

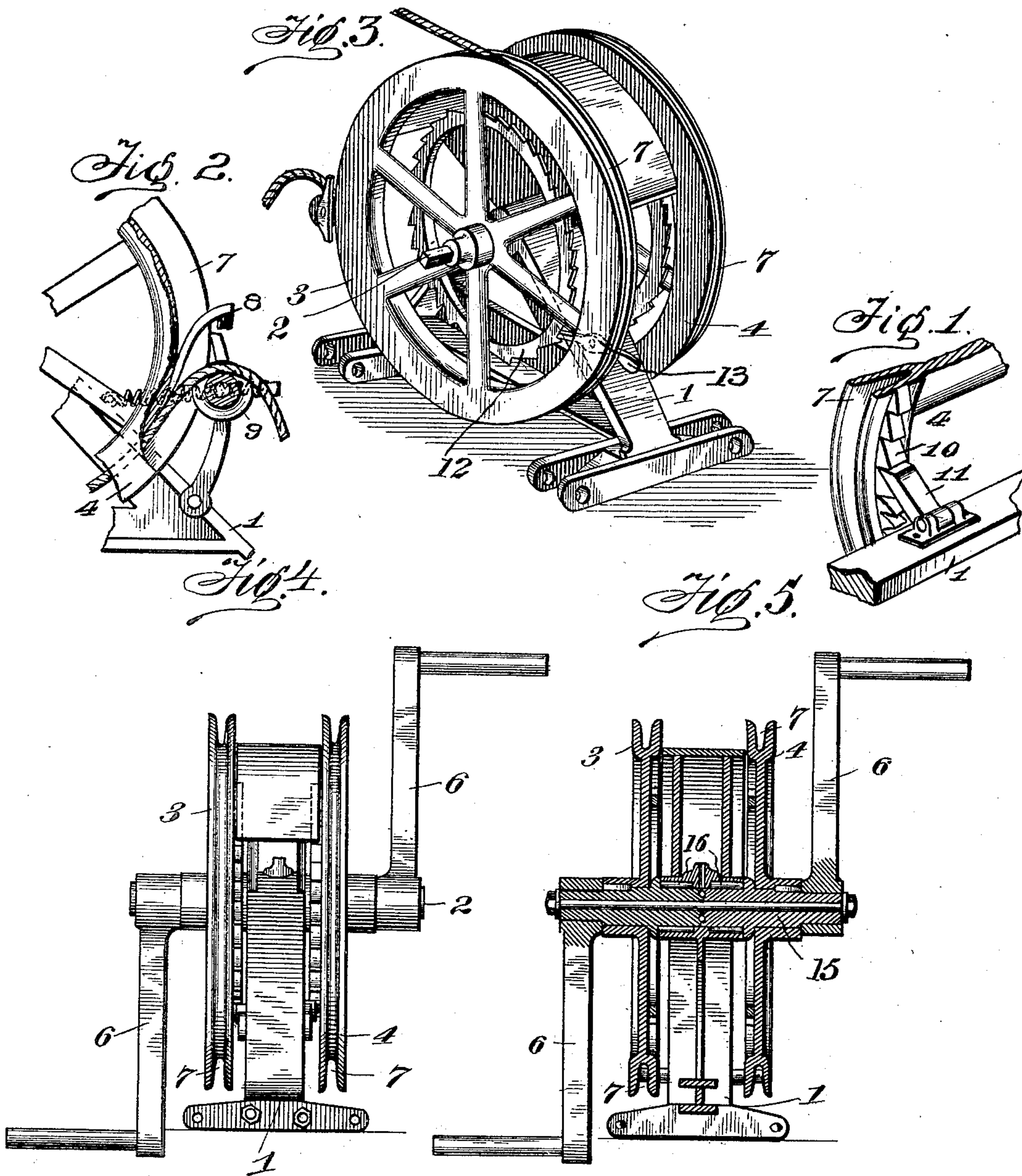
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Patented Apr. 8, 1902.

W. B. LANTZ.
SEINE PURSING MACHINE.

(Application filed Dec. 28, 1900.)

(No Model.)



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UNITED STATES PATENT OFFICE.

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SEINE-PURSING MACHINE.

SPECIFICATION forming part of Letters Patent No. 697,150, dated April 8, 1902.

Application filed December 28, 1900. Serial No. 41,404. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. LANTZ, a citizen of the United States, residing at Gloucester, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Seine-Pursing Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in machines for hauling a purse-line of a seine, and is particularly adapted to boats which are used for hauling seines.

The invention consists of a double speed seine-pursing machine comprising a suitable frame; a shaft mounted in said frame; wheels or drums mounted on said shaft, each wheel or drum being provided with a deep rope gripping and holding groove, the construction being such that the rope will be gripped and held in place without auxiliary gripping means; clearers for removing the rope from the groove; means for operating the wheels or drums, whereby one of the wheels or drums may be operated independently of the other.

The invention also consists in certain other novel constructions, combinations, and arrangements of parts, as will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a detail perspective view of one of the wheels or drums, showing a pawl engaging a rack on the face of the wheel or drum. Fig. 2 is a detail perspective view showing the construction and arrangement of the clearer and sheave for directing the rope away from the machine after it has been cleared from the groove. Fig. 3 is a perspective view of my improved machine, showing the ratchet-teeth on the inner edge of the drum or wheel. Fig. 4 is an end elevation of the same; and Fig. 5 is a vertical transverse section through a slightly-modified form of construction, showing particularly a divided or two-part shaft.

My present invention has relation to double speed seine-pursing machines as distinguished from single speed-machines and from double power-machines and single speed and power machines, the distinction being as follows: I term a machine which is provided

with interposed or added gearing for increasing or multiplying the power at a sacrifice of speed as a "power-machine" and term a machine which is not equipped with such gearing as a "speed-machine." I shall observe this distinction throughout the specification and claims. When I therefore state that my invention relates to a double speed-machine, I mean a machine having two wheels or drums, each of said wheels or drums being provided with a single groove for receiving and gripping the ends of a purse-line of a seine and without any interposed or added gearing for increasing the power at the sacrifice of speed.

Another feature of my invention is a provision of deep substantially U-shaped gripping-grooves, one groove in each wheel or drum, the construction and arrangement being such that both ends of the rope will be firmly gripped and simultaneously hauled in without auxiliary gripping means.

The particular advantage of a double speed-machine is in handling a small seine with a small crew, there being no necessity for a double power-machine with gearing for increasing the power and there not being sufficient men in the crew to have two single machines with each machine on a separate portion of a boat, with men at each machine for properly managing the same.

I have found from practical experience that it is necessary in the seining business to have different types of machines for different classes of work and different circumstances—as, for instance, small seines and small crews and large seines and large crews.

1 in the drawings represents the frame of the machine, 2 a shaft mounted therein, and 3 and 4 grooved rope-gripping wheels or drums. The frame is of any suitable construction and may be secured to a support in a boat in any suitable manner, as by hinging, but preferably in such a manner as to enable the machine to be removed out of the way of the rowers. The shaft 2 is mounted in the frame in any suitable manner, and the grooved wheels or drums 3 and 4 may also be mounted on the shaft in any suitable manner, so as to be capable of being operated thereby. The drums 3 and 4 may be operated through the means of a pulley (not shown) or the crank-handles 6. (Shown in Figs. 4 and 5.) The

wheels or drums 3 and 4 are each provided with a deep purse-line-gripping-groove 7, which grooves are substantially U-shaped in vertical cross-section and have a gradual taper outward from the throats thereof. By constructing the grooves substantially U-shaped in vertical cross-section and having the entrance to the groove enlarged or flaring a wet swollen rope is permitted to enter the groove and as the rope passes around the groove to be pressed by reason of the great tension into the bottom of said groove and to rest in such position. By reason of the great tension and the shape of the groove the rope will be held in said groove with sufficient tenacity to haul in the seine without liability of slipping and without auxiliary gripping or clamping means, it requiring a clearer to remove the rope from the groove. This construction of groove differs from ordinary pulleys or drums provided with deep grooves, which are guiding or retaining grooves only. An important feature of my invention is this construction of a flaring groove having a sufficient space at the bottom thereof for the reception of the rope and the capability of holding the same tightly in the bottom of the groove. In a V-shaped groove it is impossible for the rope to get all the way into and rest in the bottom of the groove, and auxiliary clamping or gripping means have to be employed to prevent the rope slipping or jumping out. With my construction and arrangement the strain or pull is direct on the groove, and as fast as the rope is hauled in it is automatically removed by a clearer 8, which fits closely in the groove, as clearly shown in Fig. 2, in this respect my invention differing from ordinary pulley or rope transmission mechanism in which the rope is not removed from the drum as fast as it is received by the same and in which auxiliary tension means are employed in connection with the rope and in which the rope is simply used for transmitting power.

To facilitate the guiding of the rope away from the groove as fast as it is removed by the clearer 8, I provide a guiding means 9, as clearly shown in Fig. 2, which consists, preferably, of a pivoted spring-actuated arm carrying a sheave 9, as clearly shown in said Fig. 2.

To prevent the accidental return of the wheels or drums when for any reason the hauling-in operation is stopped or after the seine has been pursed, I provide a ratchet 10 on the side of said wheels and a pawl 11 on the frame, as clearly shown in Fig. 1, or the ratchet may be in the form of a rim or wheel, as 12, as clearly shown in Fig. 3, and adapted to be engaged by the pawl 13.

The shaft 2 may be a divided or two-part shaft, as shown at 15 in Fig. 5. The machine is provided with suitable roller-bearings 16 to facilitate the operation of the drum. When a divided or two-part shaft is employed, one end of the shaft may be operated independ-

ently of the other, and consequently one grooved wheel can be operated independently of the other. This is important, as in the event of one of the purse-lines, or, more technically speaking, one of the ends of the purse-line, fouling that side of the machine on which the fouling has occurred can be thrown out of action and the rest of the line be hauled in by the other side of the machine or until the foul end of the line has been straightened out.

By constructing the clearer 8 separate from the spring-actuated guiding-sheave 9 for directing the rope away from the machine after it has been removed from the groove by the clearer 8 and not connecting the same together by one supporting-frame, as shown in my pending application, No. 31,445, dated September 28, 1900, there is no liability of the rope getting under or past the clearer and forcing the same out, as might happen in the construction as shown in my application above referred to, especially where a knot is in the rope or where the rope has been joined or spliced. The location of the guiding and directing sheave just forward of the clearer and close thereto and also in line with the groove of the wheel and also close thereto is important, as the removed rope falls directly onto the sheave and is directed away from the machine and can be coiled out of the way by an attendant.

As heretofore stated, the machine is free from all interposed or added gearing for increasing or multiplying the power at a sacrifice of speed, which simplifies the construction, reduces its cost, facilitates the handling of the same, and produces a very compact and practical machine for use in hauling in comparatively small seines and where a crew is not large enough to warrant the operation of two single machines in one boat or two single machines in different boats, one machine being in each boat.

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

1. A double speed seine-pursing machine, comprising in its construction a suitable frame, a shaft mounted in said frame, independently-operable wheels or drums mounted on said shaft, each wheel or drum having a deep substantially U-shaped rope-gripping groove which tapers slightly outward from the bottom to the top thereof, clearers for removing the rope from the grooves, the construction and arrangement being such that when the ends of the purse-line attached to a seine have been entered into the grooves of the wheels or drums, and said wheels or drums rotated, the rope will be gripped and held firmly in the bottom of the grooves without any auxiliary gripping means until it is removed by the clearers, substantially as described.

2. A double speed seine-pursing machine comprising a suitable frame, a two-part shaft

5 mounted in said frame, wheels or drums mounted on the two parts of said shafts, each wheel or drum having a groove, a crank-handle on each shaft, the grooves being of such shape and construction as to grip the ends of the purse-line, and draw in the same without auxiliary gripping means, and clearers for automatically removing the rope from the grooves, the construction also being such that

one wheel or drum may be operated independently of or simultaneously with the other, substantially as described. 10

In testimony whereof I hereunto affix my signature in presence of two witnesses.

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