

(No Model.)

J. F. MARSTERS.
FISHING ROD.

No. 462,822.

Patented Nov. 10, 1891.

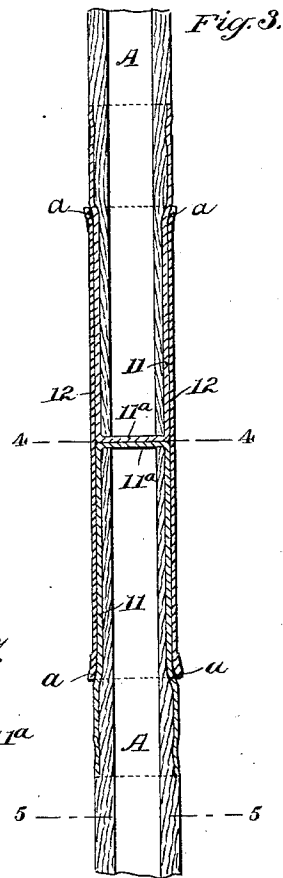
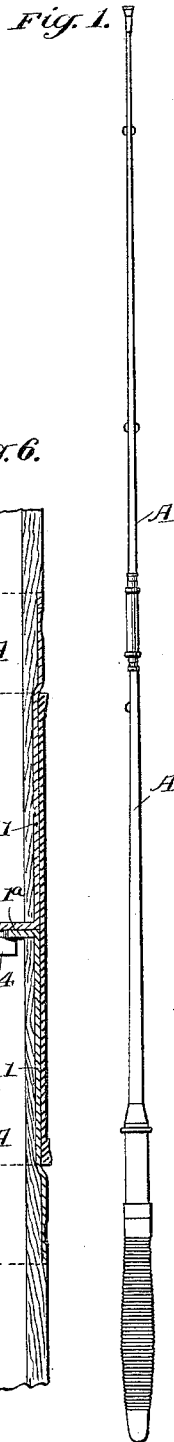
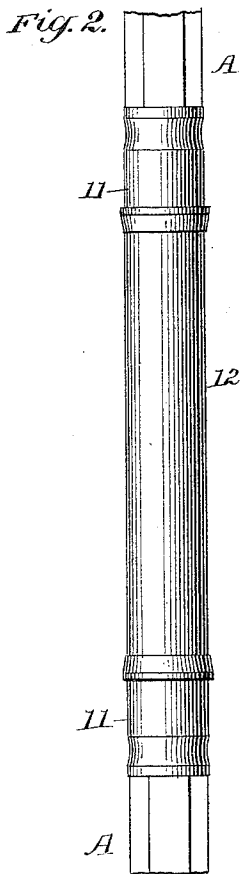


Fig. 6.

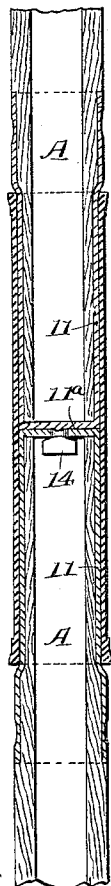


Fig. 5.

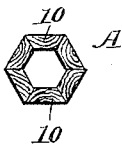


Fig. 7.

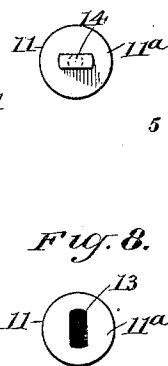


Fig. 8.

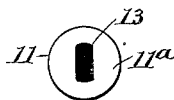
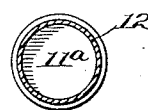


Fig. 4.



WITNESSES:

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FISHING-ROD.

SPECIFICATION forming part of Letters Patent No. 462,822, dated November 10, 1891.

Application filed May 4, 1891. Serial No. 391,518. (No model.)

To all whom it may concern:

Be it known that I, JAMES F. MARSTERS, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful
5 Improvement in Fishing-Rods, of which the following is a full, clear, and exact description.

My invention relates to an improvement in fishing-rods, and has for its object to provide a means whereby the socket-sleeve may be
10 conveniently, expeditiously, and completely disconnected from the sections or members of the rod, permitting the latter to be packed in a much shorter space than heretofore.

A further object of the invention is to in-
15 case the ends of the rod-sections, adapted to enter the socket-sleeves, with ferrules which extend not only over the ends of the sections, but also some distance along their exterior side surfaces. By this construction the ex-
20 tremities of the rod-sections are not only effectually protected from moisture, but the rod when jointed is strengthened throughout its entire length by reason of the tension brought to bear upon the rod in flexing being
25 much more equally distributed than heretofore.

A further object of the invention is to provide a means whereby the sections or members of the rod, when jointed, may be locked
30 in engagement, thereby preventing one section from leaving another unless said action is desired.

The invention consists in the novel construction and combination of the several
35 parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of refer-
40 ence indicate corresponding parts in all the views.

Figure 1 is a side elevation of a rod having the improvement applied. Fig. 2 is a side elevation illustrating two rod-sections united
45 by my improvement. Fig. 3 is a central vertical section through the rod, as shown in Fig. 2. Fig. 4 is a transverse section taken on the line 4 4 of Fig. 3. Fig. 5 is a similar section taken on the line 5 5 of Fig. 3. Fig. 6 is a
50 central vertical section through a rod at the joint connection of two members, the sections being illustrated as locked together by

devices auxiliary to the socket-sleeve. Fig. 7 is an end view of one of the sections shown in Fig. 6, and Fig. 8 is a similar view of the
55 opposite or engaging section illustrated in Fig. 6.

The sections A of the rod are preferably made of a series of sector-like strips 10, of bamboo or other equivalent material, glued
60 together to form a hollow staff cylindrical or polygonal in cross-section, as shown in Fig. 5. The ends of the sections at which joints are to be effected are slightly reduced in diameter to receive ferrules or slides 11. The fer-
65 rrules are ordinarily made of metal, and their cap-sections 11^a completely cover the extremities of the rod-sections, rendering it impossible for moisture to gain access to the interior of said rod-sections and soften the cement, which
70 seriously impairs the usefulness of a rod should it occur. The ferrules or slides extend some distance along the sides of the sections, thereby materially adding to their strength. The ferrules fit the rod-sections snugly and prefer-
75 ably at a point between their centers and their inner ends the exterior surfaces of the ferrules are gradually increased in diameter, forming inclined surfaces *a*, (most clearly shown in sectional views, Figs. 3 and 6;) but the outer
80 faces of the ferrules at their inner ends are usually made essentially flush with the corresponding faces of the rod-sections, to which the rod-sections are secured.

Whenever the ends of two rod-sections are
85 to be brought into engagement, the socket-sleeve 12 is employed. The ferruled ends of the rod-sections are removable from the socket-sleeves, and a joint is effected by sliding a sleeve over the ferrule of one rod-section un-
90 til one end of the sleeve is sprung over the inclined surface *a* of the ferrule. The sleeve will now extend beyond the capped extremity of the rod-section a distance essentially equal to the length of that portion of the sleeve con-
95 tained upon the rod-section. The formation of the joint is completed by introducing into the projecting part of the fixed socket-sleeve the ferruled end of another rod-section until the sleeve shall have been sprung over the
100 inclined surface *a* of the latter ferrule, at which time the cap-section of both ferrules contained in the socket-sleeve will be in close engagement, as illustrated in Fig. 3. It is ob-

vious that as each end of the rod-section at the joint is provided with a metal ferrule the said ferrules are held securely by frictional contact within a socket-sleeve, the said sleeve embracing, essentially, an equal portion of each ferrule. When the rod is flexed in lifting a weight, the tension exerted thereon will be equally distributed throughout the entire length of the rod, as the rod-sections at their joints may be said to be almost integral one with the other.

As heretofore stated, when a socket-sleeve is made removable from both rod-sections in connection with which it is to be employed the sections are reduced in length and may be packed much more neatly than where a ferrule constitutes a fixture upon one section.

It is evident that when a joint is made as above set forth each section will have equal play in its binding or socket sleeve, which materially adds to the elasticity of the rod. It is often desirable to lock the abutting rod-sections together, and in Figs. 6, 7, and 8 I have illustrated a means whereby this result may be accomplished.

In the cap-section 11^a of one ferrule an opening 13 is produced, and upon the outer face of the cap-section of the opposing ferrule a button 14 is formed. The head of the button corresponds in contour to the shape of the opening 13. When this locking device is employed and the rod-sections are brought into engagement, the button 14 will enter the slot 13, and by simply turning one section a slight distance the button will extend transversely of the slot 13 within the ferrule containing such slot, as shown in Fig. 6, rendering it impossible for the two sections to separate until they are manipulated with that end in view.

I desire it to be distinctly understood that the socket-sleeve may be fixed to one rod-section of a joint in any approved manner, if in practice it is found desirable; but in any event the abutting ends of each two rod-sections, constituting a joint, are provided with a ferrule or slide, and the prime object of this addition is to impart a degree of strength to the

rod not heretofore attained, as it has been the custom to produce a slide upon the end of one section only at the joint in the rod.

I desire it to be further understood that the exterior surfaces of the slides or ferrules with which the socket-sleeves engage may be made straight, instead of tapering at one point, as illustrated. This modified form of construction in the ferrules or slides is shown in Fig. 6.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A fishing-rod having the abutting ends of each section thereof at the joints provided with a male ferrule or slide and suitable means for securing same in juxtaposition, substantially as and for the purpose specified.

2. In a fishing-rod, a section thereof provided with a male ferrule or slide inclosing each end and extending exteriorly inward therefrom and a socket-sleeve closely embracing one of the ferrules or slides extending beyond the end thereof, said projecting portion of the sleeve being adapted to receive the ferrule end of another rod-section, substantially as described.

3. In a fishing-rod, the combination, with the sections thereof and male ferrules or slides secured upon the abutting ends of said sections and covering the extremities and sides adjacent thereto, of a socket-sleeve in close frictional contact with two abutting ferrules or slides at each joint in the rod, substantially as and for the purpose specified.

4. In a fishing-rod, the combination, with a section and a male ferrule surrounding and covering each end of said section, closing the extremities thereof, of a socket-sleeve in removable frictional engagement with the male ferrule at one end of the section, the said socket-sleeve being of sufficient length to extend beyond the capped extremity of the ferrule, as and for the purpose specified.

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Witnesses:

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