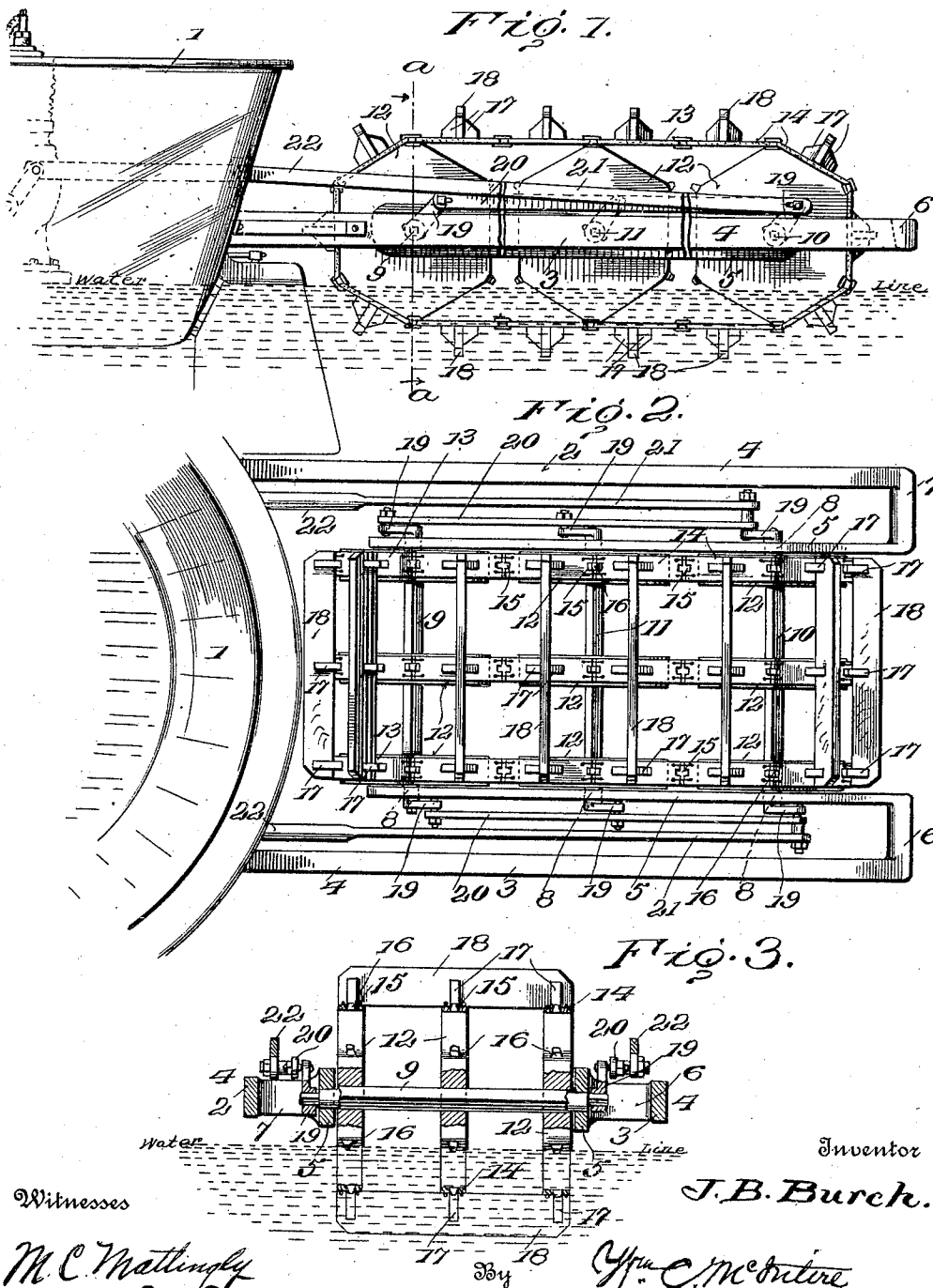


J. B. BURCH.
STEAMBOAT WHEEL.
APPLICATION FILED OCT. 17, 1910.

986,435.

Patented Mar. 14, 1911.



UNITED STATES PATENT OFFICE.

JOHN BOWLIN BURCH, OF BOWLING GREEN, KENTUCKY.

STEAMBOAT-WHEEL.

986,435.

Specification of Letters Patent.

Patented Mar. 14, 1911.

Application filed October 17, 1910. Serial No. 587,552.

To all whom it may concern:

Be it known that I, JOHN B. BURCH, a citizen of the United States, residing at Bowling Green, in the county of Warren and State of Kentucky, have invented certain new and useful Improvements in Steamboat-Wheels; 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.

This invention relates to new and useful improvements in boat propelling mechanism, and more particularly to that class employing endless belts.

An object of this invention is the provision of a device of this character which will be comparatively simple in construction, comprising but few parts, which can be manufactured at a minimum cost.

With the above and other objects in view, this invention resides in the novel features of construction, combinations, formations and arrangements of parts to be hereinafter more fully described, claimed and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a portion of the hull of a boat with my improved propelling mechanism applied thereto; Fig. 2 is a plan view thereof; Fig. 3 is a transverse sectional view taken on the line *a-a* of Fig. 1.

Referring to the drawings by characters of reference, the numeral 1 designates a portion of the hull of a boat, to the stern of which is fastened by any suitable means a pair of parallel shaft supporting members 2 and 3, each comprising spaced inner and outer side bars 4 and 5, connected at their opposite ends by transverse bars 6 and 7.

Rotatably mounted upon the inner side bars 4 of the shaft supporting members 2 and 3 and suitable bearings 8 are a pair of end shafts 9 and 10 and an intermediately disposed shaft 11. Wheels 12, provided with hexagonal shaped rims, are keyed to the ends and to the medial points of the said shafts 9, 10 and 11, for the reception of endless chain belts 13. These belts 13 are formed of hinged links 14, substantially the same length as the flat faces of the rims of the wheels 12, the opposite ends thereof being grooved, as at 15, for the reception of

teeth 16 formed upon the said wheels 12 at the juncture of their flat faces. The upper faces of each of the links 14 are provided with laterally extending parallel arms 17, provided with series of registering apertures, through which, and through apertures formed in blades 18, bolts are adapted to be inserted for the purpose of securing the said blades thereto.

The opposite ends of each shaft 9, 10 and 11 are provided with crank arms 19, connected by links 20, to which are secured rods 21, which are operatively connected to the pitman 22 of an engine mounted within the boat.

From the foregoing disclosure it will be manifest that an oscillatory movement imparted to the rods 21, through the medium of the pitman 22 of the engine, will rotate the shafts 9, 10 and 11, through the medium of the crank arms 19 working between the side bars 4 and 5 of the supporting members 2 and 3, carrying with them the wheels 12, and imparting a continuous motion to the paddle blades 18 carried by the endless chains.

Having thus fully described this invention, what is claimed as new and what I desire to secure by Letters Patent is:

1. In a device such as described, a pair of shaft supporting side members, each comprising parallel side bars, shafts journaled between the inner side bars, wheels keyed to the shafts, endless belts passing over the wheels, and means operating between the side bars of the shaft supporting members for rotating the shafts.

2. In combination with a boat, a pair of shaft supporting side members, comprising spaced side bars and connecting end bars, of shafts journaled upon the inner side bars, wheels keyed to the shafts, endless chain belts passing over the wheels, arms upon the belts, blades connecting the arms, and crank arms upon the ends of the shafts, links connecting the crank arms, pitmen connected to the said links and operating between the side bars of the shaft supporting members rotating the shafts.

3. The combination with a boat of a pair of shaft supporting side members, shafts journaled between these side members, hexagonal shaped wheels mounted upon the shaft, teeth formed upon the wheels, and

belts passing over the wheels, each comprising hinged links engaging the teeth, arms formed upon the links, blades secured to said arms, crank arms formed upon the
5 ends of the shafts, links connecting the crank arms, and means connected therewith for rotating the wheels.

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

JOHN BOWLIN BURCH.

Witnesses:

D. N. WRIGHT,
C. G. LOGAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
