(No Model.)

A. B. HENDRYX.

FISHING REEL.

No. 385,931. Patented July 10, 1888.

Fig. 1

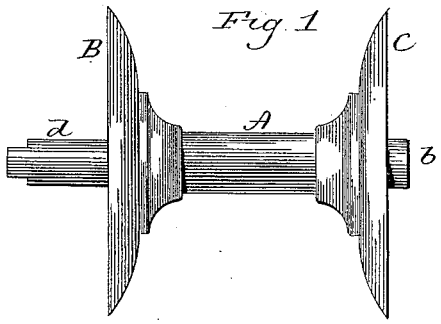


Fig. 2

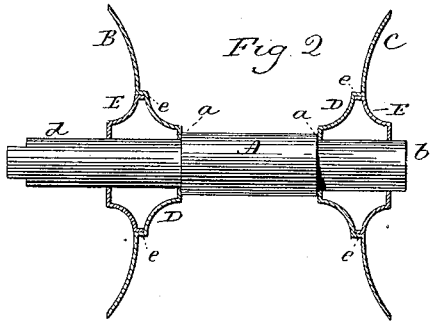


Fig. 3

Fig. 4

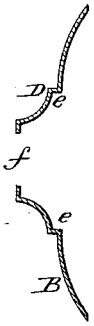


Fig. 5

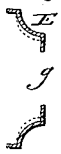


Fig. 6

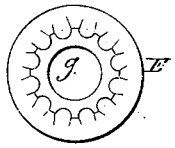
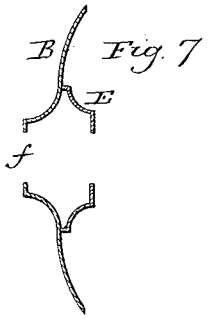


Fig. 7



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ANDREW B. HENDRYX, OF NEW HAVEN, CONNECTICUT.

FISHING-REEL.

SPECIFICATION forming part of Letters Patent No. 385,931, dated July 10, 1888.

Application filed May 21, 1888. Serial No. 274,483. (No model.)

To all whom it may concern:

Be it known that I, ANDREW B. HENDRYX, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Fishing-Reels; 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 side view of the spool complete; Fig. 2, a longitudinal central section of the same; Fig. 3, a side view of the axle detached; Fig. 4, a central section through the head detached; Fig. 5, a central section through the collar detached; Fig. 6, a face view of the collar; Fig. 7, a modification in the connection of the collar and head.

This invention relates to an improvement in the construction of the spool for fishing-reels.

Heretofore the axle of the fishing-reel has been made from cast metal, with enlarged shoulders thereon to form a support for the heads, and then the heads brazed or soldered to the axle, the wheel for the "click" made solid. This construction necessitates a very considerable amount of labor and is an important part of the cost of the reel.

The object of my invention is to reduce the weight, save a considerable portion of the labor, and thereby largely reduce the cost of manufacture of this part of the reel; and it consists in the construction as hereinafter described, and particularly recited in the claims.

A represents the axle, which near each end is reduced in diameter to form shoulders *a*, and from one end projects one gudgeon, *b*, and from the other a longer gudgeon, *d*, which is adapted to receive the crank. The body A of the axle is cylindrical.

B represents one head, and C the other head, the two heads being alike. These heads are struck from sheet metal, as represented in Fig. 4, preferably so as to present a convex surface upon the inner face and a corresponding concave surface upon the outer face. The diameter of the heads of the spool corresponds to the respective heads of the reel.

I do not illustrate the heads or frame of the reel, as they are immaterial to the present invention, the illustration showing only the construction of the spool.

Upon the inner face of each spool-head an inwardly-projecting concentric hub, D, is formed, which produces a corresponding concentric recess upon the outside and forms an internal concentric shoulder, *e*, in the outer surface of the head. The head is centrally pierced to form an opening, *f*, which in diameter corresponds to the gudgeons of the axle, and so that the heads may be set on over the gudgeons and brought against the respective shoulders *a*, as represented in Fig. 2.

To give strength and support to the head, I introduce upon the outside of the head a cup-shaped collar, E. This collar in external diameter upon its open end corresponds to the shoulder *e* upon the outside of the head. The collar is centrally pierced, as at *g*, and so as to set on over the gudgeons of the axle. One such collar is set onto each gudgeon, its open side inward, and so that the edge of the collar will enter the recess in the head and set firm within the shoulder *e*, as represented in Fig. 2. This collar forms, practically, a part of the hub for the head, and which consequently gives a very considerable length of bearing for the head upon the axle, and so as to brace or hold the head firmly in position. The head may be secured to the gudgeon by solder or brazing upon the outer side, and the collar may be secured to the head and to the gudgeon also by solder, if desired.

The support of the head, under this construction, upon the axle is as firm as if the hub were solid—that is, as if the internal projection or hub of the head C and the collar E were made integral with the head and solid.

The heads and collars are readily struck from sheet metal in dies into the requisite finished shape; consequently the cost of production over that of the usual lathe-work is very greatly reduced.

In case a click is desired, the notches are formed in the collar E, as represented in Fig. 6, by making a series of depressions around the periphery at the closed end of the collar. These depressions may be produced in the operation of striking, the die being constructed accordingly.

As the depressions are produced in the die

at the time of shaping the collar, no additional expense is incurred in making the spool adapted to a "click-reel."

Because of the great length of bearing for the head upon the axle which this construction gives, the axle may be made from wire of a small diameter compared with the diameter necessary in the usual construction.

By this construction not only is the spool made very much stronger than under the usual construction and at less cost of production, but it is also of less weight.

Instead of constructing the head to form a concentric shoulder, *e*, upon the outer surface and the collar so as to set within that recess, the head may be constructed without such shoulder upon its outer surface and the collar set against the outer surface of the head, as seen in Fig. 7, and there secured; but I prefer to construct the heads with the concentric shoulder *e* upon the outer surface and the collar E to closely fit within that shoulder, because it facilitates the location of the head in its proper relative position to the axle, as well as making a firm engagement with the head.

I claim—

1. A spool for fishing-reels, consisting of the axle A, constructed with the gudgeon at each end and so as to form a corresponding shoulder, *a*, at each end, combined with the heads B C, struck from sheet metal, each with an inwardly-projecting hub, D, and so as to form a concentric shoulder, *e*, upon the outside of the heads, the heads centrally pierced to set on over the gudgeon against the shoulder of the axle, with a collar, E, set onto the gudgeon outside the head and into the shoulder of the head, substantially as described.

2. The combination of the axle A, constructed with a gudgeon at each end to form shoulders *a*, the heads B C, made from sheet metal, constructed with a hub, D, upon their inner surface to set against the respective shoulders *a* of the axle, with a collar, E, set on over the gudgeon and against the outer face of the head and there secured, substantially as described.

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