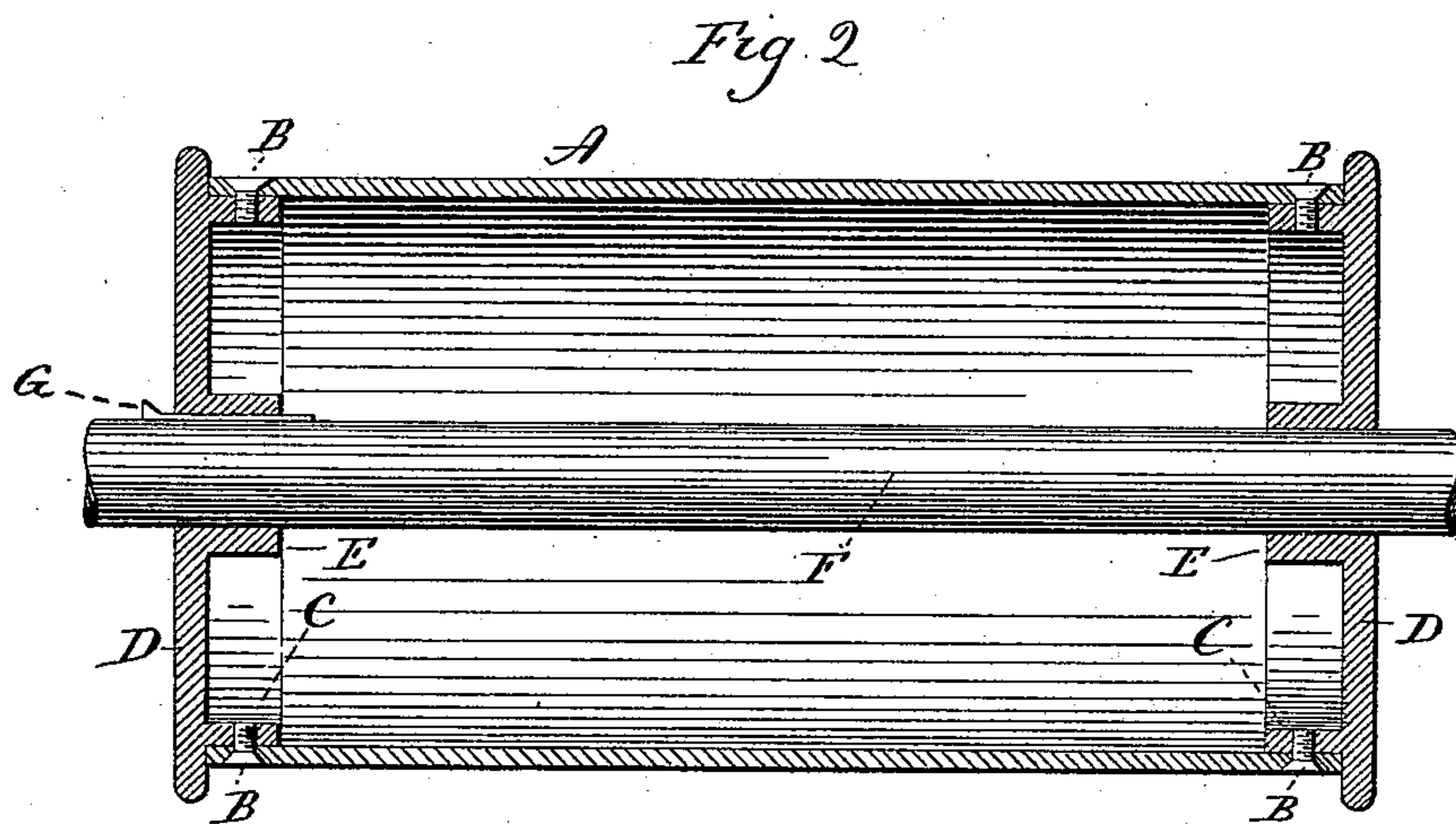
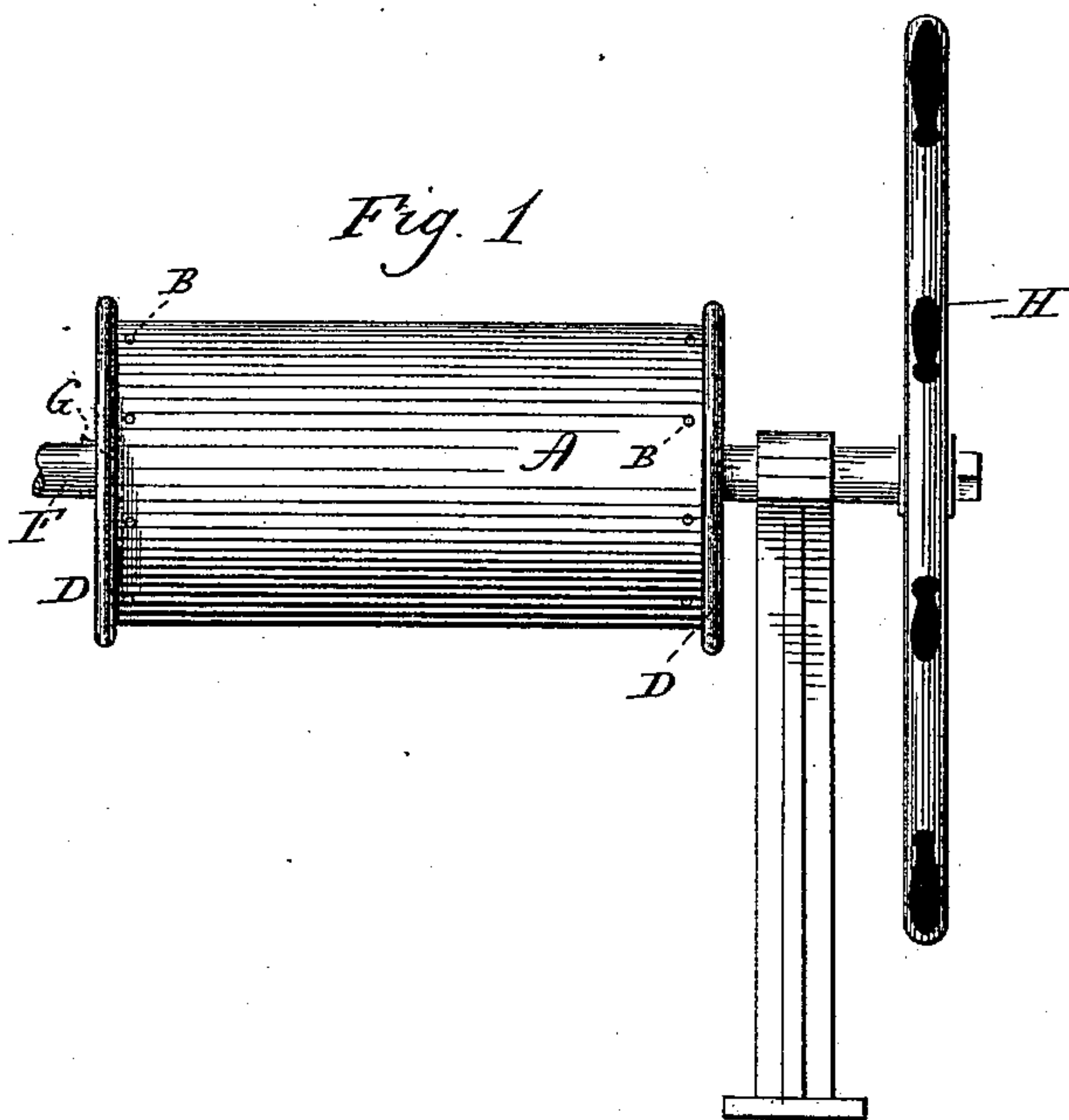


(No Model.)

E. F. BARNES.
STEERING APPARATUS.

No. 426,754.

Patented Apr. 29, 1890.



Witnesses
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UNITED STATES PATENT OFFICE.

ELBRIDGE F. BARNES, OF NEW HAVEN, CONNECTICUT.

STEERING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 426,754, dated April 29, 1890.

Application filed January 6, 1890. Serial No. 335,974. (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 accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a view in elevation of my improved steering-drum, together with a steering wheel and shaft; Fig. 2, an enlarged view of the drum and shaft, the former being shown in vertical central section.

My invention relates to an improved steering apparatus, the object being to cheapen the same and make it more durable in use.

With these ends in view my invention consists in a steering apparatus, certain details of construction, and combinations of parts, as will be more fully described hereinafter, and pointed out in the claim.

As herein shown, my improved steering-drum consists of a hollow metal cylinder A, having its opposite ends secured by screws B to the inwardly-projecting flanges C of two heads D, provided with inwardly-projecting hubs E, through which the steering-shaft F passes, the said hubs being rigidly secured to the said shaft by means of keys G, or in any other suitable manner. The steering-wheel H, which is also secured to the shaft, may be

of any approved construction. Each head is also provided with an outwardly-projecting flange I, the function of which is to retain the cable upon the cylinder. The described drum takes the place in every respect of the hardwood drum ordinarily used, and is much cheaper than the same, as well as more durable, being practically unaffected by heat and moisture, while the wood drums ordinarily employed crack and deteriorate under these influences and must be frequently replaced.

I would have it understood that I do not limit myself to the exact construction of the metal drum shown and described, but hold myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a drum for steering apparatus, the combination, with a hollow metal cylinder, of two heads, each having an inwardly-projecting flange, to which the ends of the cylinder are secured, an outwardly-projecting flange for retaining the cable on the cylinder, and an inwardly-projecting hub receiving the steering-shaft and rigidly secured thereto, substantially as set forth.

ELBRIDGE F. BARNES.

Witnesses:

FRED C. EARLE,
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