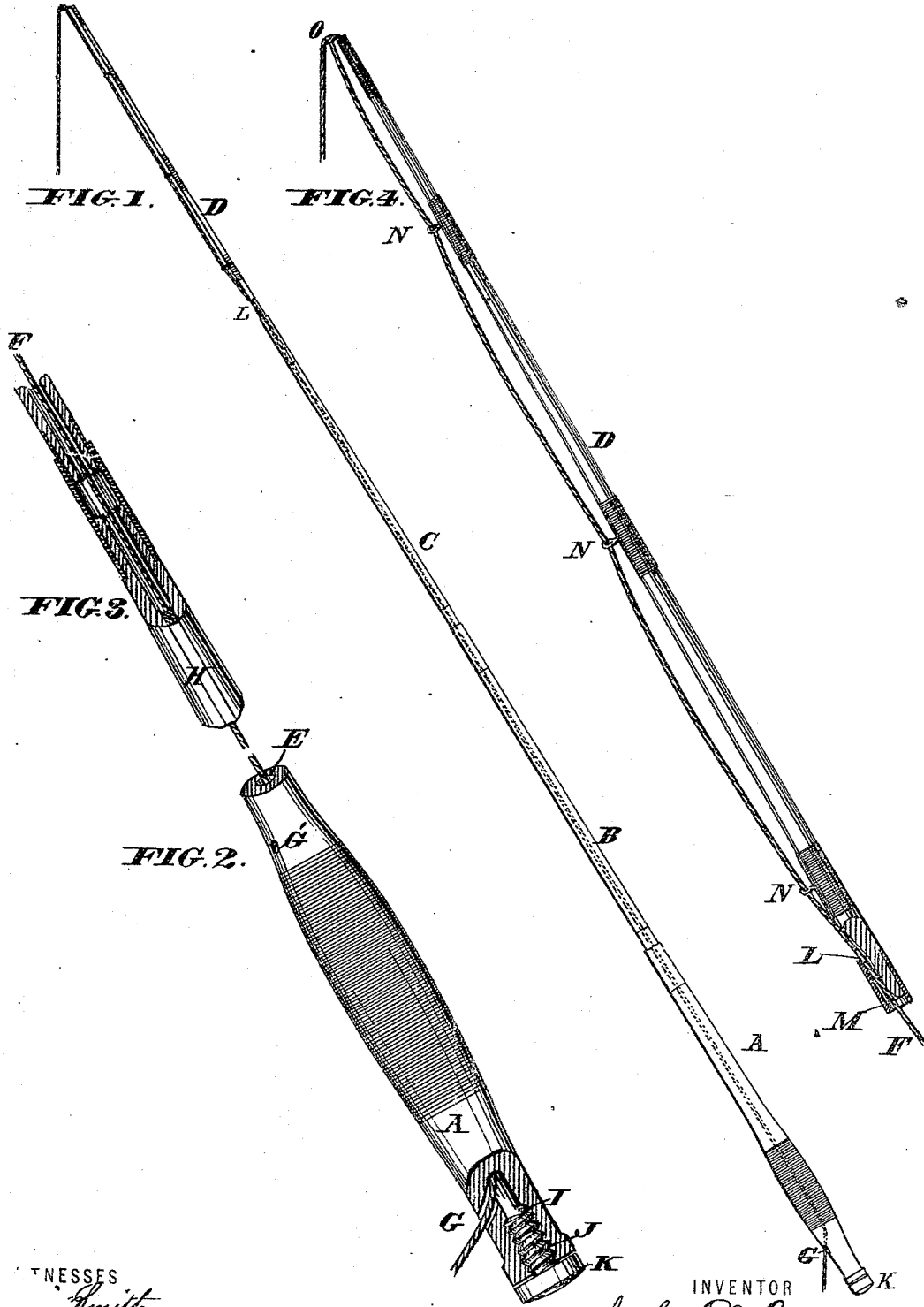


J. L. GRAVES.
Fishing-Rod.

No. 164,828.

Patented June 22, 1875.



WITNESSES
Smith
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INVENTOR
John L. Graves.
By *King & Co.* Attorneys

UNITED STATES PATENT OFFICE.

JOHN L. GRAVES, OF SPRINGFIELD, MASSACHUSETTS.

IMPROVEMENT IN FISHING-RODS.

Specification forming part of Letters Patent No. **164,828**, dated June 22, 1875; application filed May 15, 1875.

To all whom it may concern:

Be it known that I, JOHN L. GRAVES, of Springfield, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Fishing-Rods, of which the following is a specification:

My improved fishing-rod is constructed at the butt with a wooden plug and cap, combined with a screw-thread entering a threaded socket in the base of the rod, said socket communicating with a hollow or opening, which extends through every section of the rod with the exception of the last reach or tip. A lateral aperture admits the line to the central opening, through which it is pressed. The butt of the last reach or tip is grooved to permit the passage of the line from the interior of the hollow section beneath it, the line being confined to the tip by suitable winding or light metallic bands or eyes. The hollow in the different reaches is made by forming a groove with a delicate saw, or any other suitable tool or instrument, and filling the same to a proper depth with a wedge or strip.

In the accompanying drawing, Figure 1 is an elevation of a rod with four reaches, illustrating the invention. Fig. 2 is a sectional elevation of the butt on a larger scale. Fig. 3 is a sectional elevation of the upper end of the second reach, showing the joint between them. Fig. 4 is an elevation of the last reach or tip, with the base thereof in section.

A B C D represent four sections or reaches of a fishing-rod, all of which, excepting the tip or last reach, D, are constructed with a hollow, E, extending from end to end for the reception of the line F, which is passed through an aperture, G or G', at any suitable point at or near the butt. The hollow E is formed by cutting into the wood from the outside with a delicate saw, and filling the outer part of the slot thus made with a wedge piece or strip, H, of the necessary width.

The butt A, being of large diameter, may be bored, if preferred; or the hollow may be formed in the manner already described with reference to the second and third reaches.

The butt-end of the first or base section A is constructed with a threaded socket, I, for

the reception of a screw-plug, J, which is made of wood, in one with a knob or cap, K, forming the extreme base of the rod. The line F is carried out of the hollow E through a groove, L, in the butt-end of the upper reach or tip D, said groove being encircled by a band or ferrule, M. The line then passes through eyes N, or may be confined by light bands, or by winding, as required. The attachment at the point is by an eye, O, in customary manner.

It will be observed that this mode of constructing the rod and applying the line permits the latter to run through the rod with perfect freedom, so that it may be reeled in or let out, as required. It is free from liability to become entangled.

The rod is possessed of the most perfect flexibility, and of great strength.

The tip or upper reach D is made solid, in order that the greatest flexibility may be afforded at the point, where it is most required.

The screw-plug J and knob K, made in one piece, constitute a device greatly superior to the cap in common use for hollow fishing-rods. Said plug and knob, being made solid of wood, are light, and always reliable, and will last indefinitely.

The wedge or strip H may have sides plain, grooved, beveled, or otherwise prepared for entering the groove or kerf.

The following is claimed as new:

1. The hollow butt A, having a perforation, G or G', through which the cord passes, and the solid wooden plug J, constructed with a base, knob, or cap, K, as and for the purposes described.

2. The combination of hollow sections or reaches A B C, of any suitable number, and the solid tip or upper reach D, grooved at L for the passage of the line F, as described.

3. The method of forming the opening or hollow E through the rod-joints, consisting of slitting a groove from the outside, and then inserting the wedge piece or strip H, as described.

JOHN L. GRAVES.

Witnesses:

EDWD. W. SEEGER,
FRED. HARRIS.