(No Model.)

E. B. BRYANT & R. J. VICTOR.

WINDLASS GEAR.

No. 498,740. Patented May 30, 1893.

Fig. 1.

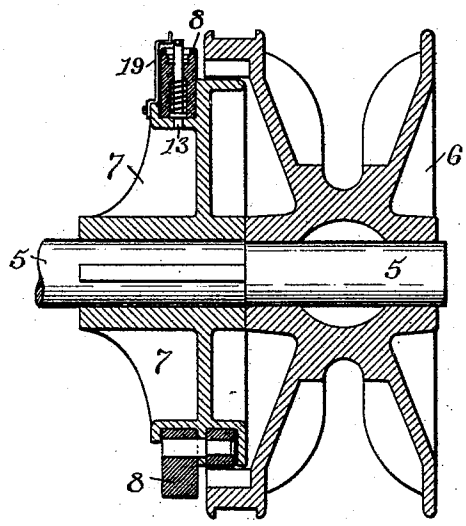


Fig. 2.

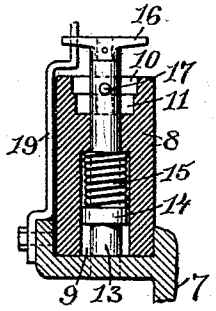


Fig. 3.

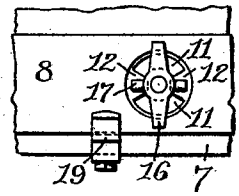
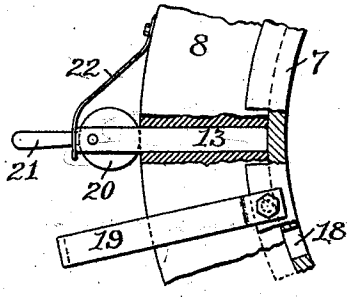


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

EVERETT B. BRYANT, OF PROVIDENCE, AND ROBERT J. VICTOR, OF EAST PROVIDENCE, ASSIGNORS TO THE AMERICAN SHIP WINDLASS COMPANY, OF PROVIDENCE, RHODE ISLAND.

WINDLASS-GEAR.

SPECIFICATION forming part of Letters Patent No. 498,740, dated May 30, 1893.

Application filed November 9, 1892. Serial No. 451,416. (No model.)

To all whom it may concern:

Be it known that we, EVERETT B. BRYANT, of the city of Providence, and ROBERT J. VICTOR, of East Providence, in the county of Providence, State of Rhode Island, have invented certain new and useful Improvements in Windlass-Gears; and we hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to improvements in locking-gears for windlasses which are particularly adapted for use on windlasses such as are described in Letters Patent No. 403,356, granted to Frank S. Manton.

The object of this invention is to provide a positive locking-device by which the locking-ring is secured to the driving-head.

The further object of the invention is to produce a positive locking-device adapted to be automatically operated by the shifting of the locking-ring.

The invention consists in the peculiar construction of the locking-device and its novel combination with the locking-ring of a windlass, together with such other novel features of construction and combination of parts as will hereinafter be more fully described and pointed out in the claims.

Figure 1 represents a sectional view of a wild-cat together with the driving-head and a locking-ring by the shifting of which the wild-cat is connected with or disconnected from the driving-head, and showing the improvement whereby the locking-ring is positively locked to the driving-head. Fig. 2 represents an enlarged sectional view of the locking-ring and a portion of the driving-head showing the construction of one form of the locking-device. Fig. 3 represents a top view of the same. Fig. 4 represents a side view of portions of the locking-ring and driving-head and showing a modified form of the locking-device.

Similar numbers of reference designate corresponding parts throughout.

In the drawings 5 represents a shaft which is suitably journaled, generally in horizontal bearings, and 6 is a wild-cat loosely mounted on said shaft.

7 is a driving-head which is keyed to the shaft 5 and is adapted to be connected with, or disconnected from, the wild-cat by mechanism operated by the locking or shifting-ring 8 which is carried by the driving-head.

In practice it is found that, owing to the locking-ring being held in position by frictional contact with the driving-head, it is possible that when the wild-cat is in use the locking-ring may slip, or be accidentally shifted backward, causing the driving-head to be unlocked from the wild-cat and allowing the cable to slip backward and sometimes causing damages, the cable being in many cases broken and the article which is suspended therefrom being dropped; to overcome this defect is the special object of our present invention.

In carrying our invention into practice we provide the locking-ring 8 with one or more sockets 9 extending from its inner circumference and with depressions 10 having the segmental sockets 11—11 in its outer circumference. Between the sockets 11—11 material is left to form the ledges 12—12, the material between the lower surface of the sockets 11—11 and the upper end of the socket 9 being perforated.

Movable in the depression 10, the socket 9 and the perforation connecting the same, is a locking-bolt 13 having near its lower end the guide and stop collar 14, and between this collar and the upper end of the socket 9 is located the coiled-spring 15 which surrounds the bolt and exerts a downward pressure on the collar. The outer end of the bolt 13 has a cross-handle 16 and is furnished with a cross-pin 17 which is located at such a distance from the lower end of the bolt that, when this bolt is raised, the pin may be engaged with the surfaces of the ledges 12—12 by giving the bolt a quarter turn.

The surface of the driving-head which the locking ring surrounds is furnished with one or more perforations 18 in which the lower end of the locking-bolt 13 engages when depressed by the spring to lock the ring 8 to the driving-head.

Secured to the driving-head 7 is a bent arm 19 which, when the ring 8 is shifted to lock the wild-cat to the driving-head, strikes the cross-handle 16 of the locking-bolt and turns the same until the pin 17 is moved off of the ledges 12—12 and allows the spring to act and force the bolt downward.

In the modification shown in Fig. 4 the locking-bolt 13 is lifted by a cam 20 pivoted to the bolt and having a handle 21. A downward pressure is exerted on the cam by the bent spring 22 sufficiently to force the end of the bolt into the socket 18 when the cam is thrown by the lever or arm 19 striking the handle 21.

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

1. In a windlass having a wild-cat, a driving-head and a device for locking the wild-cat to such driving-head, the combination with said locking-device, of a latch-mechanism adapted to lock the same to the driving-head, as described.

2. In a windlass having a wild-cat, a driving-head and a locking-ring by the shifting of which the wild-cat and driving-head are connected and disconnected, the combination with the locking-ring, of a latching-device adapted to latch the ring to the driving-head when desired, as described.

3. In a windlass having a wild-cat, a driving-head and a locking-ring by the shifting of which the wild-cat may be connected with the driving-head, the combination with the locking-ring, of an automatic latching-device adapted to be automatically operated by the shifting of the ring to latch the same to the driving-head, as described.

4. The combination with the wild-cat 6 loosely mounted on the shaft 5, the driving-head 7 keyed to said shaft and having one or more sockets 18, and the locking-ring 8 having the depressions 10 and 11—11 and socket 9 carried by the driving-head and adapted to connect the same with the wild-cat, of the spring-operated bolt 13 having the handle 16 and pin 17 and an arm 19 carried by the driving-head, as described.

In witness whereof we have hereunto set our hands.

EVERETT B. BRYANT.
ROBERT J. VICTOR.

Witnesses:
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M. F. BLIGH.