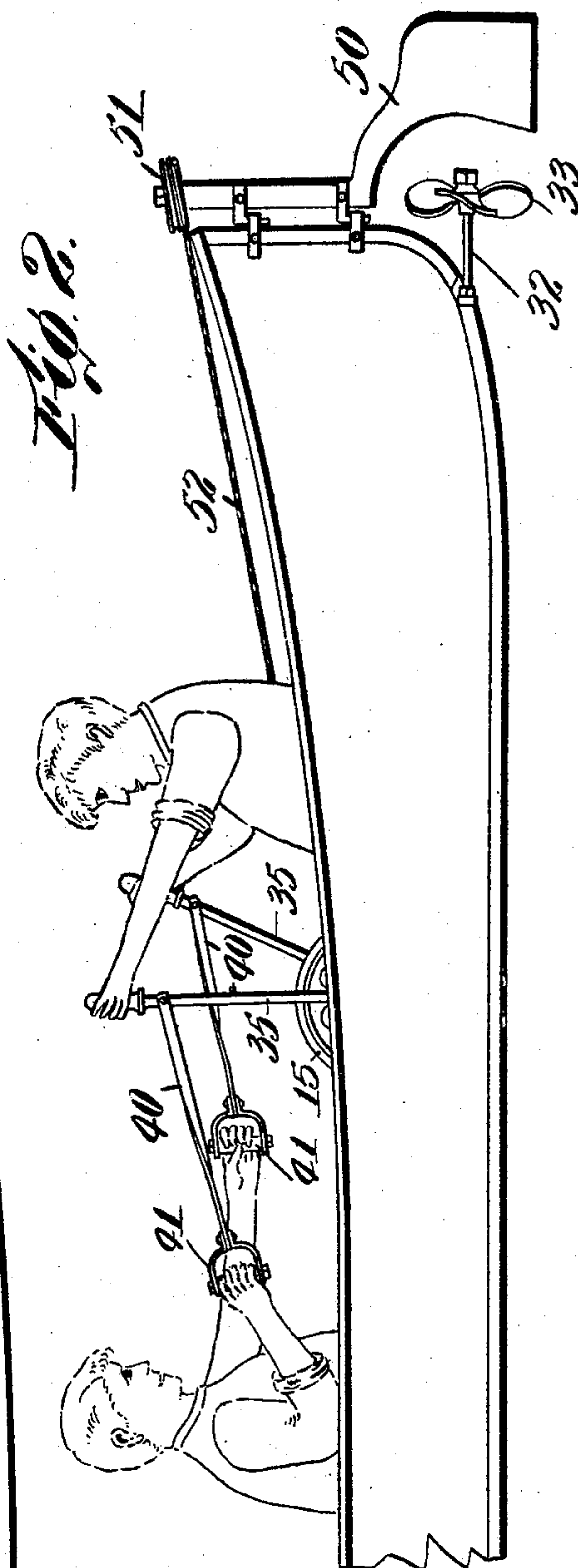
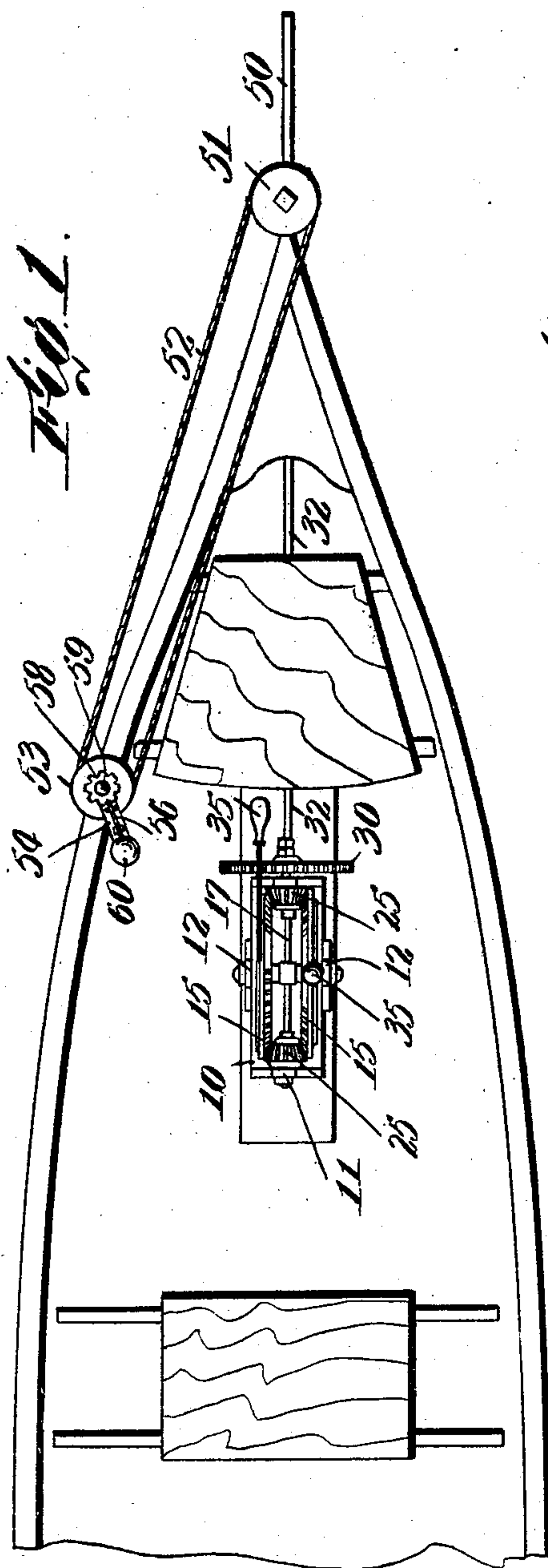


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BOAT PROPELLING DEVICE.  
APPLICATION FILED SEPT. 16, 1907.

929,174.

Patented July 27, 1909.  
2 SHEETS—SHEET 1.



Witnesses:

C. F. Mason  
E. M. Allen

Inventor:  
N. R. Thibert

By Attorneys

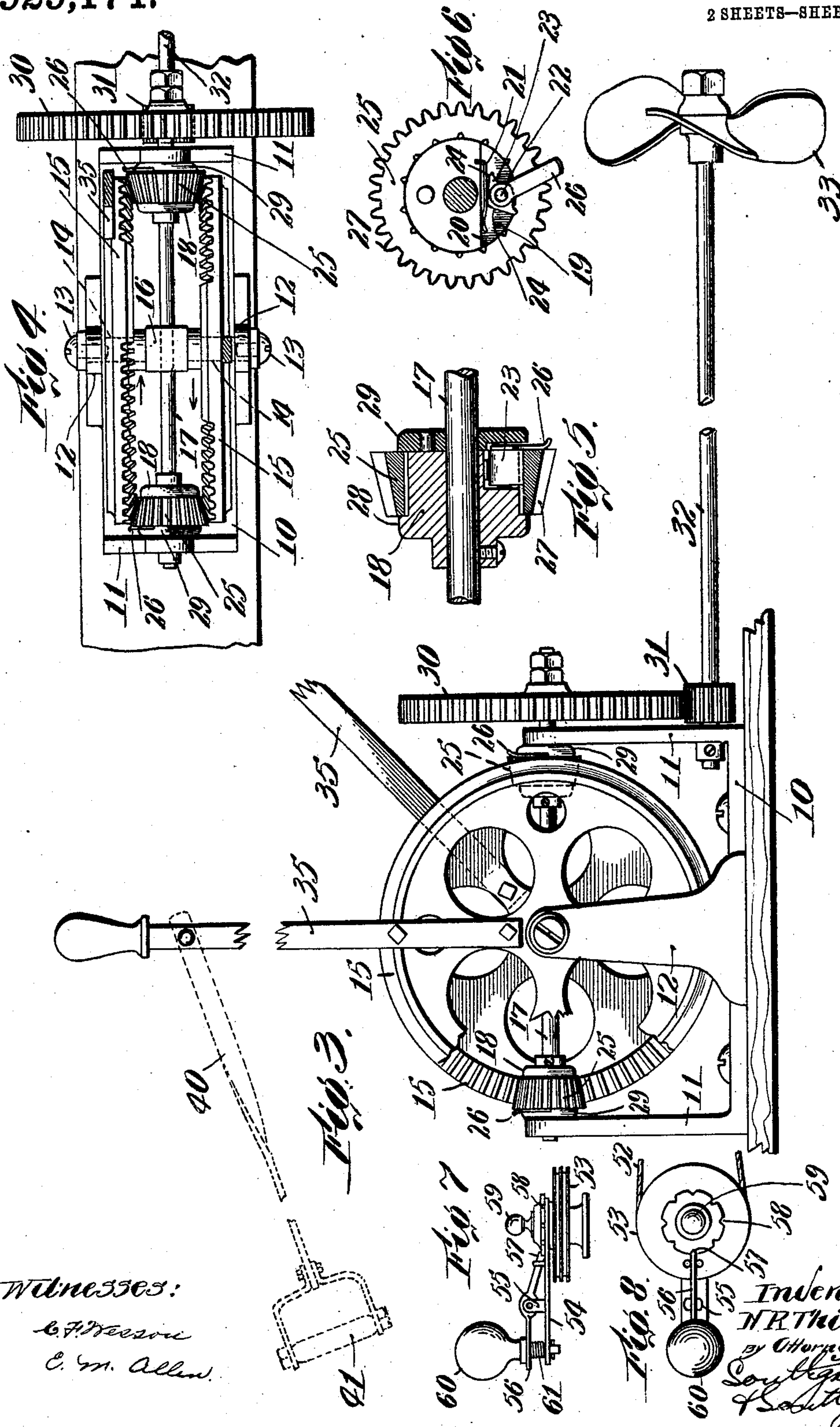
Southgate & Southgate

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Witnesses:  
C. F. Wilson  
C. M. Allen.

Inventor:  
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By Attorneys  
S. H. H. H. H.



# UNITED STATES PATENT OFFICE.

NAPOLEON R. THIBERT, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO MATTHEW J. WHITTALL AND ALFRED THOMAS, OF WORCESTER, MASSACHUSETTS.

## BOAT-PROPELLING DEVICE.

No. 929,174.

Specification of Letters Patent.

Patented July 27, 1909.

Application filed September 16, 1907. Serial No. 393,205.

*To all whom it may concern:*

Be it known that I, NAPOLEON R. THIBERT, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Boat-Propelling Device, of which the following is a specification.

This invention relates to a device for propelling boats by hand, the principal objects thereof being to provide a convenient and efficient multiplying device for the power, whereby the operator can more efficiently rotate the propeller than has been the case heretofore; to provide means whereby two or more persons can simultaneously work the device; and generally to improve and simplify the construction of boat propelling devices.

Reference is to be had to the accompanying drawings which show a preferred form of the invention, and in which—

Figure 1 is a plan of a portion of a boat with a preferred form of the invention applied thereto. Fig. 2 is a side elevation of the same. Fig. 3 is a side elevation of a portion of the operating mechanism, with parts broken away. Fig. 4 is a plan of the same. Fig. 5 is a sectional view of the ratchet mechanism on the line of the shaft. Fig. 6 is an end elevation of the same. Fig. 7 is a side elevation of a steering mechanism, and Fig. 8 is a plan of the same.

The invention is illustrated as being embodied in a construction in which a frame 10 is mounted on the bottom of the boat in any convenient place, this frame having ends 11 and sides 12 illustrated as in the form of uprights. The sides are perforated at the top and through these perforations pass screws 13 which hold a pair of studs 14 in place, on which are mounted to freely turn a pair of gear wheels 15. These are shown as bevel gear wheels mounted on the inside of the sides of the frame. Between the hubs of the two wheels is a block 16 which is fixed to the studs. The end uprights 11 have bearings through which passes a shaft 17. This shaft also bears in the block 16. On this shaft are fixed a pair of disks or the like 18 which have cut away portions 19 having a flat surface 20. On this surface is a spring 21, and on the disks are studs 22 on which are pivoted a pair of triangular pawls 23. These pawls have two flat faces 24 adapted to come into contact

with the spring 21, and are of such shape that when turned either way on the shaft the springs will hold them in position. These pawls have teeth designed to engage notches in a rotatable ratchet wheel 25. It will be seen that the pawls can be set by means of handles 26, which project out at the side of the wheel, so as to transmit rotary motion of the wheel 25 in either direction to the disk. These ratchet wheels are provided with bevel gear teeth 27 and constitute pinions, meshing with the gears 15. The ratchet wheels are held lengthwise in position on the disks by means of a shoulder 28 on each disk and a collar 29 fixed to the opposite end thereof. The shaft 17 extends through the bearing in one of the end uprights and is provided with a gear 30 which meshes with a pinion 31 on the propeller shaft 32 which carries the propeller 33. Each of the gears 15 is provided with a handle 35 securely fixed in position thereon.

It will be seen that the pawls being properly set, the oscillation of one of the handles 35 in either direction will drive one of the bevel pinions positively, while the other will be rotated idly at that time so far as that wheel is concerned. On the return motion the opposite action will take place. In the meantime, however, the other wheel having been oscillated in exactly the opposite direction, it will be seen that both of the pinions are positively rotated in a forward direction all the time, first by one wheel and then by the other, and consequently, that the shaft is given a constant motion of rotation. If it is desired to reverse, both of the pawls 26 are turned to the other position and the operation of the handles is carried on as before.

In order to permit more than one person to operate the device, and thus secure additional speed, a pair of rods 40 are pivotally connected with the two handles, and on each of the rods is mounted a grip 41. The manner of using the two sets of handles and grips will be obvious from Fig. 2.

In order to steer the device, a rudder 50 is provided with a wheel 51 about which passes a flexible connection 52 wound one or more times around the wheel 53. This wheel is provided with an arm 54 for turning it to turn the rudder. In order to fix the rudder in any adjusted position, the arm is provided with a projection 55 on which



is pivoted a lever 56 having a tooth 57 adapted to engage notches 58 in a stationary stud 59. A handle 60 is mounted on the lever 56, and a spring 61 is mounted between the 5 outer end of the lever and the arm to normally hold the lever in locking position.

While I have illustrated and described a preferred form of the invention, I am aware that many modifications may be made therein by persons skilled in the art without departing from the scope thereof as expressed in the claims. Therefore I do not wish to be limited to the particular form shown but

What I do claim is:—

15 1. In a boat propelling device, the combination of a frame having two end and two side uprights, one pair of uprights having bearings, studs carried by the other pair of uprights, gears loosely mounted on said 20 studs, a shaft journaled in said bearings, two pinions loosely mounted on said shaft, each meshing with both of said gears, mechanism for transmitting a motion of rotation from said pinions to the shaft, a propeller, and 25 means for transmitting motion from the shaft to the propeller.

2. In a boat propelling device, the combination of a frame having two end and two side uprights, a pair of inwardly facing 30 bevel gears supported on the inside of one pair of uprights, a handle connected with each of said bevel gears, a shaft journaled in the other pair of uprights, a pair of bevel pinions loosely mounted on the shaft, mesh- 35 ing with said gears, ratchet mechanism for transmitting a motion of rotation of said pinions to the shaft, whereby the oscillation of said handles will constantly rotate said shaft, a gear on said shaft, a second shaft, 40 a pinion on the second shaft meshing with the last named gear, and a propeller on the second shaft.

3. In a boat propelling device, the combination of a frame having end and side up- 45 rights, a pair of studs secured to one pair of uprights and projecting inwardly, a block to which the inner ends of both of said studs are secured, said block being located in the center of said frame, a pair of bevel gears 50 mounted freely to rotate on said studs inside the frame, a shaft journaled in the other pair of uprights of the frame and in said block, a pair of bevel pinions mounted on said shaft, each meshing with both of said 55 bevel gears, ratchet mechanism for transmitting a motion of rotation of said pinions to said shaft, a handle on each of said gears adapted to be oscillated to constantly rotate said shaft, and a propeller connected with 60 said shaft.

4. In a boat propelling device, the combination of a frame having side and end uprights, a pair of inwardly facing bevel

gears supported by one pair of uprights and freely mounted to rotate, a shaft jour- 65 naled in other pair of uprights, a pair of disks on said shaft, a pair of ratchet wheels on said disks, a pawl supported by each disk and adapted to engage the ratchet wheel, said ratchet wheels having bevel gear teeth 70 thereon and constituting bevel pinions each meshing with both of said bevel gears, whereby the oscillation of each of said gears will be transmitted to said pinions alternately and the shaft will be rotated constantly in 75 one direction, said pawls being reversible.

5. In a boat propelling device, the combination of a frame having sides and ends, a pair of bevel gears supported by said sides and freely mounted to rotate, a shaft jour- 80 naled in said ends, a pair of disks on said shaft, a pair of ratchet wheels on said disks, a pawl supported by each disk and adapted to engage the ratchet wheel, said ratchet wheels having bevel gear teeth thereon and 85 constituting bevel pinions meshing with both of said bevel gears, said pawls being reversible, and having handles extending outwardly by which they may be reversed, said disks having springs for engaging the pawls 90 to hold them in forward or reversed position.

6. In a boat propelling device, the combination of a frame having two end and two side uprights, the end uprights having 95 bearings, studs carried by said side uprights, bevel gears loosely mounted on said studs, a shaft journaled in said end bearings, two bevel pinions loosely mounted on said shaft, each meshing with both of said bevel gears, 100 ratchet mechanism for transmitting a motion of rotation from said pinions to the shaft, a propeller, means for transmitting motion from the shaft to the propeller, each of said bevel gears having a handle fixed 105 thereon, and a second handle connected with each of the first named handles.

7. In a boat propelling device, the combination of a pair of gears, a shaft, a pair of pinions on said shaft, each meshing with 110 both of said gears, ratchet mechanism for connecting said pinions with the shaft, a handle rigidly mounted on each of said gears, whereby the oscillation of said handles will constantly rotate said shaft in 115 one direction, and an auxiliary mechanism connected with each handle comprising a rod pivoted to the handle, and a hand grip connected with the rod.

In testimony whereof I have hereunto set 120 my hand, in the presence of two subscribing witnesses.

NAPOLEON R. THIBERT.

Witnesses:

ALBERT E. FAY,

C. FORREST WESSON.