

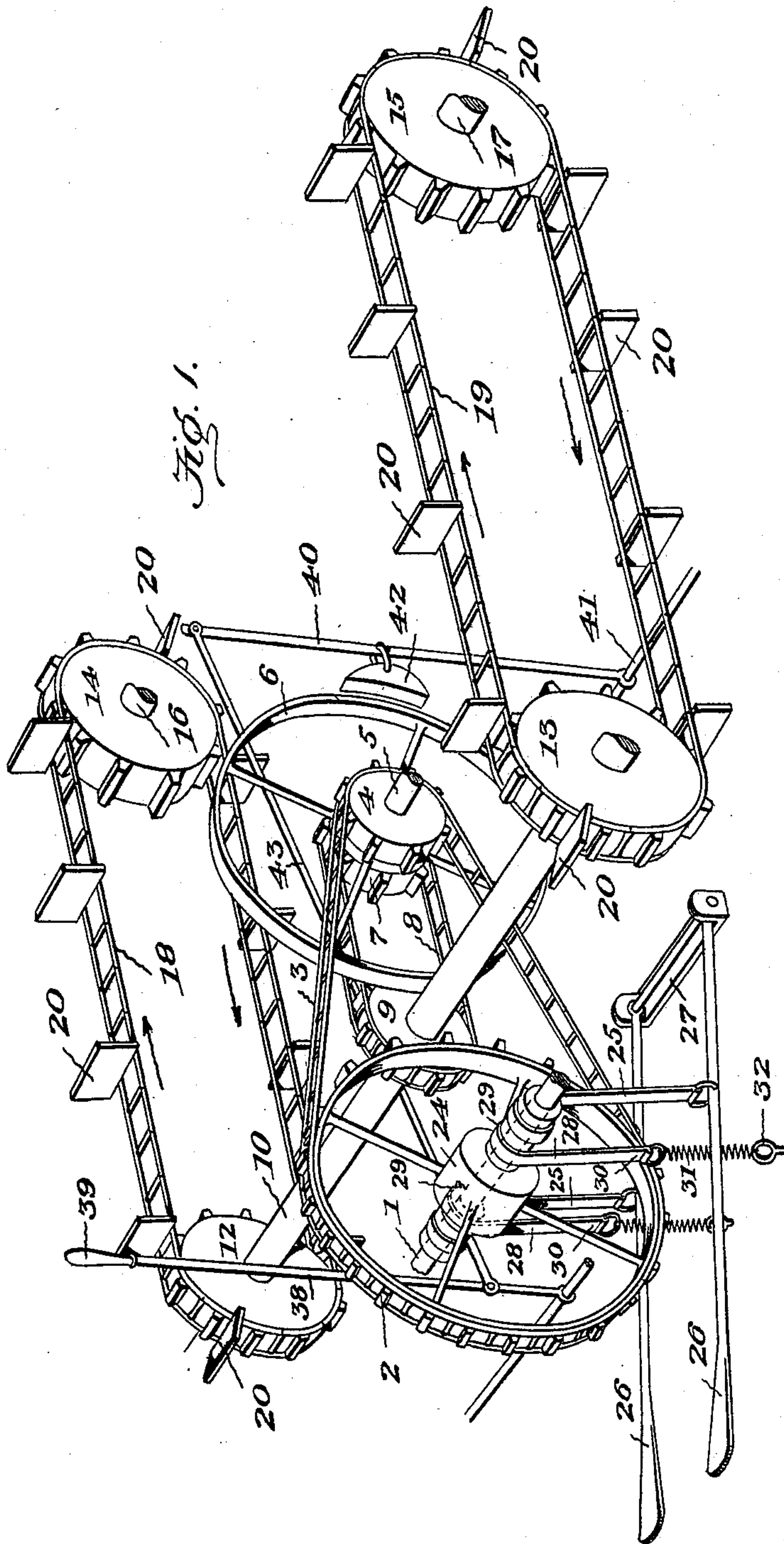
(No Model.)

2 Sheets—Sheet 1.

J. W. M. D. MOORE.  
PROPELLER FOR BOATS.

No. 583,762.

Patented June 1, 1897.



Witnesses  
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Attorney

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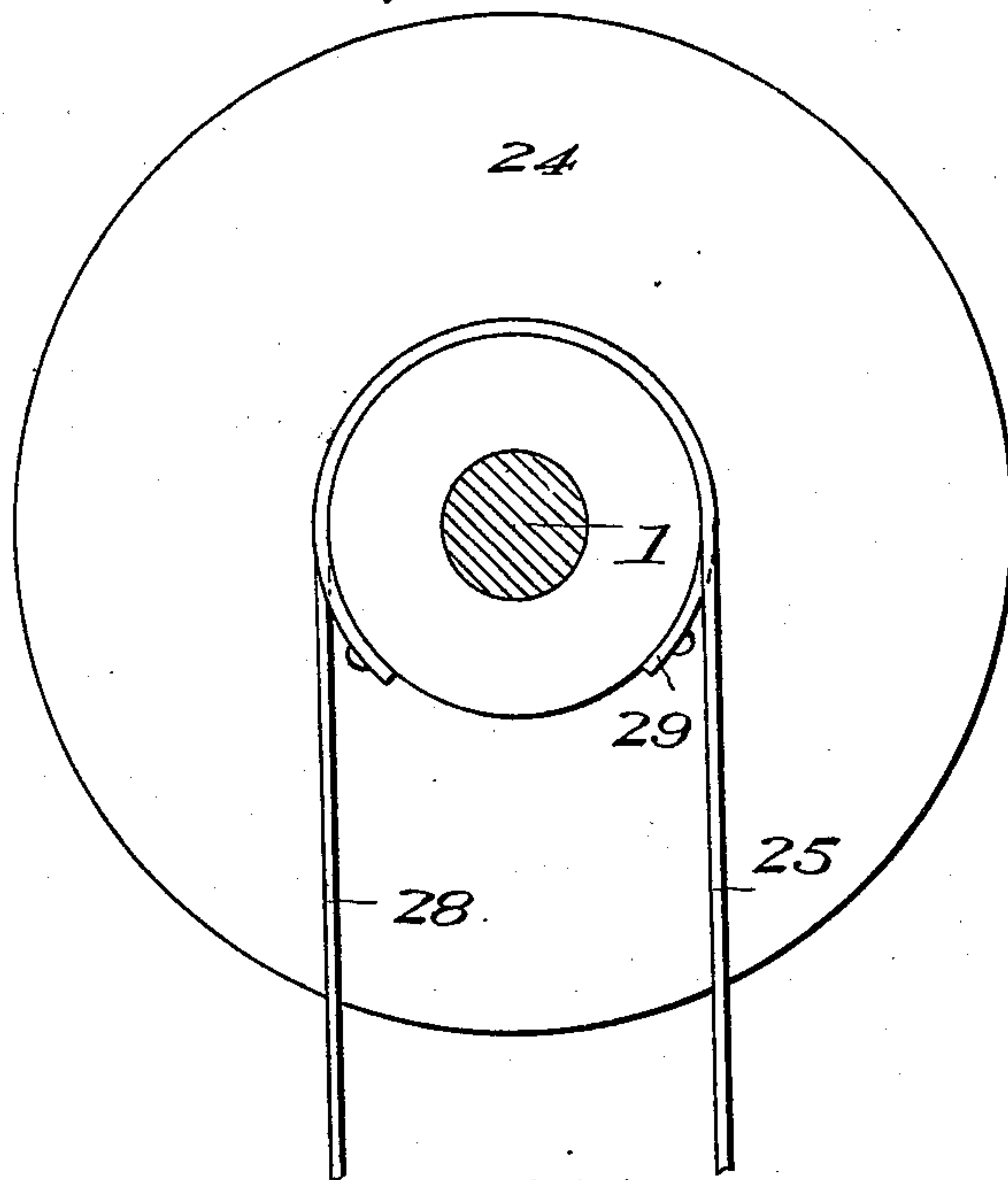
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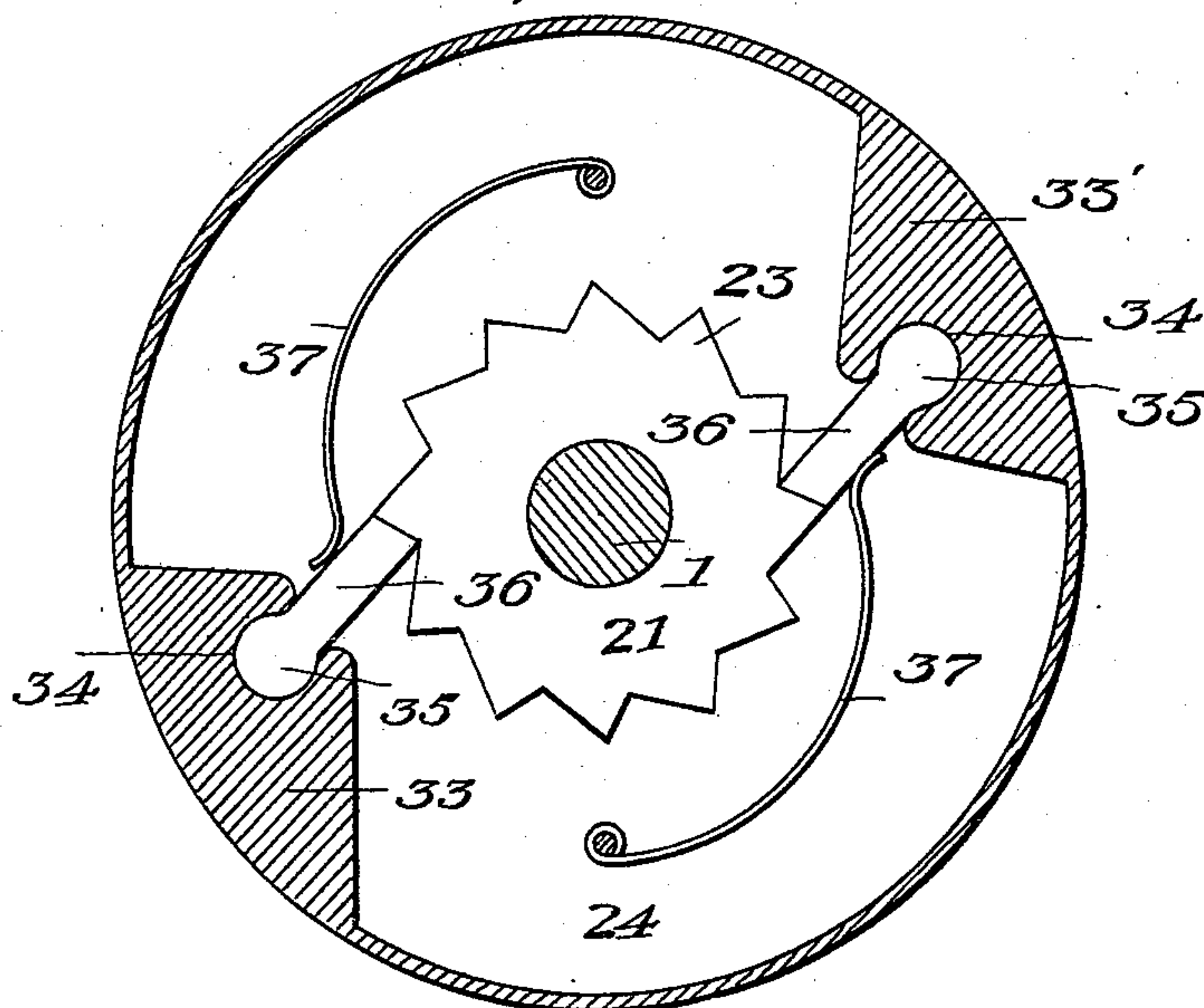
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*Fig. 2.*



*Fig. 3.*



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# UNITED STATES PATENT OFFICE.

JOHN WESLEY MACK DONEL MOORE, OF MOSS, TENNESSEE.

## PROPELLER FOR BOATS.

SPECIFICATION forming part of Letters Patent No. 583,762, dated June 1, 1897.

Application filed December 19, 1896. Serial No. 616,265. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN WESLEY MACK DONEL MOORE, a citizen of the United States, residing at Moss, in the county of Clay and State of Tennessee, have invented certain new and useful Improvements in Propellers for Boats; and I do 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 mechanism for propelling boats and similar vessels; and the object is to provide a simple, durable, and efficient device for this purpose.

To this end the invention consists in the construction, combination, and arrangement of the same, as will be hereinafter more fully described, and particularly pointed out in the claims.

In the accompanying drawings the same figures of reference indicate the same parts of the invention.

Figure 1 is a perspective view of my improved propelling mechanism for boats. Fig. 2 is an enlarged side elevation of the ratchet-drum, and Fig. 3 is a vertical longitudinal section of the same.

1 represents the main driving-shaft, suitably mounted in the usual bearings in the boat. This shaft is provided with a sprocket-wheel 2, from which a sprocket-chain 3 runs to a smaller sprocket-wheel 4 on a counter-shaft 5.

6 represents a balance or fly wheel also fixed on the counter-shaft 5, and 7 is a sprocket-wheel also rigidly fixed on the said shaft 5. A sprocket-chain 8 connects said wheel 7 with a sprocket-wheel 9 on a transverse shaft 10, mounted in bearings in the sides of the boat or vessel, the outer ends of which project a sufficient distance outside of the hull to receive the sprocket-pulleys 12 and 13.

14 and 15 are similar sprocket-pulleys loosely mounted on short shafts 16 17, secured on the outside of the hull and in the same horizontal plane as the shaft 10.

18 and 19 represent endless sprocket-chain belts connecting the sprocket-pulleys 12 and 14 on the one side and the sprocket-pulleys

13 and 15 on the other. These sprocket-chain belts are each provided with a series of rectangular blades or paddles.

21 and 21 represent ratchet-wheels having star-shaped teeth 23, and they are fixed on the main shaft, one on each side of the sprocket-wheel 2.

24 represents a drum or cylinder on each side of the sprocket-wheel 2, encompassing the ratchet-wheels 21 21 and mounted so as to revolve freely on the shaft 1, and 25 is a strap, one end of which is suitably secured to said drum, and its other end, after passing around the drum, is secured to a foot-lever 26, fulcrumed in a bracket 27, fixed to the framework in the bottom of the boat. A second smaller strap 28 has one end 29 fastened to the drum, and it then passes around said drum in the opposite direction to the strap 25, its lower end 30 being secured to the upper end of a spiral spring 31, the lower end of which is fixed to an eyebolt 32, secured to the framework in the bottom of the boat.

33 33' represent integral brackets on the inside of the drum 24, and these are each formed with transverse circular recesses 34, in each of which is pivoted the correspondingly-shaped hub 35 of a pawl 36, the free end of which is adapted to engage the star-shaped teeth 23 of the ratchet-wheels, being held in contact therewith by the flat springs 37.

It will be seen by reference to the drawings that two complete foot-lever systems are employed, one on each side of the main driving-wheel 2, and when alternately operated by the right and left foot a continuous rotary motion is imparted to the endless sprocket-chain belts 18 and 19 in the direction shown by the arrows.

40 represents a lever fulcrumed on a rod 41 in the frame and provided with a friction brake-shoe 42, which bears against the fly-wheel, and 38 is a handle-bar connected to the brake-lever 40 by a rod 43, its hand-grip 39 being within convenient reach of the operator to apply the brake and control the head-way of the vessel, as desired.

While I have described and illustrated my propeller as operated by foot-power, I do not desire to be confined to the same, as it is



obvious that any suitable motive power, as steam, gas, gasolene, or storage batteries, may be employed.

Although I have specifically described the construction and relative arrangement of the several elements of my invention, I do not desire to be confined to the same, as such changes or modifications may be made as clearly fall within the scope of my invention without departing from the spirit thereof.

Having thus fully described my invention, what I claim as new and useful, and desire to secure by Letters Patent of the United States, is—

15 1. A propeller for boats, comprising the main driving-shaft, the sprocket-wheel mounted thereon, the counter-shaft; the sprocket-wheel and balance-wheel mounted thereon, the sprocket-chain connecting said sprocket-wheels, the transverse shaft provided with a sprocket-wheel, the chain connecting said last-mentioned sprocket-wheels, said transverse shaft having the sprocket-pulleys 12 and 13 mounted on its outer ends,

in combination with the loose sprocket-pulleys 14 and 15 and the endless sprocket-chain belts 18 and 19, provided with the paddles 20, substantially as and for the purpose set forth.

2. A propeller for boats, comprising the main driving-shaft, the sprocket and ratchet wheels fixed thereon, and having the drums provided with pivoted pawls, and means for intermittently operating said drums, in combination with the counter-shaft and the transverse shaft in operative connection with the said main shaft, and the sprocket-wheels on said transverse shaft, which wheels are in operative connection, by means of sprocket-chains, with loose sprocket-wheels, said chains being provided at suitable intervals with paddle-blades, substantially as and for the purpose set forth.

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

JOHN WESLEY MACK DONEL MOORE.

Witnesses:

W. L. BROWN,

D. W. CULLOM.