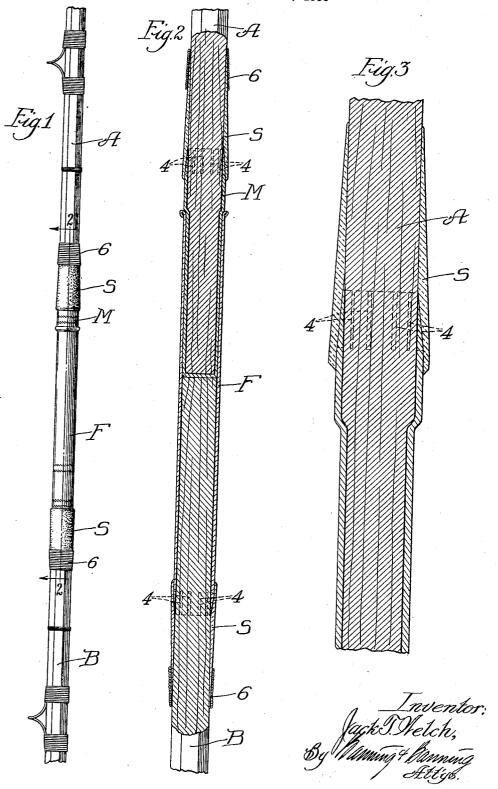
FISHING ROD

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## UNITED STATES PATENT OFFICE

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## FISHING ROD

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rod having its sections releasably connected with the aid of telescoping ferrules applied to the ends thereof, and is concerned ment at the point where such a connecting

ferrule joins to a rod section.

In the use of a jointed fishing rod, whether the same be made of bamboo, wood, metal, 10 or other material, it is commonly found that the weakest place where breakage is most apt to occur is close to the ends of the ferrules which are applied to the joined rod sections. If the rod splits or breaks, as sometimes 15 happens under stress, the owner's misfortune will, in all probability, be aggravated by loss of the fish whose struggles may have occasioned the mishap. A sportsman, in particular, demands a high grade rod having 20 both a considerable flexibility and adequate strength, and is easily dissatisfied if deficient in either respect. It is with a view to strengthening the rod in its weakest places, that it is adjacent the ferrules at the joints, <sup>25</sup> that the present invention has been devised. In the accompanying drawing is illustrated in the manner following:

Figure 1 is a view in elevation of a por-30 tion of a jointed fishing rod showing the connected ends of two adjacent sections

thereof:

Fig. 2 is an enlarged fragmentary section

on line 2-2 of Fig. 1; and

Fig. 3 is a further enlarged fragmentary longitudinal section showing the application of a reinforcing sleeve over the end of one ferrule and the adjacent portion of the rod section

The illustrated portions of a conventional jointed rod comprise sections A and B which may be made of bamboo, wood, metal, or other suitable material. Fitted over one end of the rod section B is a ferrule F extending beyond the rod end to form a socket wherein may be received the male ferrule M which is applied over the adjoining end of the rod section A. Each ferrule may be tightly secured to its associated rod section in the usual

This invention relates to a jointed fishing way, as by cement or a cross pin (not shown).

The ferrule ends which are remote from each other are desirably, although not neces-5 primarily with means for effecting reinforce- sarily, tapered down toward the surface of 55 the rod sections whereon they are mounted. Also, as is common practice, the ferrules may be serrated by the provision of longitudinal slots 4 at their tapered ends, thereby forming relatively flexible tongues at the ends of the 60 ferrules. It has been found that such a construction tends to greater strength in the zone of each ferrule where breakage is most apt to occur.

Although numerous expedients have been 65 adopted to strengthen the rod in the region of each ferrule end, a weakness at such points still persists. Under stress, the rod will flex, as is intended, but at the juncture of the ferrules with the ends of the rod sections, this 70 flexation is hampered. To strengthen the rod at such points, I apply thereto sleeves S which are fitted closely over the rod and slid into position over the ends of the ferrules that are mounted thereupon.

The sleeve construction which I have found a suggestive exemplification of my invention entirely suitable for the purposes of this invention is desirably made of some such material as has a cellulose base—pyralin, for example. As shown in the drawing, one end 80 of the sleeve is required to ride over the end of the associated ferrule for a slight distance, and in doing so it becomes firmly positioned in place. If desired, circumferential windings 6 of silk or other material, such as com- 85 monly surround a fishing rod, may be applied over each sleeve at one point to assist in securing it in position. By so shaping the sleeve that one or both ends are tapered down close to the associated parts, as suggested in 90 the drawing, it will present a smooth and inconspicuous appearance.

There is a particular advantage resulting from the use of a reinforcing sleeve having a cellulose base with a rod made of bamboo, wood, or fibre, such as is commonly used by sportsmen. Bamboo, in particular, is a material which tends to dry and shrink with age. A metallic ferrule applied to a rod section of such material tends in consequence to loosen 100

		its connection therewith as the rod shrinks.	ous surface applied circumferentially to the	
		A sleeve of the kind specified applied over	rod.	
		both the rod and ferrule tends also to shrink	7. A fishing rod having a shrinkable body	
		with age, thereby maintaining its secure an-	upon the surface of which is mounted a me-	
	5	chorage with each. In securing the sleeve in	tallic fitting over part of which is arranged	
		place, it may be desirable to render the sleeve.	a sleeve applied circumferentially to the rod,	
		plastic by the application thereto of a proper	the sleeve being formed of a contractible ma-	
		solvent, such as amylacetate, thereby con-	terial to maintain a tight connection with	
		ducing to a firm adhesion between the sleeve	the rod as it shrinks.	
-	10	and both the rod and ferrule. The sleeve so	JACK T. WELCH.	75
		applied is posessed of sufficient flexibility to		
		give as required when the rod is flexed, and		
		so is admirably adapted as a joint reinforcement.		
- 1	15	It will be apparent from the preceding de-		80
•		scription that my invention provides not only		
		a reinforcement at the joint between a ferrule		
		and rod section, but also a means for enhanc-		
		ing the secure connection of the ferrule to the		
2	0	rod. The likelihood of rod breakage, when		05
		the reinforcing means of this invention is		
		used, is considerably reduced, and this result		
		is attained without in any degree impairing		
		the flexibility of the rod.		
¥	5	I claim:		90
		1. A fishing rod comprising joined sections		
		having their connected ends mounting tele-		
		scoping ferrules the remote ends whereof are tapered down to a diameter closely approxi-		
3	0	mating that of the associated rod, and con-		23
_		tractable reinforcing sleeves of flexible ma-		
		terial applied closely over the tapered ferrule		
		ends and adjacent portions of the rod.		
		2. A fishing rod comprising connectible		
3	5	sections mounting telescoping ferrules on		100
		their ends to be joined, each ferrule extending		
		back along a rod section for a desired dis-		
		tance, and a durably contractible reinforcing		
.4	Δ	flexible sleeve having a continuous surface		105
7		shrunk over the joint at the juncture of each		700
		ferrule with an associated rod section.		
		3. A fishing rod having a flexible section mounting at one end a ferrule which extends		
		back along the rod section a desired distance,		
4	5	and an integral durably contractible flexible		110
		sleeve having a continuous surface united to		
		both the ferrule and rod section and covering		
		the joint therebetween.		
_	^	4. A fishing rod comprising joined sections		
Ð	D .	having their connected ends mounting tele-		7.13
		scoping ferrules the walls whereof are ren-		
		dered flexible in one portion, and an integral		
		reinforcing durably contractible sleeve of		
5	5	flexible material having a continuous surface applied closely over the flexible portion of		100
		the ferrule and adjacent portion of the rod.		
		5. A fishing rod in which is comprised a		
		flexible section to be joined to others, a fer-		
		rule applied over and secured to one end of		
6	U	the section, and a sleeve having a cellulose	医动物 经营销 医电影 建铁压电池	125
		base applied over and secured to both the fer-		
		rule and rod section in their joinder zone.		
		6. A fishing rod having an exterior fitting		
	: K	over part of which is arranged a durably self-		7 9 A
•	•	contracting flexible sleeve having a continu-		130