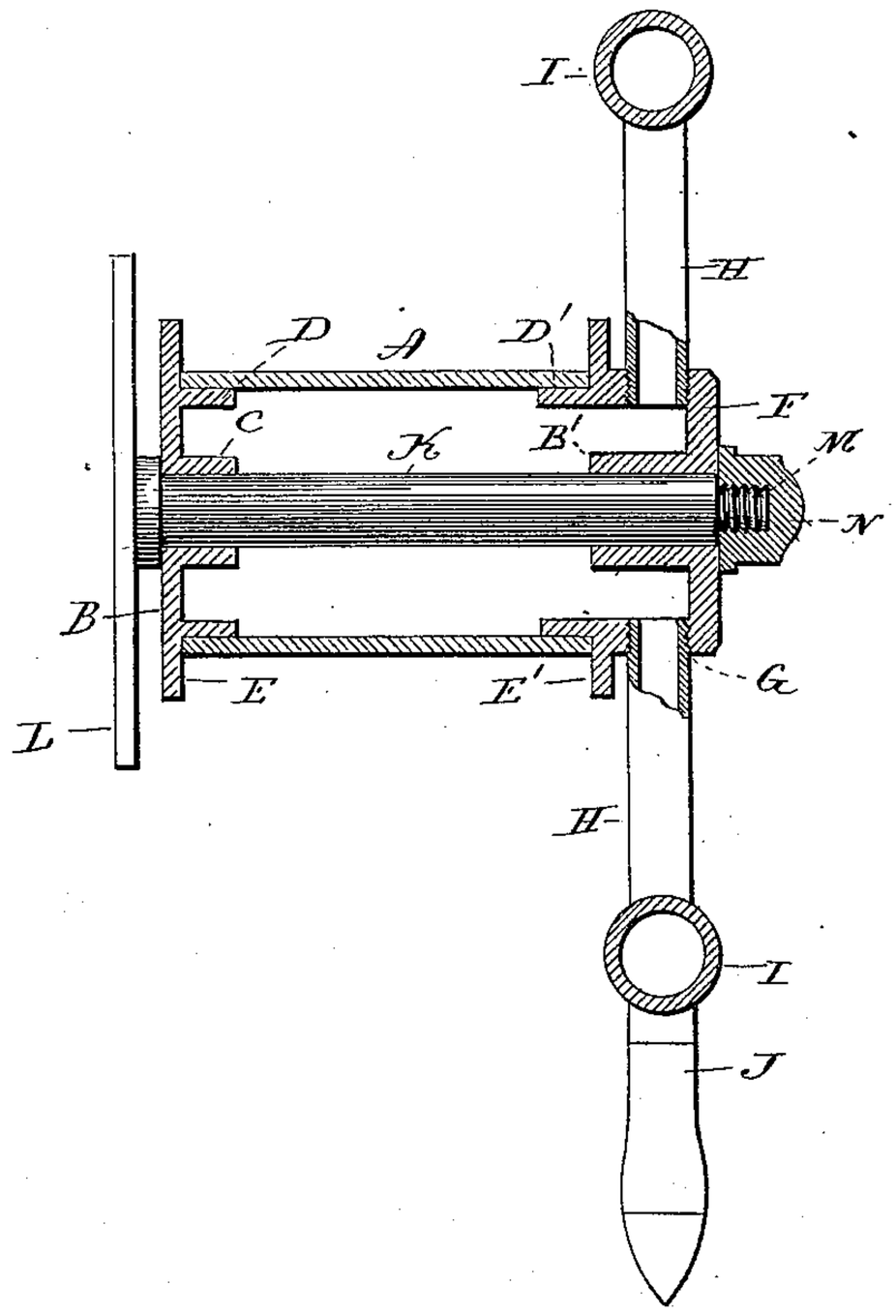
(No Model.)

E. F. BARNES.

STEERING APPARATUS.

No. 428,366. Patented May 20, 1890.



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STEERING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 428,366, dated May 20, 1890.

Application filed April 14, 1890. Serial No. 347,803. (No model.)

To all whom it may concern:

Be it known that I, ELBRIDGE F. BARNES, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Steering Apparatus; and I do hereby declare the following, when taken in connection with the accompanying drawing and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawing constitutes part of this specification, and represents a view in vertical longitudinal section of a combined drum and steering-wheel embodying my invention.

My invention relates to an improvement in steering apparatus especially designed for small yachts and launches, the object being to provide a simple, ornamental, strong, durable, and compact apparatus, preferably made entirely of brass or some other metal which will not affect a compass.

With these ends in view my invention consists in a combined steering drum and wheel composed of a hollow metal cylinder and two heads, one of which is extended and provided with openings receiving the wheel-spokes, to the outer ends whereof the wheel-rim and steering-handles are attached.

My invention further consists in certain details of construction and combination of parts, as will be hereinafter described, and pointed out in the claim.

As herein shown, the said combined drum and wheel consists, in part, of a hollow cylinder A, preferably formed from a section of brass tubing, and two cast brass heads B and B′, the former having an inwardly-projecting hub C, an inwardly-projecting horizontal flange D, over which one end of the cylinder is sleeved, and a radially-projecting retaining-flange E, which retains the cable upon the cylinder which forms the body of the drum. The other head B′ is provided with a corresponding inwardly-projecting flange D′, over which the opposite end of the cylinder is sleeved, with a corresponding radially-projecting retaining-flange E′, and also with a hollow outwardly-projecting hub F, provided with a circular series of radial holes G, which are screw-threaded to receive the inner ends of the wheel-spokes H, the outer ends whereof pass through the wheel-rim I and receive the steering-handles J. The ends of the cylinder are riveted or otherwise secured to the inwardly-projecting flanges D and D′ of the heads B and B′. By preference the said spokes and rim are made of brass tubing.

It will be noted that the outer face of the head B and the outer face of the hub F are practically flat, the bearing of the spindle or pin K falling entirely within the head B and the hub F, whereby compactness is secured. The said spindle or pin is attached in the ordinary manner to a pin-plate L, adapted to be secured to any upright support. The outer end of the pin is furnished with a threaded nipple M, receiving a nut N, which bears against the face of the hub and holds the combined drum and wheel in place upon the pin.

My improved steering drum and wheel as thus constructed is very strong and compact, light and elegant, is not affected by the weather as are those made wholly or in part of wood, and if made of brass, as I prefer to make it, will not affect the compass.

What I claim as new, and desire to secure by Letters Patent, is—

A combined steering drum and wheel composed of a hollow cylinder, two flanged heads respectively introduced into the ends thereof, one of the said heads being provided with an outwardly-projecting hub having a circular series of radial holes formed in it, wheel-spokes having their inner ends inserted into the said holes, and a wheel-rim and steering-handles applied to the outer ends of the said spokes, substantially as described.

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Witnesses:
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