

(No Model.)

G. I. VARNEY.
FISHING ROD JOINT.

No. 537,088.

Patented Apr. 9, 1895.

FIG. 1.

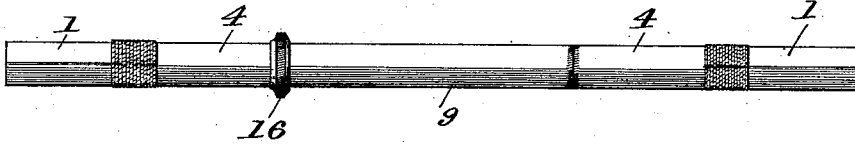


FIG. 2.

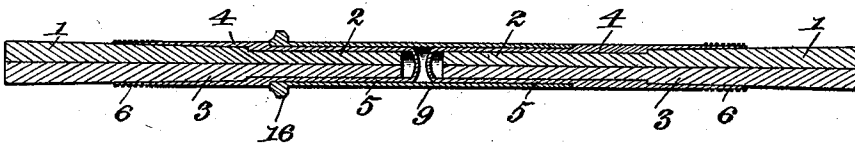


FIG. 3.

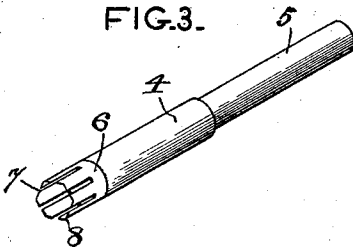


FIG. 5.

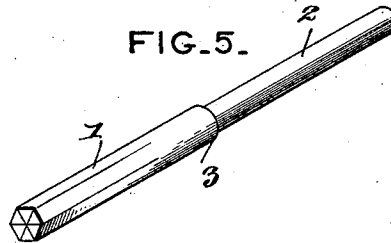


FIG. 4.

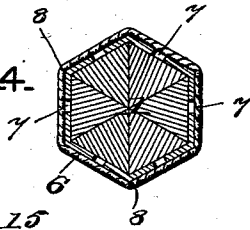
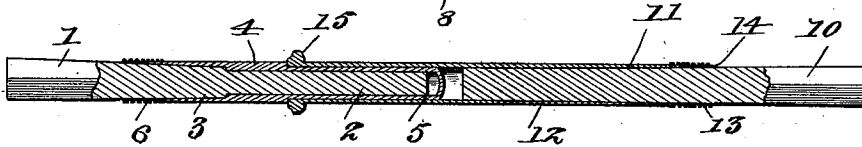


FIG. 6.



Witnesses

E. H. Monro

J. H. Riley

By his Attorneys.

Inventor
George I. Varney.

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

GEORGE I. VARNEY, OF POUGHKEEPSIE, NEW YORK.

FISHING-ROD JOINT.

SPECIFICATION forming part of Letters Patent No. 537,088, dated April 9, 1895.

Application filed June 13, 1894. Serial No. 514,463. (No model.)

To all whom it may concern:

Be it known that I, GEORGE I. VARNEY, a citizen of the United States, residing at Poughkeepsie, in the county of Dutchess and State of New York, have invented a new and useful Fishing-Rod Joint, of which the following is a specification.

This invention relates to improvements in joints of fishing-rods, and has especial reference to the improvement of that class of joints employed between the ends of that class of rods formed of split bamboo; the longitudinal sections of which are glued together.

My invention has two primary objects in view, namely: the preservation of the glued sections and the avoidance of the same becoming soaked with water and thereby caused to separate; and the prevention of weakness at the points of juncture of the sections of the rod and the metal ferrules employed in the joint. Great difficulty has existed in the manufacture of this class of rods, in the preservation and proper protection of the glue-connected longitudinal rod-sections, and in all the better classes of light rods composed of a series of jointed sections, in the strengthening of the points of juncture or meeting of the metal ferrules and the wood; and such weakness has been caused by various reasons, the primary one of which has been that the ends of the sections, which are usually polygonal in cross-section, have been reduced to a cylindrical body in cross-section, such reduction resulting in the weakening thereof, and hence strain being brought upon the flexible rod-section, is immediately transmitted to the rigid metal ferrule and the result is that a break or fracture takes place at the juncture of the metal and the wood. I have found by experience that if the reduction of the sections could be avoided at the point of junction between the ferrule and rod, this weakening can be avoided, and the strain instead of being abruptly transmitted from the resilient rod-section to the ferrule, would be thereby gradually transmitted over a considerable portion of the surface of the rod-section, and at the same time splitting the end of the ferrule so as to form a series of resilient tongues, whereby not only are these points greatly strengthened but also the graceful outline of

the rod as a whole, when yielding to pressure or strain, preserved.

I accomplish the objects heretofore set forth, from which accrue the enumerated advantages, in a manner hereinafter specified and particularly pointed out in the claims.

Referring to the drawings:—Figure 1 is a side elevation of a joint between two bamboo sections, constructed in accordance with my invention. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is an enlarged detail in perspective of one of the ferrules. Fig. 4 is a transverse section through the rod-section and the yielding end of the metal ferrule. Fig. 5 is a detail in perspective of the end of the rod-section, the ferrule removed. Fig. 6 is a longitudinal section of a joint constructed in accordance with my invention, but adapted for ordinary light rods, other than split bamboo.

Like numerals of reference indicate like parts in all the figures of the drawings.

Referring particularly to Figs. 1 to 5, inclusive, 1 designates two split bamboo rod sections, which at their inner extremities are reduced to form cylindrical ends 2, and above the same merge very gradually into the polygonal portions, said gradual merging being obtained by a slight scraping away or removal of the angles of the section, as indicated at 3. The metal ferrule with which each of the sections is provided, consists of a main cylindrical body-portion 4, which at its outer end merges into an abruptly-formed cylindrical portion 5, the outer end of which is closed. The ferrule thus formed is placed upon a suitable lathe, and near its inner end is reduced or tapered toward its extremity, thereby constituting a shallow inclined or tapered recess for the reception of the silk wrappings. The recess 6 is made polygonal to correspond with the rod-section in transverse-section, which formation of the ferrule is produced by placing said ferrule upon a suitably shaped mandrel. The edges of the inner reduced end are now split between the angles or corners, as indicated at 7, so that a series of angular thin spring-tongues 8 is formed. The ends of the rod-sections are now inserted into their ferrules thus constructed, and driven tightly to position; and when in position it will be

seen that the cylindrical portions 2 of the rod-sections fit the reduced cylindrical portions 5 of the ferrules, while the somewhat tapered and enlarged cylindrical portions 3 of the rod-sections fit the enlarged cylindrical portions 4 of the ferrules. It will also be seen that inasmuch as the ends of the ferrules have been made polygonal and composed of a series of angular spring-tongues agreeing in number with the angles of the rod-sections, each angle or corner of said rod-sections will be embraced snugly by one of the thin angular spring-tongues.

9 designates a cylindrical sleeve, open throughout its length, and a little greater in length than the combined length of the two reduced cylindrical portions or ends 5 of the adjacent ferrules, and of an internal diameter adapting it to snugly receive said reduced ends 5 of the ferrules, in which position the ends of the ferrules very nearly though do not quite contact.

By the above construction it will be seen that the glue-joints at the ends of the rod-sections are thoroughly and efficiently protected from and preserved against the admission of any moisture whatever and hence remain intact for a greater period of time and are not liable or in danger of splitting. It will also be evident that strain upon the rod-sections is gradually diffused and extended to the yielding tapered annular spring-tongues 8, and thus the stress being diffused and spread over a greater surface of the rod-section, the liability of a fracture occurring at the juncture of the rod-section and ferrule, is avoided; and as a matter of fact the joints are thereby rendered the strongest portions of the entire rod.

In Fig. 6, 10 designates a rod-section, polygonal in cross-section, and formed of suitable light wood, other than split bamboo. The end of the section like that of the section 1, is tapered as at 11, though the taper extends from the beginning thereof to the end, and is therefore considerably longer than that of the section 1. 12 designates a cylindrical ferrule, the inner end of which is finished precisely like the ferrule described in connection with Fig. 1, in that it is tapered as at 13, to a thin inner edge; afterward made polygonal in cross-section, and split to form the series of angular tongues 14. When introduced over the end of the section 10, the angular tongues each embrace an angle of the section; and the reduced or cylindrical portion of the section fits snugly in the body of the ferrule. The ferrule is open throughout its length, and at its outer end is provided with a milled boss 15, which corresponds with a similar boss 16, formed at the corresponding end of the sleeve 9, illustrated in Fig. 1. The outer end of the ferrule receives the inner reduced cylindrical end 5 of a ferrule constructed after that shown in Fig. 1, so that as will be evident, the only change

in the modification consists in omitting the reduced portion 5 of one ferrule, and continuing the enlarged cylindrical portion 4 in lieu thereof. This modification is as before stated, preferably used only in connection with rods formed of other than split bamboo, and the reason of this is that such rods employ no glue joints and hence do not require the extreme care and avoidance of moisture.

From the foregoing description, taken in connection with the accompanying drawings, it will be seen that I efficiently accomplish in a simple manner the objects of the invention, minutely enumerated and detailed at the beginning of this specification; and which it would seem unnecessary to repeat.

Having described my invention, what I claim is—

1. The combination with a polygonal rod-section, one end of which is slightly reduced and gradually merged into cylindrical form, of a metal ferrule fitting the cylindrical portion and having its inner end bent into polygonal form to embrace and correspond with the polygonal-shape of the rod-section above its reduced portion, and provided between its angles with splits forming a series of intermediate angular spring-tongues for embracing and conforming to the configuration of the angles of the rod-sections and extending along the same, substantially as specified.

2. The combination with a polygonal rod-section, one end of which is slightly reduced and gradually merged into cylindrical form, of a metal ferrule fitting the cylindrical portion and having its inner end tapered and thinned, bent into polygonal form in cross-section, and split between its angles, thereby forming a series of intermediate spring-tongues, having angularly-disposed sides embracing and extending along the angles of the rod-section, substantially as specified.

3. The combination with the opposite polygonal rod-sections, of the opposite ferrules each consisting of an outer closed end, a reduced cylindrical portion for receiving the cylindrical end of the sections, and beyond the same a slightly enlarged cylindrical portion for receiving the gradually tapered portions of the sections, said ferrules having their inner extremities exteriorly reduced and tapered to a thin edge, polygonally-shaped in cross-section and split intermediate its angles, forming intermediate spring-tongues, having angularly-disposed sides fitting over and extending along the angles of the sections, and the cylindrical open-ended sleeve receiving the ends of the ferrules, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GEO. I. VARNEY.

Witnesses:

BARTRAM G. LEEPER,
CHAS. B. HUNTER.