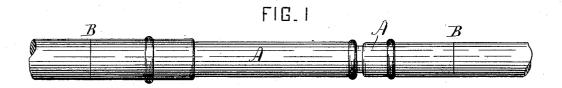
(No Model.)

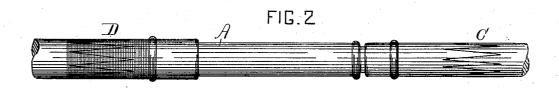
## W. H. REED.

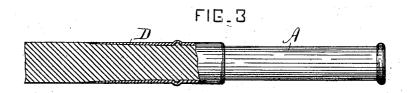
JOINT FERRULE FOR FISHING RODS.

No. 322,750.

Patented July 21, 1885.







John W Frost George C. Carnright William H. Reed

## United States Patent Office.

WILLIAM H. REED, OF CHICAGO, ILLINOIS.

## JOINT FERRULE FOR FISHING-RODS.

SPECIFICATION forming part of Letters Patent No. 322,750, dated July 21, 1885.

Application filed December 5, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. REED, of the city of Chicago, county of Cook, in the State of Illinois, have invented a new and useful Improvement in Joint-Ferrules for Fishing-Rods, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification, in which 10 similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a side view of the ferrule now in common use; Fig. 2, a like view of my improved ferrule, and Fig. 3 a sectional 15 view of the same, showing the tapering pro-

My invention relates to joint-ferrules used to connect the sections of fishing-rods to each other, and to prevent the breaking of the rods 20 immediately at the junction of the wood and metal ferrule. It is known to all anglers that the weakest part of a fishing-rod is at the jointing-ferrules and immediately at the edge B of the ordinary ferrules A A, as shown in 25 Fig. 1. The said edge B of the ferrules A A in Fig. 1 acts as a fulcrum, and the section of the rod as a lever, when the rod is sprung in casting, or when under a strain in killing or landing a fish. While the sections of the rod 30 will give or yield to the strain, the ferrules remain perfectly rigid, and the sections of the rod press hard against the said edge B of the ferrules A A, as shown in Fig. 1, and by the constant springing of the rod in casting a bait 35 or fly, and the subsequent straining that it is subjected to in killing or landing a fish, gradually disintegrates the particles composing the wood, and thus causes the rod to break at that point. To prevent this I make the end 40 of the ferrule at which the wood enters terminate in a series of serrations, as shown at C in Fig. 2, and thus destroy in a large measure the said edge B of the ferrules A A, as shown in Fig. 1, and at the same time impart more 45 or less elasticity to the ferrule at the junction of the wood and ferrule, the metal composing the ferrule being made thinner toward the

edge B previous to making the serratures to impart elasticity to the points, the points then being wound or wrapped with silk or 50 other suitable cord, as shown in Fig. 2 at D, and then varnished in the usual manner.

I am aware of a ferrule having longitudinal slits cut in it. By such a construction the objections specified to the metallic edges of a 55 ferrule coming in contact with the fiber of the rod are not removed, for the reason that said ferrule presents a metallic edge throughout the entire circumference of the rod, minus the slits, and therefore subjects the fiber of 60 substantially the entire rod at the point of bearing upon the edge of the ferrule to its cutting effects, whereas by my construction the cutting-edge of the ferrule is reduced to the minimum, and only a single fiber of the 65 rod exposed to the end of each projection on Furthermore, by reducing the thickness of the teeth or projections from their base to their points additional elasticity is imparted to the ferrule. It is obvious that 70 my elastic ferrule is well adapted for use with other flexible rods, and will protect a textile or other covering from the cutting effects of a ferrule presenting a continuous or substantially a continuous metallic edge, due to the 75 springing of said rod.

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

1. A ferrule provided with elastic serrated 80 projections on its edge, substantially as and for the purpose set forth.

2. A serrated ferrule having its projections reduced in thickness, substantially as and for the purpose described.

3. A serrated ferrule in combination with a flexible rod, substantially as described.

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4. A fishing-rod in combination with a serrated ferrule and a wrapping of suitable material, substantially as described.
WILLIAM H. REED.

Witnesses:

JOHN W. FROST, GEORGE C. CARNRIGHT.