

(No Model.)

E. W. EDWARDS.
FISHING ROD.

No. 427,162.

Patented May 6, 1890.

Fig. 1.

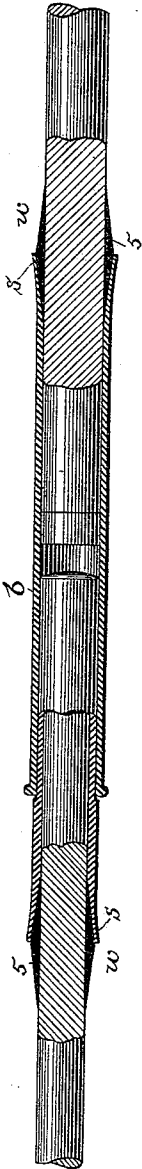


Fig. 2.

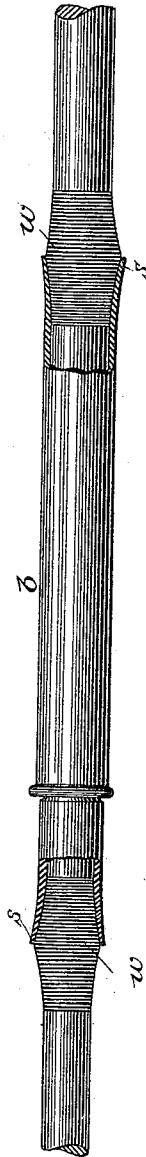
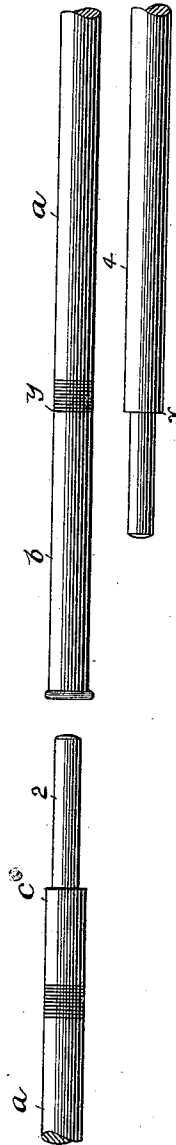


Fig. 3.



Witnesses
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FISHING-ROD.

SPECIFICATION forming part of Letters Patent No. 427,162, dated May 6, 1890.

Application filed January 27, 1890. Serial No. 338,271. (No model.)

To all whom it may concern:

Be it known that I, EUSTIS WILLIAM EDWARDS, a citizen of the United States, residing at Central Valley, Orange county, New York, have invented certain new and useful Improvements in Fishing-Rods, of which the following is a specification.

My invention relates to that class of fishing-rods in which a series of sections consisting each of a stem and ferrules are connected to form a jointed rod; and my invention consists of a rod constructed, as fully described hereinafter, so as to secure increased strength and reduce liability to fracture when the rod is bent.

In the accompanying drawings, Figure 1 is a longitudinal sectional view through one joint of a fishing-rod illustrating my invention. Fig. 2 is a similar section showing a modification. Fig. 3 is a view illustrating the construction of parts of an ordinary rod.

In fishing-rods as usually manufactured the sections *a*, which are connected to constitute the rod, have each a socketed ferrule *b* at one end and a ferrule *c* at the other provided with a tang or finger 2, adapted to fit in the socket of the adjacent section. The wooden strip 4 of each section is generally reduced at the end where it is fitted to the socket, thereby forming a shoulder *x*, Fig. 3, so that the surface of the ferrule is flush with that of the wood; and in any case the edge of the metallic ferrule *y* bears directly upon the wood, and when any strain comes upon the rod tending to bend the same the abrupt variation in stiffness at the point *y* causes the bend to take place at that point, and, further, causes the bend to be sharper at this point than would be the case if the socket were not practically rigid. As a consequence of this abrupt sharp bend and the pressure of the edge of the rigid socket into the yielding strip *a*, the latter is very apt to be broken under strains that would not injure the rod if such abrupt bending could be prevented. To obviate this defect, I re-enforce the stem of each section at the point where the rigid permanently-attached socket-piece terminates, and I preferably make use of a re-enforcing material that has more or less elasticity. This re-enforce may be secured in different ways. As shown in Fig. 2, the stem is formed

so as to thicken it at the points *w*, opposite the inner or attached ends of the ferrule-pieces, the latter being expanded to receive the enlargements, so that the rod is strengthened at such points, the bending out or flaring of the ferrules at their inner ends *S* reducing the tendency of the edges to penetrate the stem when the rod is bent. A preferable mode of re-enforcing the stems consists in applying thereto a sleeve 5, of somewhat elastic material, as caoutchouc, rubber, or, preferably, zylonite. This sleeve is made thickest at the point where the end of the ferrule terminates and extends in both directions, gradually tapering until its surface meets that of the stem. As thus re-enforced the pressure upon the sleeve 5, resulting from any bending of the rod, instead of coming at one point, is distributed over a comparatively wide area, so that the bend is gradual, the strain is prevented from being concentrated at one point, and the fracture of the rod is prevented. The mouth or inner end *S* of the socket of the ferrule being tapering to conform to the tapering face of the re-enforce, any lateral deflection of the ferrule, instead of forcing a sharp edge onto the stem, merely brings the broad tapering face of the socket against the face of the re-enforce or sleeve, and as the latter is somewhat elastic the elasticity of the rod is increased.

It will be obvious that the ferrules may be of different forms and constructions without departing from the main features of my invention.

When zylonite or like material is used as a re-enforce, I prefer to bind it with silk and varnish the latter to make it water-proof.

Without limiting myself to the precise construction and arrangement of parts shown, I claim—

1. A fishing-rod in which the sections are provided with ferrules and the stems are thickened opposite the inner or attached end of each ferrule, substantially as set forth.

2. The combination, in a fishing-rod, of sections having ferrules with flaring inner ends adapted to thickened portions of the stems, substantially as set forth.

3. A fishing-rod provided with sections, each consisting of a wooden stem and metallic ferrules, and tapering sleeves re-enforcing

the stem opposite the inner end of each ferrule, substantially as set forth.

4. The combination, with the stem *a* of a fishing-rod, of a re-enforce 5 of elastic material tapering from the center toward each end, and a ferrule expanded at the end to receive a portion of the re-enforce, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EUSTIS WILLIAM EDWARDS.

Witnesses:

EDWARD CROMWELL,
MINIE PEMBLETON.