

(No Model.)

G. B. TURRELL.
COUPLING FOR RODS.

No. 291,819.

Patented Jan. 8, 1884.

Fig. 1.

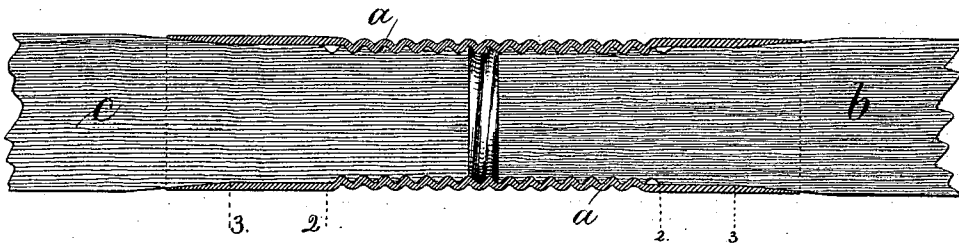
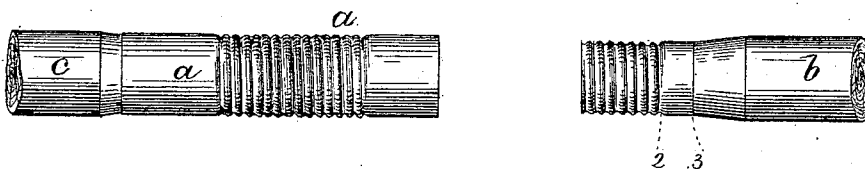


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE,

GEORGE B. TURRELL, OF SOUTH ORANGE, NEW JERSEY, ASSIGNOR TO THE
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COUPLING FOR RODS.

SPECIFICATION forming part of Letters Patent No. 291,819, dated January 8, 1884.

Application filed October 18, 1883. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. TURRELL, of South Orange, in the county of Essex and State of New Jersey, have invented an Improvement in Joints or Couplings for Rods, of which the following is a specification.

Gun-rod sections have been united by cast-metal couplings screwed to each other, each section of the coupling being united to the wooden rod by a socket that receives the reduced end of the rod, and into which it is held by pins or screws. Fishing and other rods have been united by wrought-metal tubes into which the reduced ends of the rod-sections are slipped, and in some instances one piece of metal tube is attached to the section, and upon the adjacent end of the next section is a shorter piece of tube or a ferrule. Sometimes these are plain and sometimes screw-threads are cut upon the same. In gun-rods there is often considerable tension and the wood is frequently broken off in the sockets or ferrule, or else the tubular connections are pulled off the wooden rod. In Letters Patent No. 285,493 some of these objections are obviated by the use of sheet-metal tubes with screw made by a thread rolled in a sheet metal and screwed upon the rod-sections.

My present invention is made for simplifying and rendering more strong, firm, and reliable the connection between the end of the wooden rod-section and the tubular coupling.

In the drawings, Figure 1 is a longitudinal section, in enlarged size, of the rod and coupling; and Fig. 2 is an elevation of the coupling-tube on the end of one section and the adjacent end of the next section.

In gun-rods it is important that the rod be perfectly straight and true after the sections are screwed together; that the wood at the joints retain as near as possible the same strength as at any other portion of the section; that the metal portion of the coupling be slightly smaller than the exterior of the wood sections, so as not to scratch the gun-barrel; that the coupling shall not become loose by the shrinkage of the wood, and that the coupling shall be as strong in its tensile strength, or nearly so, as the other portion of the rod.

In fishing and similar rods most of the foregoing points are also advantageous.

In order to simplify the construction of the coupling, I make use of the metallic tube *a*, preferably of sheet metal, with a screw-thread rolled into the same, so that the screw-threaded portion is smaller than the end portion which is not threaded. This allows the reduced ends of the rods *b* and *c* to be entered into the plain portion of the coupling-tube before the screw-threads cut in the wood are caused to engage with the threads of the sheet-metal tube. This prevents injury to the wooden thread by insuring a proper alignment of the wood with the coupling, so that the threads engage properly. Besides this, the rod is cylindrical in the portion between 2 and 3, and fits the inside of the smooth cylindrical coupling, and by this the two parts or wooden sections *b* *c* are kept properly in line with each other independently of the screw-threaded portion; hence any inaccuracy in the screw-threads does not interfere with the alignment of the rod-sections. The threaded portions at the ends of the sections and the threaded portion of the tubular coupling are of such a length that the entire rod will have nearly the same tensile strength throughout its length. The exterior of the coupling-tube is slightly smaller than the exterior of the sections *a* *b*, so that the metal of the coupling-tube will not be liable to scratch the interior of the gun-barrel. This feature, however, is not of importance in fishing-rods, and may sometimes be dispensed with.

The wood of which gun-rods are usually made is subject to shrinkage, although generally seasoned with great care. To prevent the coupling-joint becoming loose from shrinkage, I make the wooden end a slight or gradual taper between the larger diameter and the end 3 of the reduced cylindrical portion, and I taper the interior of the coupling-tube at the ends at the same or nearly the same inclination or angle, and the threaded ends of the sections do not abut together, but there is a space between them, in order that the tapering or conical portion of the section may be drawn firmly into the tapering end of the tu-

bular coupling, and thus tightly bind the parts together, and in case the wood shrinks or wears smaller by being taken apart and put together, there will not be any looseness when the sections are screwed together.

It is to be understood that the taper upon the rod is preferably employed; but I do not limit myself in this particular, as one or both ends of the coupling-tube may be of uniform thickness, and there may be a square shoulder upon the rod section or sections, the parts being screwed together until the end of the coupling-tube is pressed against the shoulder firmly.

The taper at the ends of the coupling-tube may be applied to the rod and coupling tubes or ferrules shown in the aforesaid Patent No. 285,493.

There may be any desired number of sections in the gun-rod, and the end that receives the swab, extractor, or other implement may be made in the manner shown, the tool or implement being upon a coupling-tube or upon a short section screwed into the coupling-tube.

I claim as my invention—

1. The combination, with the wooden rod-sections having screw-threads at their ends, of a tubular coupling of sheet metal, with the end portions cylindrical, or nearly so, and a screw-thread bent inwardly, so as to be of less diameter than the end portions, substantially as set forth.

2. The combination, with the wooden gun-rod sections, of a coupling-tube of sheet metal slightly smaller than the exterior of the wooden sections, and having a screw-thread bent inwardly, substantially as set forth.

3. The sheet-metal coupling-tube having the screw-thread bent inwardly, in combination with the wooden rod-sections fitting the interior of such couplings, and having screw-threads upon the wood, substantially as set forth.

4. The sheet-metal coupling-tube having a screw-thread bent inwardly in the middle por-

tion, and plain portions at one or both ends of larger diameter than the threaded portion, in combination with the rod-sections, the ends of which slide into the plain portions of the coupling before the screw-threads engage, substantially as specified.

5. The combination, with the wooden gun-rod section, of a tubular coupling adapted to receive the wooden sections into its respective ends, and having a screw-thread bent inwardly in such tubular coupling, the ends of the gun-rod sections not touching, so as to be tightened by screwing the sections into the coupling, substantially as set forth.

6. The combination, in a jointed rod, of a tubular coupling having an internal screw-thread in the middle portion, and wooden sections having screw-threaded ends and plain tapering portions between such ends and the plain portions of the rod, so that the tapering portions are drawn into the ends of the coupling by the action of the screw, substantially as set forth.

7. In a jointed rod, the combination, with a tubular coupling having an internal screw-thread, of the wooden rod-section of larger diameter than the exterior of the coupling, and having a bearing-surface that is brought forcibly against the coupling-tube, at or near the end, to prevent looseness from shrinkage, substantially as set forth.

8. The combination, with the wooden rod-sections, of a tubular coupling, into which the end portions of the wooden sections are directly received, such coupling having an internal screw-thread, so that, however closely screwed together, the sections may be separated by unscrewing one of the sections from the coupling, substantially as specified.

Signed by me this 15th day of October, A. D. 1883.

GEO. B. TURRELL.

Witnesses:

GEO. T. PINCKNEY,
WILLIAM G. MOTT.