a bomb or other explosive or incendiary device, balloons, model aëroplanes, gliders or other devices intended to act as targets for shooting practice, packages, messages or other articles. When the hinged loop on the forward end of the travelling conveyor strikes against the abutment on the kite line it will be pressed backward disengaging the sliding rod from the rod or cane which maintains the blind or sail in the extended position, allowing same to be re-wound upon the spring roller and at the same time the rod or wire extension will be withdrawn from the wire loop disengaging the cord running from the lower ends of the blind and releasing the bomb, grenade, or other incendiary device, balloons, model aeroplanes, *etc.* which may be engaged therewith, allowing same to fall or float away, and the whole conveyor being no longer supported by the extended sail will descend the kite line under the influence of gravity.

The stout wire loop hinged at the forward end of the frame and which when it strikes against an abutment secured upon the kite line acts to operate the sliding rod to release the extended sail or blind, is preferably bent from iron or steel rod to a loop formation, one end of which overlaps a portion of the rod so that the kite line or wire may be forced between these portions so as to become engaged within the loop. The supports for the rollers which run upon the kite line are preferably provided with gates or openings in one side thereof and sliding pieces of wire or the like are adapted to close these openings when the apparatus has been placed in position on the kite line. The rod or cane which maintains the sail extended preferably operates in a wire loop or guide mounted upon one side of the longitudinal member of the frame.

The abutment upon the kite line against which the forward end of the conveyor strikes comprises a split wooden or other ferrule or collar mounted upon the kite line and embraced by a metal band or clamp by means of which it may be secured thereon. If desired this ferrule or clamp may be secured upon the kite line sufficiently loosely to allow of a slight degree of slip when struck by the travelling conveyor so as to reduce the shock caused by a too rapid stoppage of the conveyor. It is found that the conveyor when descending along the kite line attains so high a velocity that it is advisable to provide a suitable buffer to bring same to a standstill gradually and so prevent damage to the conveyor. For this purpose I prefer to employ a buffer comprising a pair of members, the rearmost of which is frictionally secured to the kite line and which is connected to the forward member through the medium of a series of springs preferably arranged upon sliding rods or bolts, an india-rubber or similar cushion being provided at its forward end to receive the actual blow of the conveyor. This india-rubber cushion and the forward member of the

buffer are preferably slotted upon one side to enable the kite line to be readily engaged therewith and the rear member is frictionally secured to the kite line by being split longitudinally and clamped thereon by means of a band or clamp adapted to be tightened around the member by means of a thumb-screw.

Dated this 15th day of October, 1915.

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

COMPLETE SPECIFICATION.

Improvements in Travelling Conveyors for use 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:—

My invention relates to improvements in a conveyor adapted to travel on the wire or cord of a kite and provided with means for supporting articles thereon and releasing same as described in the Specification accompanying Patent Application No. 6493/1915. In this patent 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 frame is mounted the roller which may be spring-controlled, 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 on the frame, and a further catch is set to prevent the blind roller from re-winding, 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 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 devices intended to act as targets for shooting practice, packages, messages or any 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.

According to the present invention the sail or roller blind which is mounted upon a spring roller upon a transverse member of the frame is adapted to be maintained in the opened or extended position by means of a rod or cane connected at one end to the lower bar of the blind and adapted to be engaged at the other end with a catch which will be released when the apparatus reaches a suitable abutment secured upon the line of the kite preferably at a position situated about 100 feet from the kite itself. This rod acts to maintain the roller blind or sail in the extended position at a considerable angle to the frame

of the conveyor and consequently to the line of the kite wire or cord. The blind is drawn off from the roller upon the inner side thereof so that the action of the wind against the under or inclined surface of the sail cannot operate between the blind and the roller to prevent its re-winding when released.

It is found that the conveyor when descending along the kite line attains so high a velocity that it is advisable to provide a suitable buffer to bring same to a standstill gradually and so prevent damage to the conveyor.

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

Fig. 1 is a perspective view of the conveyor with the blind held in a position substantially at right angles to the body thereof.

Fig. 2 is a similar view with the blind rolled up to allow the conveyor to descend the kite line.

Fig. 3 is a side elevation of the conveyor showing a portion of the blind set in position for ascending the kite line.

Fig. 4 is a part plan of same.

Figs. 5 and 6 are respectively elevation and plan of the buffer against which the conveyor strikes when descending the kite line, and

Figs. 7 and 8 are elevation and plan respectively of the abutment secured to the kite line, near the kite.

Referring more particularly to Figs. 1 to 4, the longitudinal body 1 of the conveyor is provided at each end with pulleys 2 supported in brackets 3 and these brackets 3 are provided with sliding pins 4 upon one side, which when raised disclose a gap at one side of the bracket to enable the pulleys 2 to be placed upon the kite line 5. At the rear of the longitudinal body 1 is arranged the bracket 6 having an opening 7 therein to accommodate the kite line 5 and in order to arrest the downward motion of the conveyor this bracket 6 is adapted to engage against the buffer 29 shown in Figs. 5 and 6, the construction of which will be hereinafter described.

Upon a cross member 8 which is secured to the longitudinal body 1 of the conveyor, by wing nuts 9, is mounted a spring operated roller 10 which is secured at each end to the cross member 8 by the brackets 11. Upon this roller 10, is arranged the blind or sail 12 which is provided with a stiffening rod 13 at its free end. Connected at each end of this rod 13 is a cord or loop 14 provided at its centre with a hook 15 and adapted to engage with a catch device about midway between the bracket 6 and the cross member 8.

This catch which is substantially of the same construction as that described in the Specification accompanying Patent Application No. 6493/1915, comprises a rod 16 mounted upon the longitudinal body 1 and adapted to slide lengthwise thereon. This rod 16 is bent over at its upper end and passes through a slot 17 in the longitudinal body 1 and is secured to the pivoted wire loop 18 by means of the link 19. This pivoted wire loop 18 is preferably bent from iron or steel rod, to a loop formation, one end of which overlaps at 20 a portion of the rod, so that the kite line 5 can be forced between these portions so as to become engaged within the loop 18.

The hook 15 provided upon the cord or loop 14 passes through an aperture in the longitudinal body 1 and engages with the free end of the sliding rod 16 which is normally pressed in a rearward direction by means of the spring 21. A wire link or catch 22 secured to the under surface of the longitudinal body 1, also engages within the hook 15 and is employed to support a bomb or other article 23 which is intended to be released when the conveyor has ascended the kite line 5 as shown in Figs. 1 and 2.

In order to keep the blind 12 in the extended position ready to ascend the kite line, and at the correct angle so that the wind is able to exert pressure upon the blind, a bamboo rod or cane 24 is provided upon the conveyor. This cane 24 is loosely attached at one end to the stiffening rod 13 provided upon the free end of the blind 12 and the other end is provided with an eye 25 which

engages with a cranked portion or catch 26 upon the sliding rod 16. This cranked portion or catch 26 is situated near the cross member 8 and the cane 24 is normally kept in position thereon by means of a wire loop or guide 27 which also acts to support the cane 24 in a convenient position after the blind 12 has been rolled up. In order to keep the catch 26 in a position upon the longitudinal body 1 so that it cannot turn out of engagement with the cane 24, a guide 28 bears upon its upper face.

Referring now to Figs. 5 and 6 in which the buffer 29 is shown in detail, this comprises a pair of members 30 and 31, the rearmost one 31 of which is frictionally secured to the kite line 5 at a convenient position thereon and which is connected to the forward member 30 through the medium of a series of springs 32 arranged upon sliding rods 33. An india-rubber or similar cushion 34 is provided upon the forward member 30 to receive the actual blow of the conveyor. This india-rubber cushion 34 and the forward member 30 are split at 35 upon one side to enable the kite line 5 to be readily engaged therewith and the rear member 31 is frictionally secured to the kite line 5 by being similarly split longitudinally at 36 and clamped thereon by means of a band 37 adapted to be tightened around the member 31 by means of a thumb-screw 38.

The abutment 39 upon the kite line 5 which is shown in detail in Figs. 7 and 8, and against which the forepart of the conveyor strikes after it has ascended the kite line, comprises a split wooden ferrule or collar 40 mounted upon the kite line and embraced by a metal band 41 which is adapted to be tightened by means of the thumb-screw 42. If desired this abutment 39 as well as the buffer 29 may be secured upon the kite line 5 sufficiently loosely to allow of a slight degree of slip when struck by the travelling conveyor so as to reduce the shock caused by a too rapid stopping of the same.

When the hinged loop 18 at the forward end of the travelling conveyor strikes against the abutment 39 on the kite line 5 it will be pressed backwards disengaging the cranked portion or catch 26, on the sliding rod 16, from the cane 24 which normally maintains the blind or sail 12 in the extended position. The blind 12 being no longer supported will be re-wound upon the spring roller 10, and at the same time the rod extension will be withdrawn from the hook 15 thereby disengaging the cord 14 running from the stiffening rod 13 of the blind and releasing the bomb or other article 23 which may be engaged therewith, allowing same to fall away. The whole conveyor being now no longer supported by the extended blind 12 will descend the kite line 5 under the influence of its own weight until it is brought to a standstill by the buffer 29, and the cane 26 will assume a position substantially as shown in Fig. 2.

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) In a travelling conveyor for use in connection with kites and the like of the type previous referred to in this specification, means for keeping the blind or sail in the extended position so that the wind can act thereon and cause the conveyor to ascend the kite line comprising a rod or cane of bamboo or other suitable material loosely secured at one end to the stiffening rod of the sail or blind, and engaging at its other end with a cranked portion or catch provided upon a sliding rod upon the longitudinal body of the conveyor.

(2) In a travelling conveyor for use in connection with kites and the like of the type referred to and as claimed in Claim 1, means for releasably attaching articles to the conveyor comprising a loop hinged at one end to the longitudinal body and secured to the sliding rod, the free end of the rod being adapted to engage in a hook provided upon a cord secured to the stiffening rod, and a wire link or catch secured to the longitudinal body and engaging within the hook so as to form a support for a bomb or other article which can be released when the hinged loop strikes against an abutment upon the kite line.

(3) In a travelling conveyor for use in connection with kites and the like of the type referred to and as claimed in Claims 1 and 2, means for securing in position and releasing the rod or cane which keeps the blind or sail in the extended position, comprising a cranked portion or catch secured to the sliding rod and adapted to engage in an eye upon the end of the said rod or cane, said cranked portion or catch being released from the rod or cane when the wire loop strikes against an abutment upon the kite line.

(4) In a travelling conveyor for use in connection with kites and the like of the type referred to and as claimed in Claim 3, a wire loop or guide secured to the longitudinal body of the conveyor and arranged so that it keeps the rod or cane in engagement with the cranked portion or catch and also supports it in a convenient position after it has been released.

(5) In a travelling conveyor for use in connection with kites and the like of the type referred to and as claimed in the fore-going claims, a buffer against which the conveyor strikes when descending the kite line comprising a pair of members, the rearmost of which is frictionally secured to the kite line by means of a band adapted to be tightened by a thumb-screw, and which is connected to the forward member by a series of springs arranged upon sliding rods, an india-rubber or similar cushion upon the forward member to receive the actual blow of the conveyor and a split in the forward member and the cushion and a similar split in the rear member to enable the kite line to be readily engaged therewith.

(6) In a travelling conveyor for use in connection with kites and the like of the type referred to and as claimed in Claims 1 to 4, an abutment secured upon the kite line a short distance from the kite and against which the loop at the front of the conveyor is adapted to strike to release the blind or sail and the bomb or other article simultaneously, comprising a split ferrule or collar frictionally secured to the kite line by a band adapted to be tightened by a thumb-screw.

(7) Improvements in travelling conveyors for use in connection with kites and the like of the type referred to, substantially as described with reference to Figs. 1 to 4 of the accompanying drawings.

(8) Improvements in travelling conveyors for use in connection with kites and the like of the type referred to, substantially as described with reference to Figs. 5 and 6 of the accompanying drawings.

(9) Improvements in travelling conveyors for use in connection with kites and the like of the type referred to, substantially as described with reference to Figs. 7 and 8 of the accompanying drawings.

(10) A travelling conveyor for use in connection with kites and the like constructed and operated substantially as described with reference to the accompanying drawings.

Dated this 15th day of April, 1916.

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

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1916.

A.D. 1915. Oct. 15. No. 14,601.
PARKER'S Complete Specification.

(2 SHEETS)
SHEET 1.

Fig. 1.

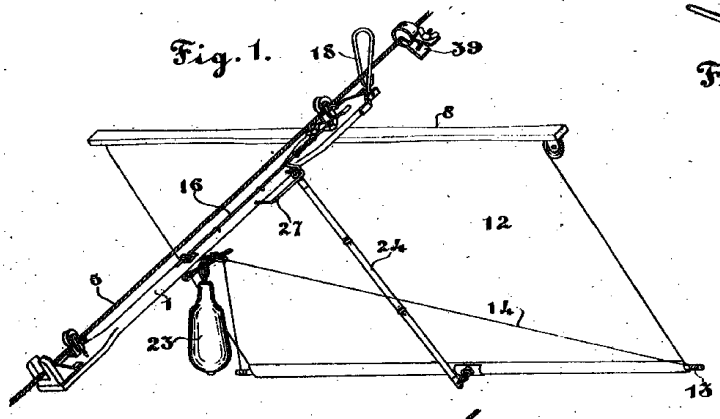


Fig. 2.

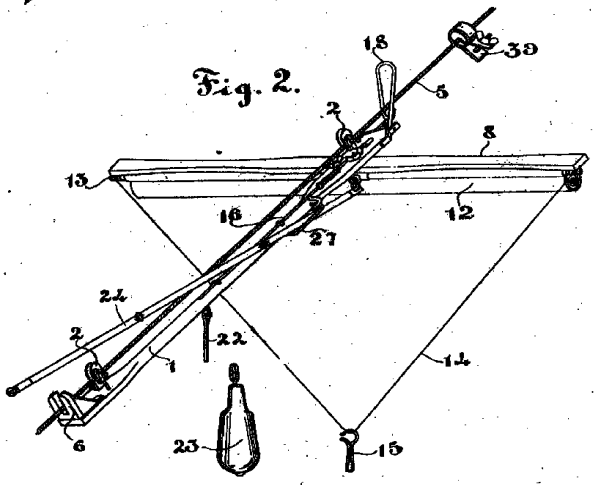


Fig. 3.

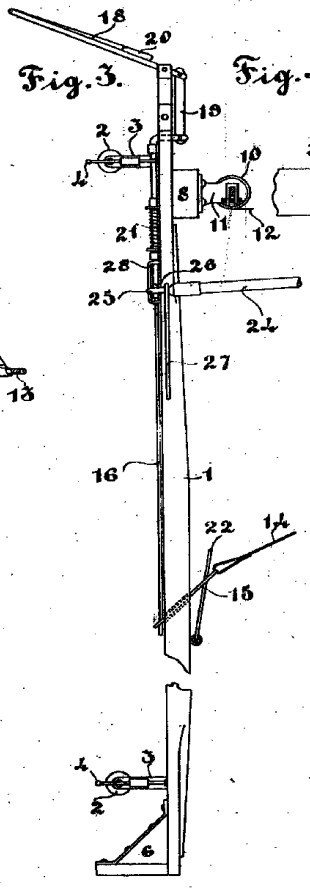
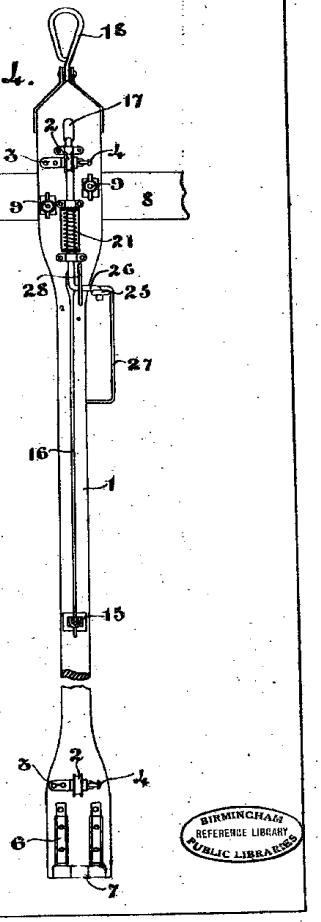


Fig. 4.



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

Fig. 1.

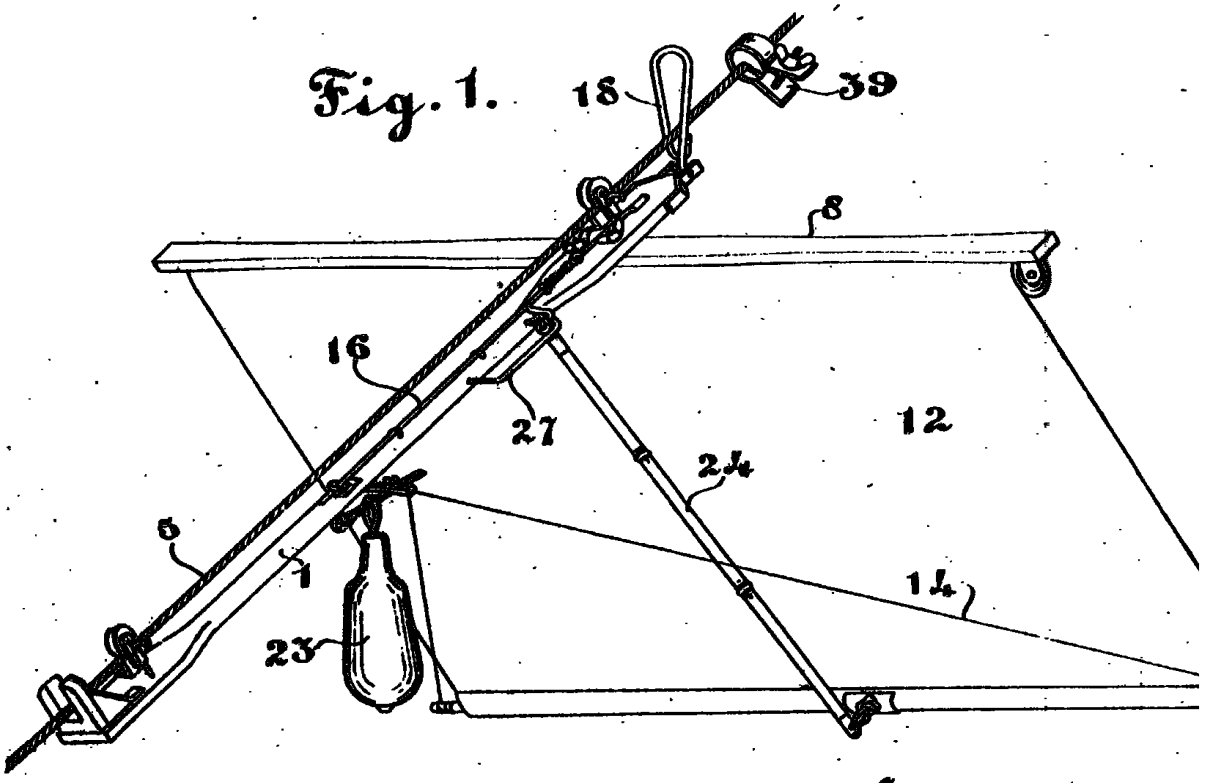

Fig. 2.

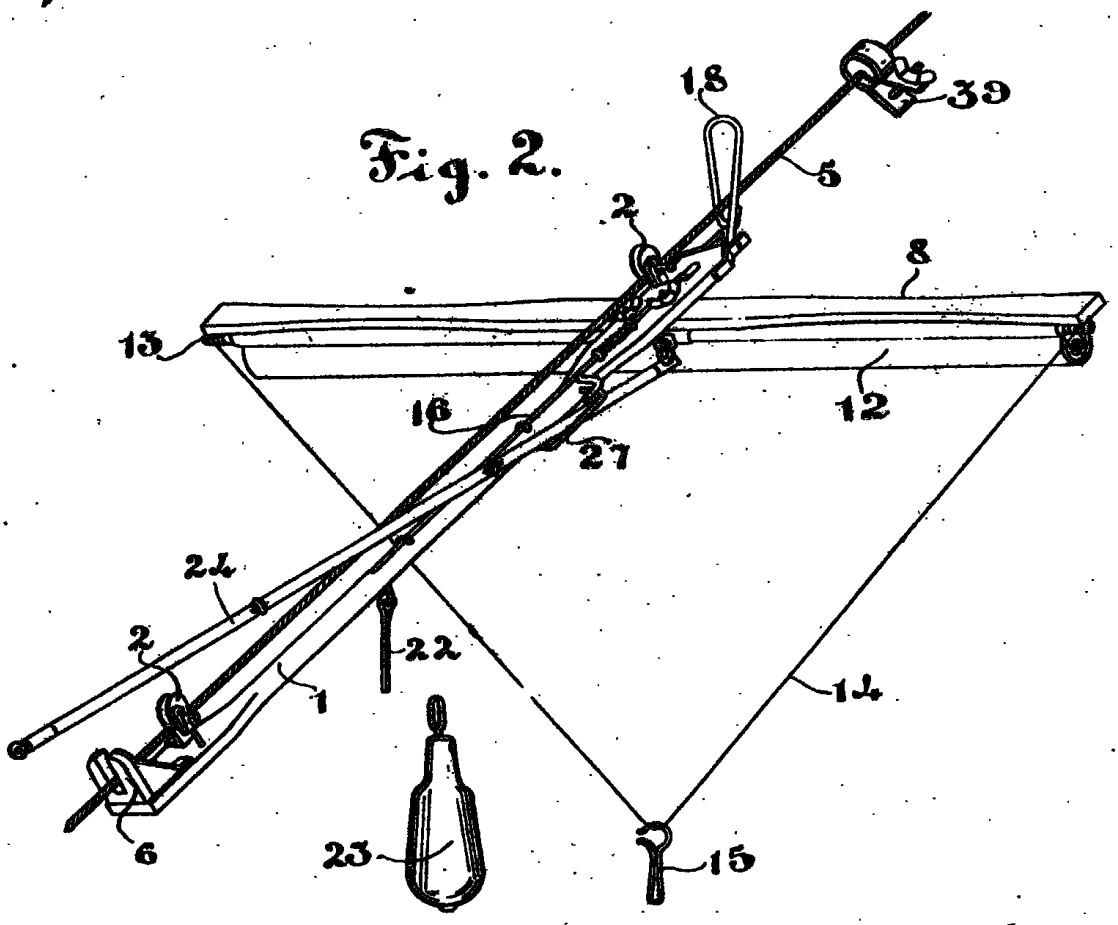

Fig. 3.

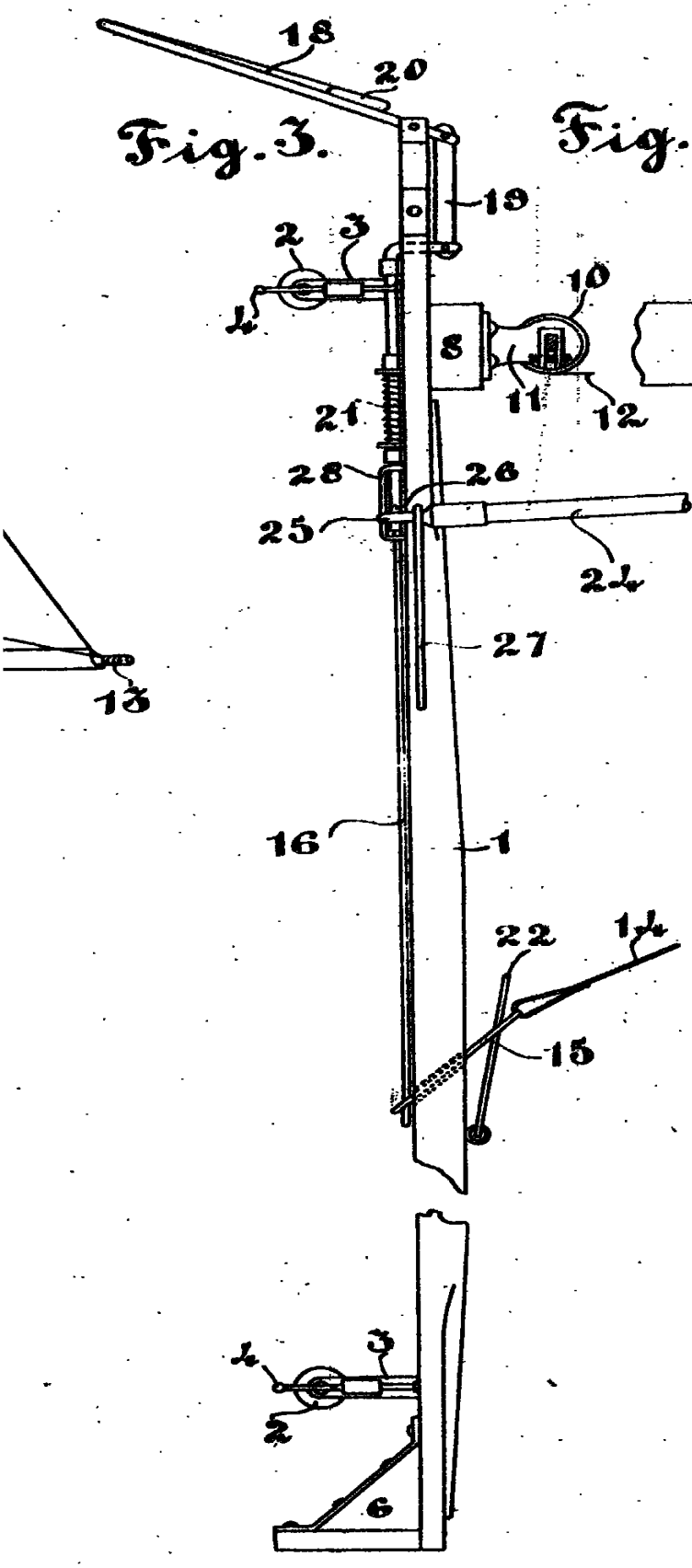

Fig. 4.

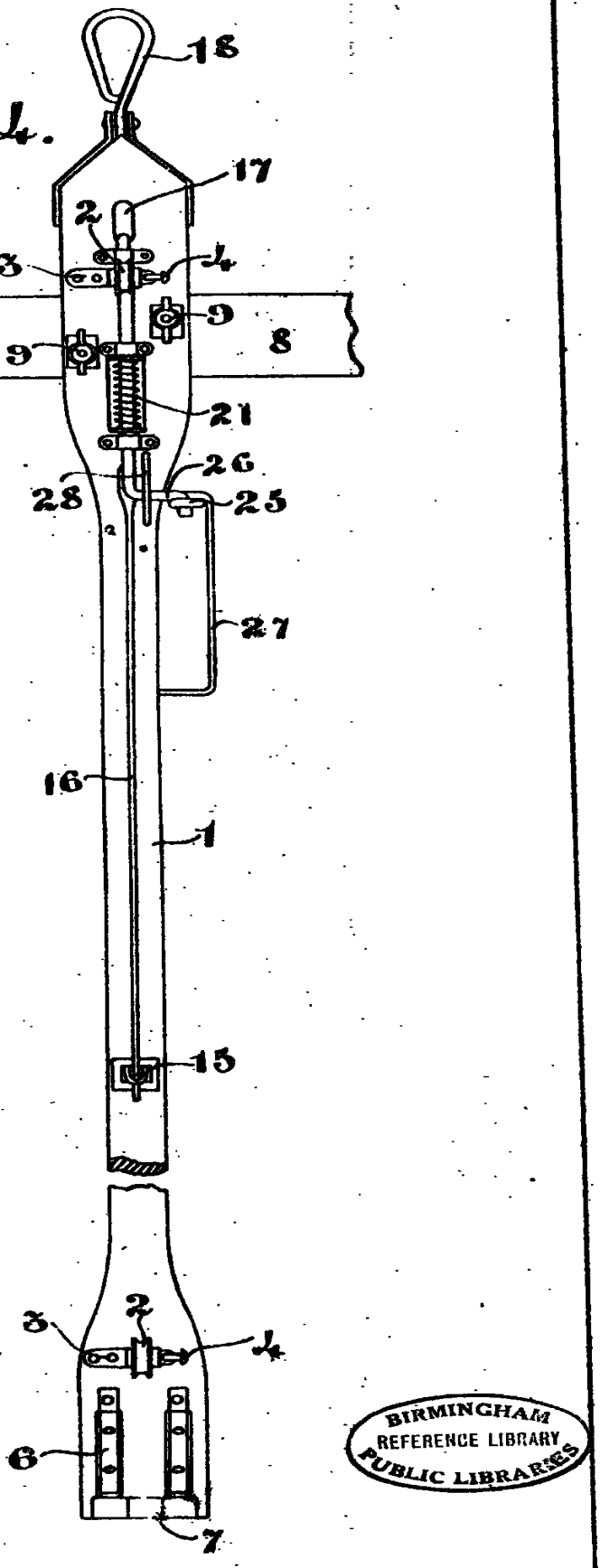

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Fig. 5.

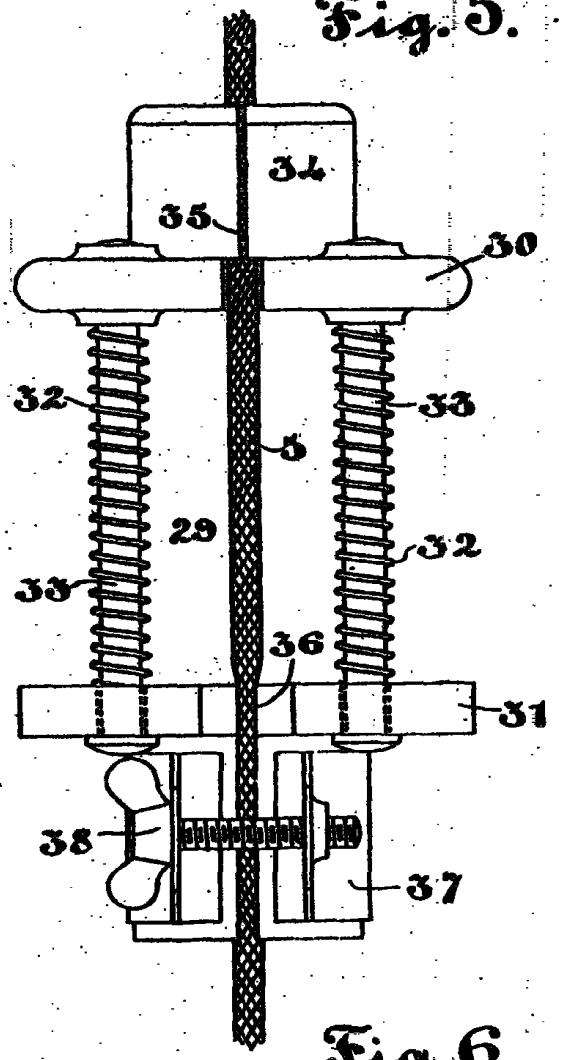


Fig. 7.

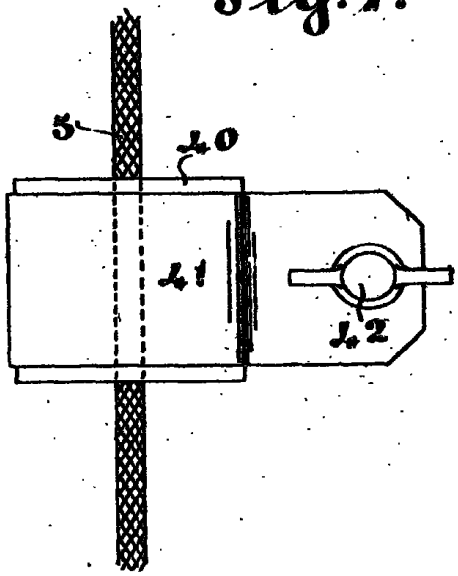


Fig. 8.

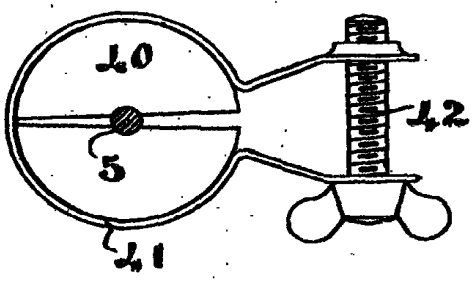
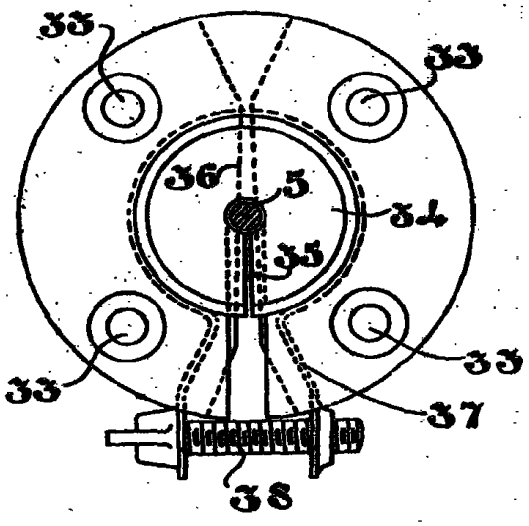


Fig. 6.



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