(No Model.)

W. S. WINSOR.

CHAIN PROPELLER.

No. 599,050. Patented Feb. 15, 1898.

Fig. 1.

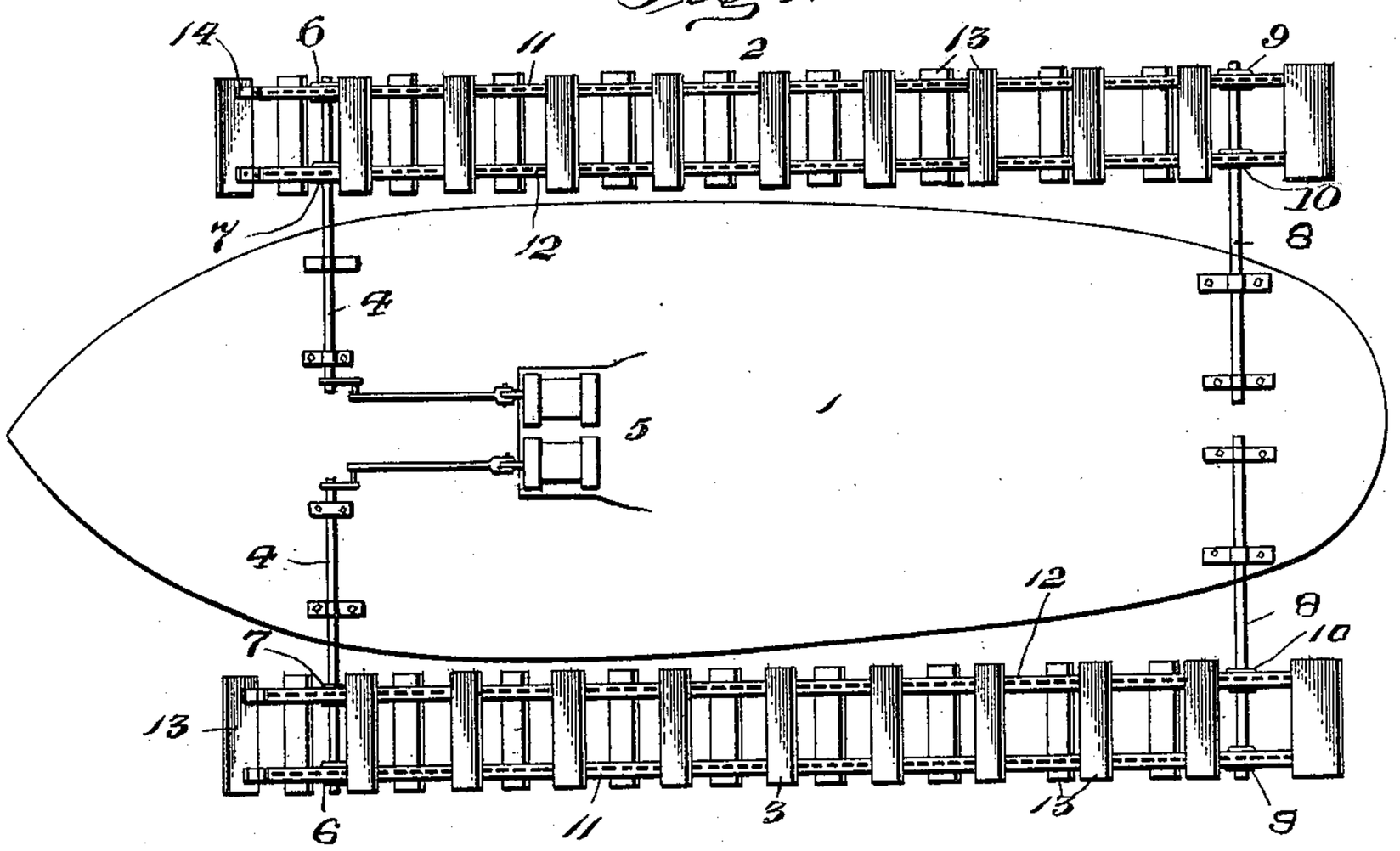
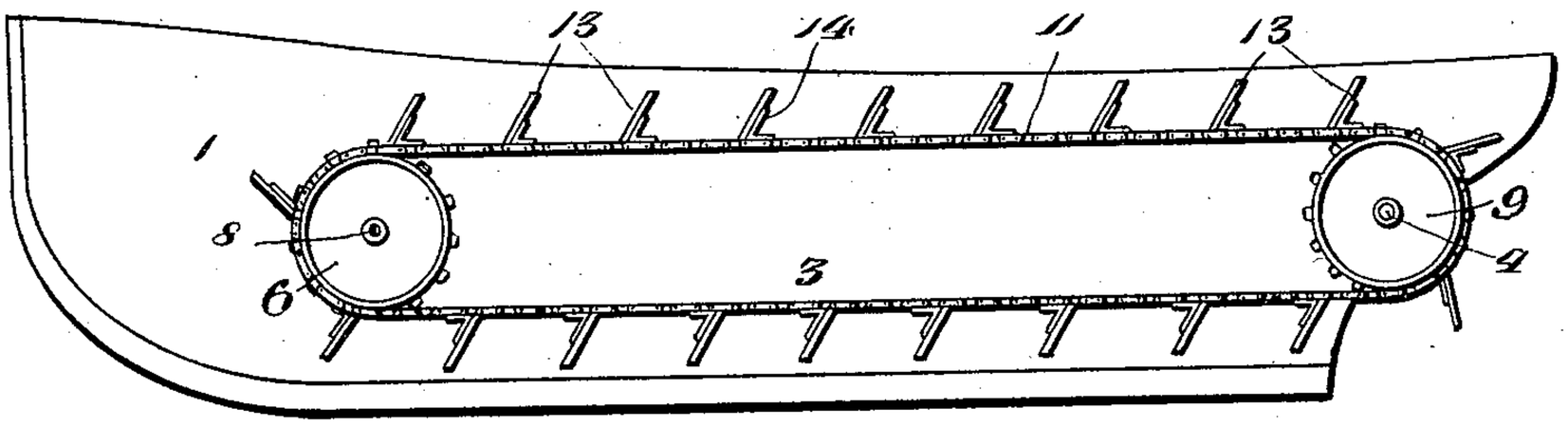


Fig. 2.



WITNESSES:

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WILLIAM S. WINSOR, OF ST. LOUIS, MISSOURI.

CHAIN-PROPELLER.

SPECIFICATION forming part of Letters Patent No. 599,050, dated February 15, 1898.

Application filed November 19, 1896. Serial No. 612,710. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. WINSOR, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Ship Propulsion; 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 ship propulsion.

My object is to provide simple and cheap propelling mechanism for ships which will be of such improved construction that the vessel may be propelled rapidly and steered easily with a minimum expenditure of power.

The invention consists of certain improved devices combined in a novel manner, which will be more fully described hereinafter and particularly recited in the appended claim.

In the accompanying drawings, Figure 1 is a plan view showing the vessel equipped with my improved propelling mechanisms, and Fig. 2 a side elevation thereof.

The numeral 1 designates an ordinary ship. Two of my improved mechanisms are employed, they being designated by the numerals 2 and 3, respectively, and located at opposite sides of the vessel; but as they are duplicates a description of one will suffice. At 4 is shown a crank-shaft which is journaled in suitable bearings connected to the vessel and it extends out over the sides thereof. The numeral 5 designates an engine employed for driving this crank-shaft. Carried by this crank-shaft are sprocket-wheels 6 and 7. At the stern end of the vessel there is located a second shaft, which I shall term an "auxiliary" shaft, designated by the numeral 8 and which is journaled in suitable bearings and projects from the side of the vessel in parallel relation to the crank-shaft. This shaft carries two sprockets 9 and 10 of the same size as sprockets 6 and 7.

The numerals 11 and 12 designate sprocket-chains which pass around sprockets 6 and 9 and 7 and 10, respectively. At 13 are shown a series of paddles, which may be of any preferred construction and inclined at an angle to the chains, being suitably connected to the latter in parallel relation by irons 14. Any preferred mechanism could be employed for raising and lowering the fore and aft shafts, so that any desired degree of dip of the paddles in the water might be obtained. Hence in the present instance I have not shown this mechanism. Ordinarily the engines 5 are driven at the same speed and pressure. Of course it is obvious that inasmuch as the engines 5 are independent either propelling mechanism could be operated singly, if desired, and also that the propelling mechanisms might be operated at different speeds and the paddles located at different depths in the water, so that, if desirable, the propelling mechanisms could be used to steer the ship should the rudder become lost or damaged.

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

The herein-described combined ship propulsion and steering mechanism comprising independent shafts journaled in bearings at the front of the vessel and extending out from the sides thereof, a plurality of sprocket-wheels secured to the outwardly-projecting portions of said shafts, independent shafts journaled in bearings connected to the vessel at the rear thereof and likewise extending out from opposite sides of said vessel, a plurality of sprocket-wheels secured to said shafts in alinement with the sprocket-wheels on the shafts at the front of the vessel, a plurality of sprocket-chains at each side of the vessel which chains run over the sprocket-wheels of the front and rear shafts, inclined blades or paddles connected to all the sprocket-chains at the respective sides of the vessel by angle-irons, and independent engines operatively connected to the shafts at the front of the vessel whereby the propelling mechanisms can be operated simultaneously or independently to propel or steer the vessel.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM S. WINSOR.

Witnesses:

W. B. PLUMMER,

GEO. GUTHRIE.