

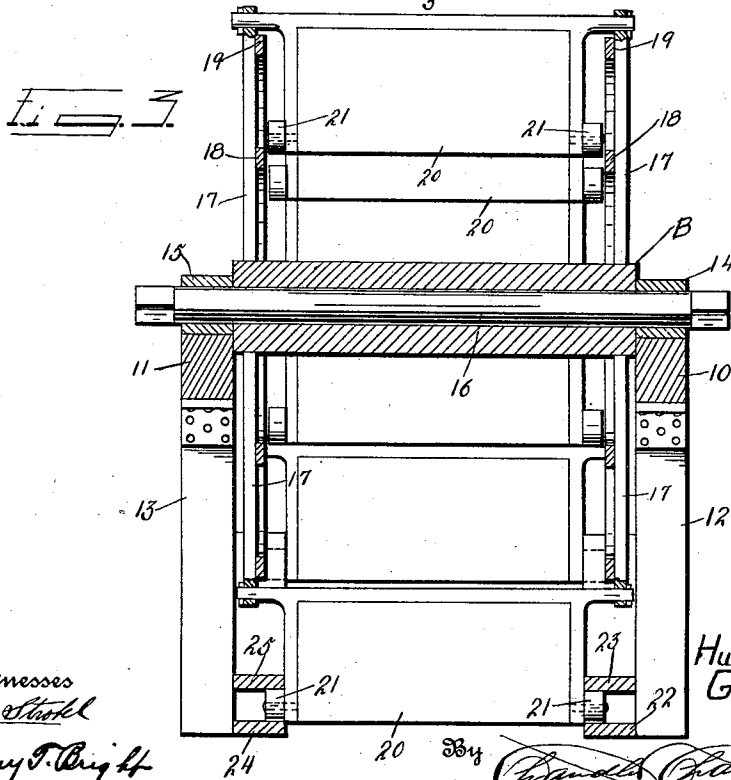
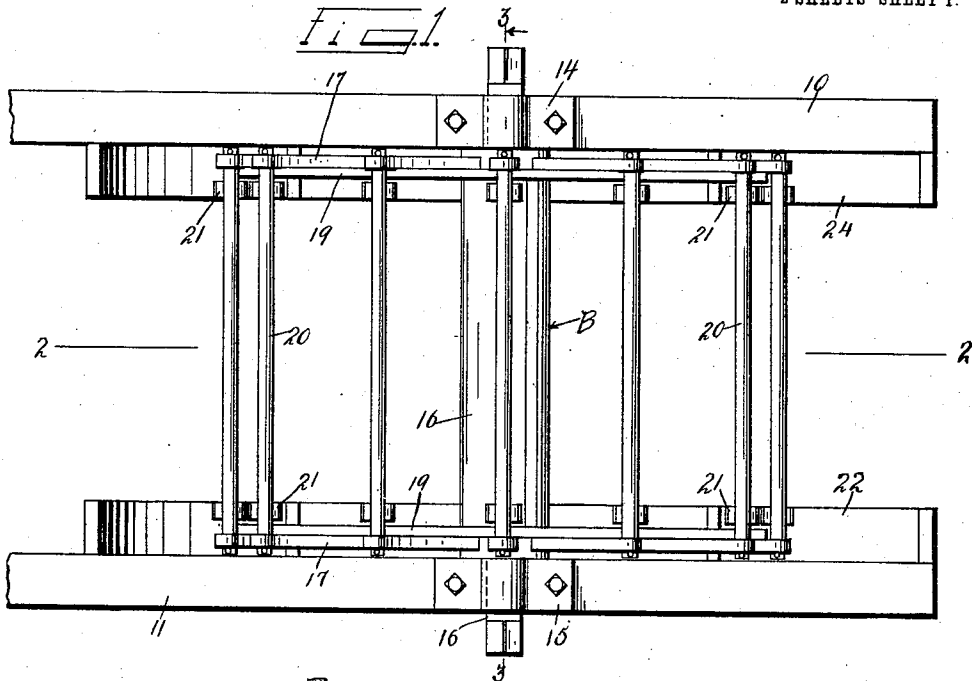
H. S. BARTON & G. E. BAUMGARDNER.
POWER WHEEL.

APPLICATION FILED DEC. 22, 1910.

1,011,902.

Patented Dec. 19, 1911.

2 SHEETS—SHEET 1.



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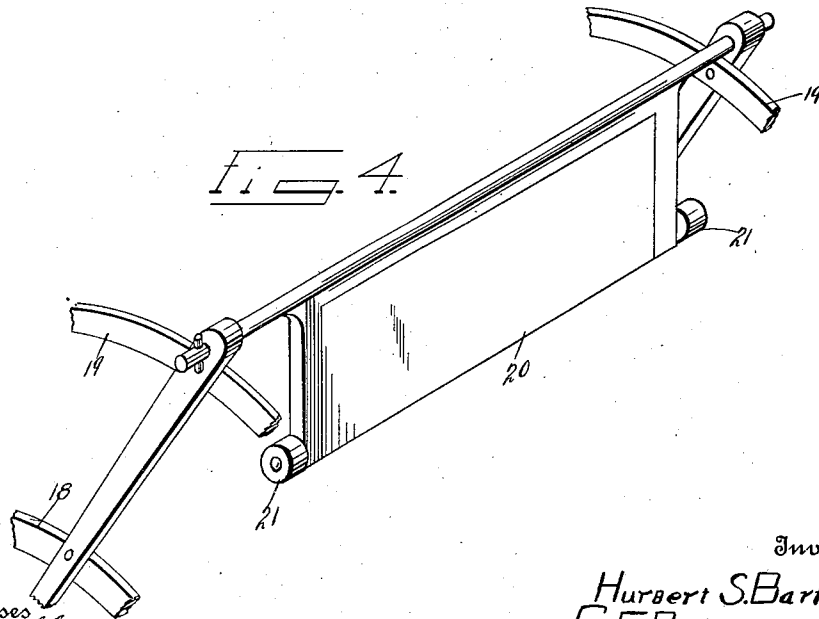
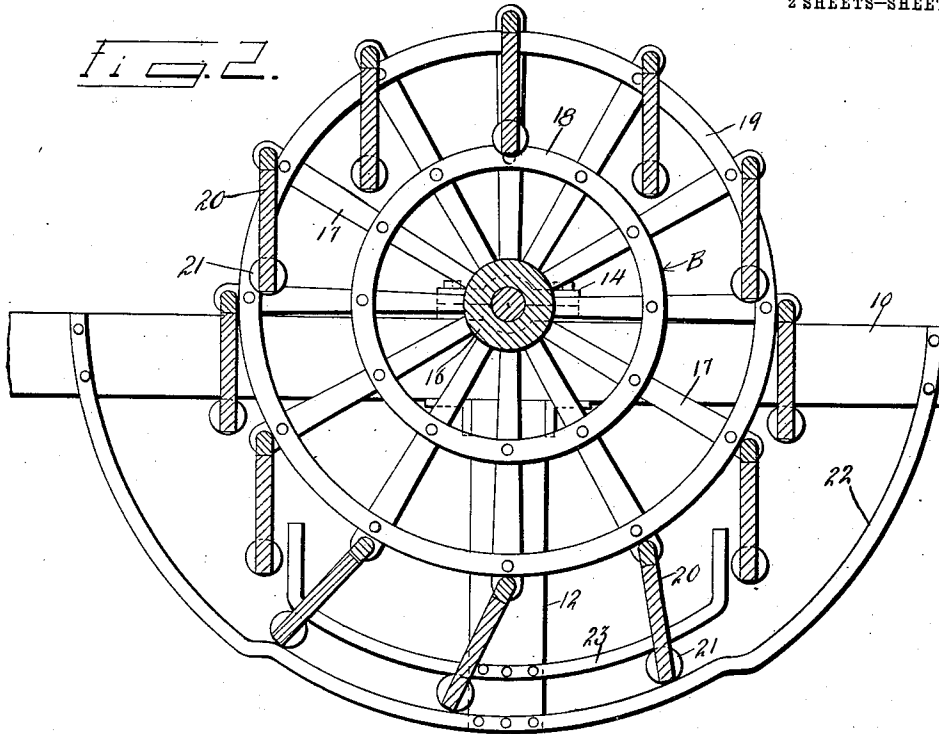
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UNITED STATES PATENT OFFICE.

HURBERT S. BARTON AND GEORGE E. BAUMGARDNER, OF HIGHLAND PARK,
TENNESSEE.

POWER-WHEEL.

1,011,902.

Specification of Letters Patent.

Patented Dec. 19, 1911.

Application filed December 22, 1910. Serial No. 598,738.

To all whom it may concern:

Be it known that we, HURBERT S. BARTON and GEORGE E. BAUMGARDNER, citizens of the United States, residing at Highland Park, in the county of Hamilton, State of Tennessee, have invented certain new and useful Improvements in Power-Wheels; and we 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 power wheels, and especially that type utilized at the stern of a steamer for propelling the same.

The object of the invention resides in the provision of a power wheel of the type named in which the blades thereof are pivotally mounted so that when said blades are moved from their propelling zone they will offer the least resistance to the water and thereby result in an economic utilization of the power necessary to drive the wheel.

Another object of the invention resides in the provision of means whereby the movement of the pivoted blades is limited during their travel through the propelling zone so that they will present at that time the proper resisting surface to the water.

With these and other objects in view, the invention consists in the details of construction and in the arrangement and combination of parts to be hereinafter more fully described and particularly pointed out in the appended claim.

In describing the invention in detail, reference will be had to the accompanying drawings, wherein like characters of reference denote corresponding parts in the several views; and in which,

Figure 1 is a plan view of a power wheel constructed in accordance with the invention; the same being shown mounted in the usual frame common to stern wheel steamers; Fig. 2, a section on the line 2—2 of Fig. 1; Fig. 3, a section on the line 3—3 of Fig. 1; and Fig. 4, a detail perspective view of one of the paddles of the power wheel, together with a fragment of the wheel drum.

Referring to the drawings, 10 and 11 indicate the rearwardly extending beams common to stern wheel steamers and depending from these beams are parallel spaced vertical members 12 and 13; said beams and ver-

tical members constituting what is known as the well of a stern wheel steamer.

Mounted upon the beams 10 and 11 respectively are journal bearings 14 and 15, in which is journaled a spider drum B. This drum includes a hub 16, from each end of which radiate spokes 17, the spokes at each end of the hub being correspondingly arranged. Inner and outer annular bands 18 and 19 respectively serve to brace the spokes 17, the outer face of the band 19 being disposed inward of the outer end of said spokes. Pivotaly hung between corresponding oppositely disposed spokes are paddles 20 which have journaled on each side at their outer ends rollers 21 for a purpose that will presently appear.

Mounted on the inner face of the vertical member 12 concentric with the axis of rotation of the drum B is a guide rail 22, while another guide rail 23 is also mounted on the inner face of the vertical member 12 in parallel spaced relation to the guide rail 22 and disposed between the latter and the periphery of the drum B. The guide rail 23 has its terminals bent away from the guide rail 22 so as to form an enlarged entrance mouth at each end of the guide rail 23 to the space between said guide rail and the guide rail 22.

Mounted on the inner face of the side member 13 is an arcuate guide rail 24 which is disposed similar to the guide rail 22. Another guide rail 25 similar to the guide rail 23 is also mounted on the inner face of the vertical member 13 in parallel spaced relation to the guide rail 24, and has its ends bent away from the guide rail 24 so as to form an enlarged entrance mouth to the space between said guide rail and the guide rail 23.

By this construction it will be apparent that as the drum B is rotated by the usual means, the blades 20 are free to swing on their pivots until the rollers 21 enter the space between the guide rails 22 and 23 and the guide rails 24 and 25 respectively. When the rollers are so disposed, it will be apparent that the blades 20 will be held against pivotal movement and maintained in position to offer the proper resistance surface to the water during the travel of the rollers 21 between the respective guide rails. As soon as these rollers pass out of the space between the guide rails 22 and 23 and the guide rails 24 and 25, the blades 20 move to inactive po-

sition, which will result in the use of less power to propel the wheel and increase the speed at which the boat is driven.

What is claimed is:—

- 5 In a power wheel, the combination of a supporting frame including a pair of parallel spaced side members, a drum journaled on the frame between said side members, a plurality of blades pivoted around the pe-
10 riphery of the drum transversely of the latter and having their pivot disposed in alinement with one of the side edges of the blade, a pair of spaced guide rails mounted on the inner face of each of said side members, and

a roller carried on the ends of each blade in alinement with the free side edge thereof adapted to pass between said guide rails during the rotation of the drum whereby the pivotal movement of said blades during a portion of their travel is limited. 15 20

In testimony whereof, we affix our signatures in presence of two witnesses.

HURBERT S. BARTON.
GEORGE E. BAUMGARDNER.

Witnesses:

W. J. COUNTS,
W. A. OTT.

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