

(No Model.)

J. H. KNAPP.
FISHING ROD FERRULE.

No. 337,589.

Patented Mar. 9, 1886.

FIG. 1.

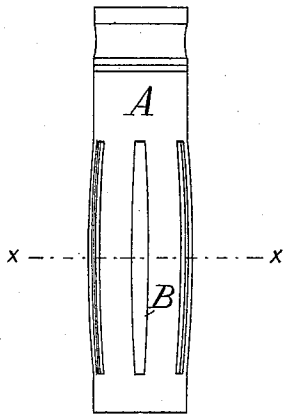


FIG. 2.

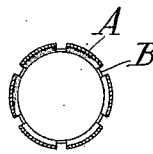


FIG. 3.

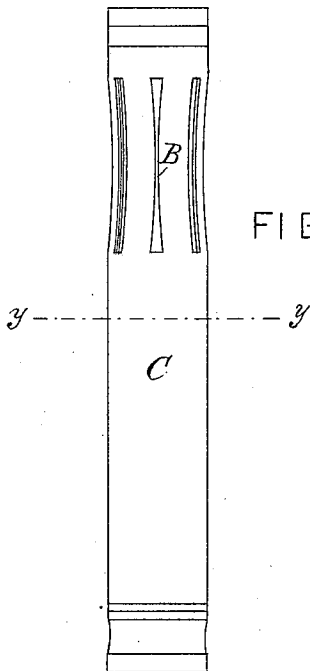
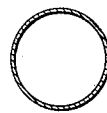


FIG. 4.



WITNESSES

Wm. A. Lowe
Charles E. Love

John H. Knapp
INVENTOR
Henry P. Wells
his Atty.

UNITED STATES PATENT OFFICE.

JOHN H. KNAPP, OF NEW YORK, N. Y.

FISHING-ROD FERRULE.

SPECIFICATION forming part of Letters Patent No. 337,589, dated March 9, 1886.

Application filed September 1, 1885. Serial No. 175,905. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. KNAPP, of the city, county, and State of New York, have invented a new and useful Improvement in Fishing-Rod Ferrules, of which the following is a specification, reference being had to the accompanying drawings.

Joint-ferrules for fishing-rods have hitherto been constructed by providing the contiguous ends of the parts to be joined with pieces of metal tubing, one of which is adapted to fit within the other. It is obvious, especially in rods adapted for casting the artificial fly or bait, that the centrifugal force imparted to the rod in the process of casting tends to throw the rod apart at the joints. It is essential to the utility of such a rod that this tendency should be met and overcome, since not only is it impossible to cast any distance with a rod which will throw apart, but because when the rod is thus disjointed the disjointed portion is impelled forward by the impetus of the cast, while the direction of its movement is so controlled by the fishing-line attached to it that it falls upon the smaller end of the tip, to the almost certain destruction of that joint. Several methods to overcome this are in use. Sometimes the various joints are first united by inserting the ferrules one within the other and then lashing them together so they cannot throw apart. Sometimes, besides the cohesion due to the fit of the ferrules one within the other, a conical tenon or dowel is attached to one joint, and a corresponding recess or socket is bored in the contiguous joint to receive the dowel. Thus additional frictional surface and increased cohesion are obtained. Again, the ferrules are composed of plain tubing without any additional device, and the requisite cohesion is obtained by careful fitting. Indeed, accurate fitting is essential in both the cases last cited; but the difference between an accurate fit and no fit at all in the practical sense is infinitesimal, and nothing is more common in the experience of every angler than for the ferrules which entered one another easily in the morning either to utterly refuse to separate in the evening or to separate only with extreme difficulty and at the risk of breaking the rod. This annoyance especially manifests itself when the rod has remained jointed for any length of time, particularly if

the ferrules have been exposed to dampness or rain. Again, when it is desired to duplicate a joint or ferrule and thus guard against accident by having several interchangeable joints, it is often a difficult matter to obtain duplicate ferrules of exactly the same size.

My invention is designed to meet and overcome these objections and to provide ferrules which, while they always have the required fit and consequent cohesion to prevent throwing apart, shall at the same time have sufficient adaptability not only to meet slight differences in size, but also to prevent the sticking of the ferrules, before alluded to.

A further advantage and improvement is also secured by my invention in that the angler can regulate the cohesion of the ferrules of his rod, increasing it if it be too little or diminishing it if it be in excess.

In the drawings, forming part of this specification, Figure 1 represents an elevation of a male or inside ferrule; Fig. 2, a cross-section of the same on the line *xx*; Fig. 3, an elevation of an outside or female ferrule embodying my invention; and Fig. 4, a cross-section of the latter on the line *yy*.

My invention consists in providing the inside or male ferrule, A, with an elastic compressible surface throughout a part of its length, so that when the male ferrule A is inserted within the female ferrule the elastic surface will yield somewhat and be more or less compressed. Thus an accurate fit, even within female ferrules of slightly-varying internal diameter, and the consequent cohesion essential to prevent the rod from throwing apart in casting, is always insured, while at the same time the ferrules will never stick together and refuse to separate. I impart this elastic surface to said male ferrule A by making a number of longitudinal slots, B, in a portion of its surface and slightly raising the metal between said slots. Thus the diameter of the male ferrule when the rod is unjointed is greater between said slots than it is elsewhere, while this diameter, owing to the elasticity of the metal between the slots, may be reduced by pressure. Thus the resiliency of the metal will constantly cause it to tend to resume its original dimensions and an accurate fit is at all times insured. Should, however, the ferrules stick, the effort of the angler to unjoint his

rod compresses the elastic surface of the male ferrule until the fit is sufficiently loose to permit of an easy separation. Again, should the degree of elasticity be insufficient to secure the required degree of cohesion, the metal between the slots may be slightly raised by the insertion of something underneath them through the slots, while should it be excessive it may be diminished by rolling the male ferrules between any two hard and flat surfaces.

While I figure and describe longitudinal slots to accomplish my purpose, I fully recognize that the same result may be attained in other ways. All that is required is to provide the male ferrule with an elastic compressible surface throughout a portion of its bearing-length, which surface exceeds somewhat in diameter that of the rest of the ferrule. It is also plain that the same result can be accomplished by providing the female ferrule with elastic and extensible bearing-surfaces, as shown in Fig. 3, which are less in diameter than that of the rest of said ferrule, using in conjunction therewith a male ferrule of the ordinary construction.

I am aware that sections of rods have been

split or severed from their butt-ends inwardly and the divisions thus made have been expanded to form an approximate cylinder larger than the ferrule on the adjacent section. I do not claim such construction.

Having thus described my invention, what I claim as new, and desire to patent, is—

1. As a new article of manufacture, a fishing-rod ferrule provided with an elastic compressible bearing-surface intermediate between the extremities of said ferrule, as and for the purpose described.

2. As a new article of manufacture, a fishing-rod ferrule provided with an elastic extensible bearing-surface intermediate between the extremities of said ferrule, as and for the purpose described.

In testimony that I claim the foregoing improvement in fishing-rod ferrules, as above described, I have hereunto set my hand this 29th day of August, 1885.

JOHN H. KNAPP.

Witnesses:

CHARLES G. COE,
CHAS. G. KOSS.