

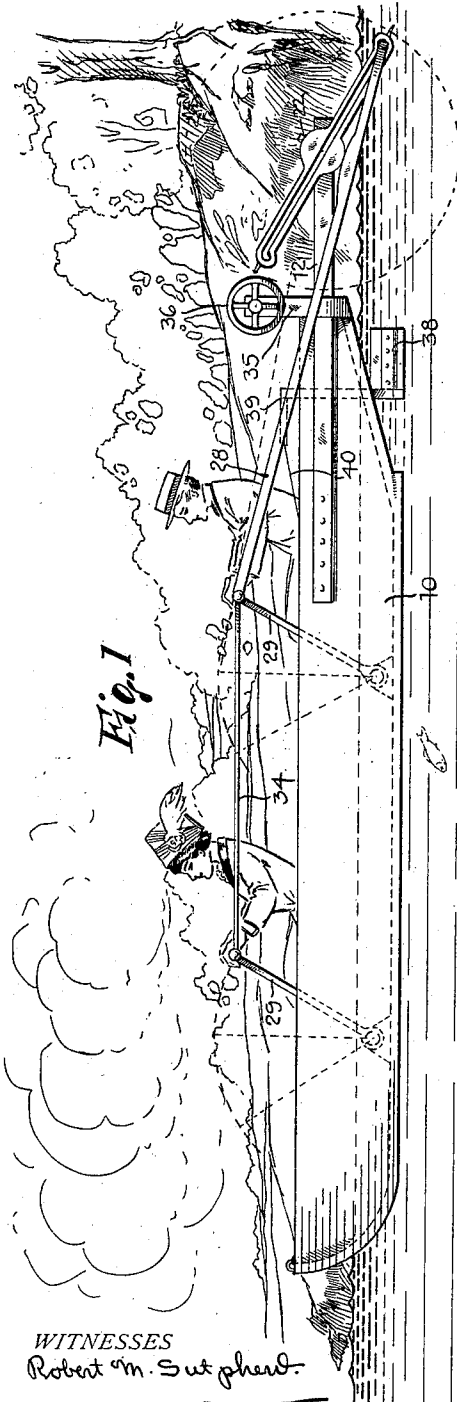
C. FELDER.
ROWING DEVICE.

APPLICATION FILED DEC. 14, 1911.

Patented July 16, 1912.

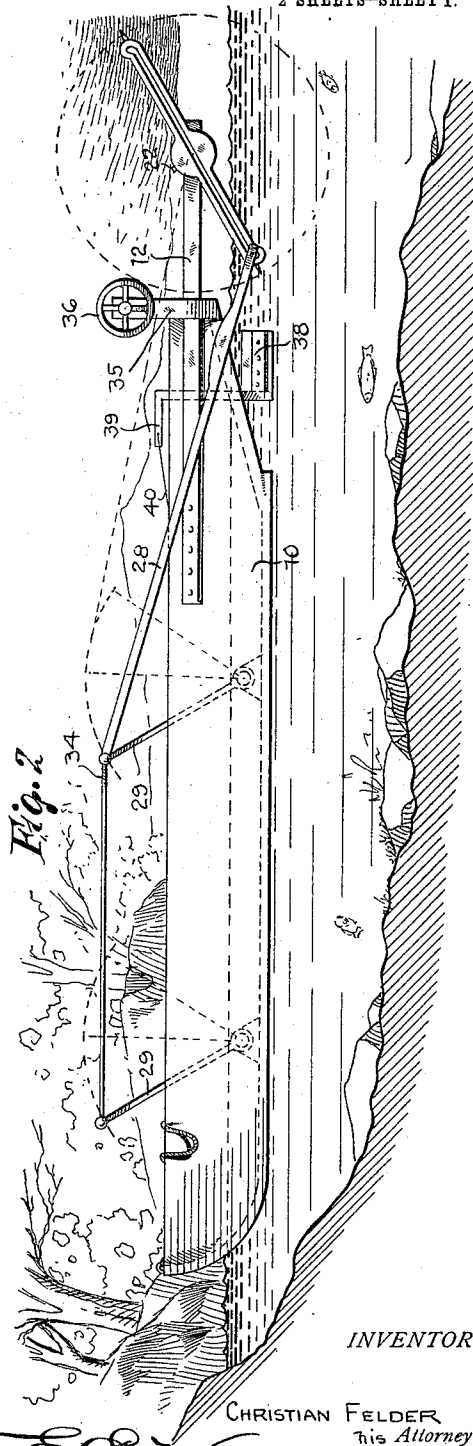
1,032,886.

2 SHEETS-SHEET 1.



WITNESSES
Robert M. Sutphen.

Not Notarized By E. O. Crooman,



INVENTOR

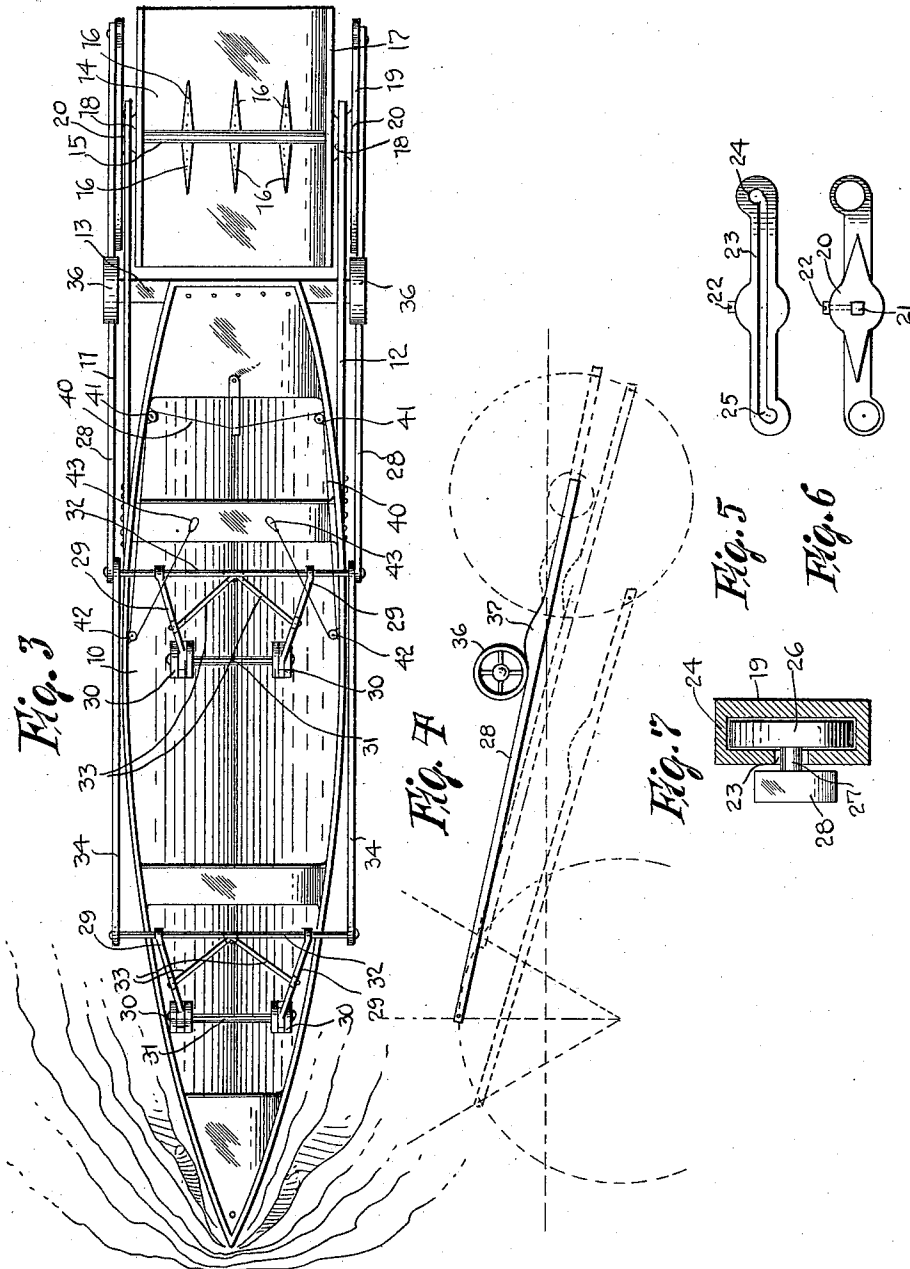
CHRISTIAN FELDER
His Attorney.

1,032,886.

C. FELDER.
ROWING DEVICE.
APPLICATION FILED DEC. 14, 1911.

Patented July 16, 1912.

2 SHEETS—SHEET 2.



WITNESSES
Robert M. Sutphen.

INVENTOR
CHRISTIAN FELDER.

Ross Woodward of E. C. Broome, his Attorney.

UNITED STATES PATENT OFFICE.

CHRISTIAN FELDER, OF MARICOPA, CALIFORNIA.

ROWING DEVICE.

1,032,886.

Specification of Letters Patent.

Patented July 16, 1912.

Application filed December 14, 1911. Serial No. 665,712.

To all whom it may concern:

Be it known that I, CHRISTIAN FELDER, a subject of the Emperor of Germany, residing at Maricopa, in the county of Kern and State of California, have invented certain new and useful Improvements in Rowing Devices, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to boats, and the principal object of the same is to provide a boat with a novel type of propelling means so that the propeller which is mounted in the stern of the boat may be operated by the mechanism which is pivotally mounted in the boat with handle bars in front of each of the seats of the boat. This permits the boat to be very easily propelled and also permits the boat to be moved in the direction in which the person is facing.

This invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a side elevation showing the manner of operating the propelling means. Fig. 2 is a view similar to Fig. 1 with the propelling means moved to the opposite position to that shown in Fig. 1. Fig. 3 is a top plan view of the boat. Fig. 4 is a diagrammatic view showing the manner of operating the device. Fig. 5 is an elevation showing the outer edge of the side strip of the propeller. Fig. 6 is an elevation of the inner face of the side strip of the propeller. Fig. 7 is an enlarged sectional view through the side strip of the propeller with the operating bar connected therewith.

Referring to the accompanying drawings by numerals it will be seen that this device is connected with the boat 10 and comprises a propeller which is rotatably mounted between the ends of the side bars 11 and 12 which are secured to the boat adjacent the stern and are connected intermediate their length by means of a cross bar 13 which is secured to the stern of the boat. The propeller comprises the plate 14 which is mounted upon the center bar 15 and which is braced by the braces 16 which extend to each side of the center bar 15. Side strips 17 carry bearings 18 which fit into the openings formed in the ends of the bars 11 and 12. The center bar 15 extends through the bearings 18 and extends to each side of the bars 11 and 12. A crank bar 19 is mounted upon each of the outer ends of the center bar 15 and is connected with the oper-

ating mechanism so that the propeller may be turned. The crank bars are each provided with the bearing 20 which fits into the opening formed in the end of the bar which carries the propeller and is provided with a socket 21 in which the end of the center bar fits. A set screw 22 passes through the bearing to hold the crank bar in place upon the center bar. The outer face of each of the crank bars is provided with a longitudinally extending groove 23 which communicates with a housing 24 formed in the bar and extending longitudinally thereof. This groove and housing terminate in the enlarged circular heads 24 and 25 which form pivot points so that the propeller may be turned. A disk 26 is mounted in the housing 24 and is provided with a neck 27 which extends through the slot.

A push bar 28 is pivotally connected with each of the necks 27 and is brought forward and connected with the operating mechanism. This operating mechanism comprises the standards 29 which are pivotally mounted in the bearings 30 and have their lower ends connected by the bar 31. Handle bars 32 are carried by the upper ends of the standards 29 and are braced by means of the braces 33 which also hold the standards apart at their upper ends. One of the handles is mounted in front of each of the seats of the boat, and the handle bars are connected by means of the connecting bars 34 so that the operating devices will all move at the same time. The cross bar 13 has a vertical bar 35 at each end which extends above the bars 11 and 12, and these vertical bars carry the wheels 36 which act as guides for the push bars 28 when the cam portion 37 of the bar comes in contact with the wheel.

The rudder 38 is mounted in the stern of the boat and is provided with the usual tiller 39 at its upper end. Cables 40 are connected with the tiller and are passed over the pulleys 41 and 42 and, are led up to a point adjacent the handle 32 where they are formed into loops 43 so that the cables may be conveniently held by the person guiding the boat.

The boat is operated in the following manner:—The person sits on the seat facing the bow of the boat and rocks the operating mechanism upon the pivot so that the push bars 28 are moved backwardly and for-

wardly. As the bars are moved from the position shown in Fig. 2, to the position shown in Fig. 1, the propeller makes a one-half revolution. Upon making a forward movement of the bars the disks slide in the housings until they pass the center of the propeller and the cams 37 come in contact with the rollers 36, thus causing the bars to be pressed down and returning the propeller to the position as shown in Fig. 2.

It will thus be seen that this device may be very readily used since the whole force is brought directly back of the boat thus forcing the boat ahead better than when the propelling means is positioned at each side of the boat. It should also be noted that the person in the boat faces the front of the boat and therefore can see where he is going. This overcomes the necessity of facing the stern of the boat as is the common position assumed when rowing the boat with a pair of oars. When operating this boat, the arms are passed through the loops 43, and therefore, it will be readily seen that by moving the arms the rudder may be turned in the proper direction, without its being necessary to let go of the hand bar 32.

What is claimed is:—

1. A boat, a propeller connected to the rear of said boat, a crank arm carried by each outer end of the center bar of the propeller, each of said crank arms being provided with a longitudinally extending slot communicating with a longitudinally extending housing formed in said crank arm, a disk mounted in said housing, a neck leading from said disk through said slot, a bar connected with said neck, and operating means connected with said bars.

2. A boat, vertical bars carried by said boat, rollers carried by said vertical bars, a propeller carried by said boat, crank arms carried by said propeller, push bars slidably connected with said crank arm, cams formed upon said push bars and adapted to

engage said rollers to guide said push bars, and operating means connected with said push bars.

3. A boat, a propeller carried by said boat, a crank arm connected with each end of the center bar of said propeller, said crank arms being each provided with a longitudinally extending slot terminating in enlarged ends, a disk mounted in said slot and provided with an outwardly extending neck, push bars connected with said necks, and operating means connected with said push bars.

4. In a device of the character described a propeller, a crank arm carried by each outer end of the center bar of the propeller, each of said bars being provided with a longitudinally extending housing, a disk mounted in said housing, a neck leading from said disk, and operating means connected with said neck.

5. A device of the character described comprising vertical bars, rollers carried by said bars, a propeller, crank arms carried by said propeller, push bars slidably connected with said crank arms, cams formed upon said push bars and adapted to engage said rollers to guide said push bars, and operating means connected with said push bars.

6. In a device of the character described, a propeller, a crank arm connected with each end of the center bar of said propeller, said crank arm being provided with a longitudinally extending slot terminating in enlarged ends, a disk mounted in said slot and provided with an outwardly extending neck, push bars connected with said necks, and operating means connected with said push bars.

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

CHRISTIAN FELDER.

Witnesses:

V. D. BLACK,

FLOYD E. KNIGHT.