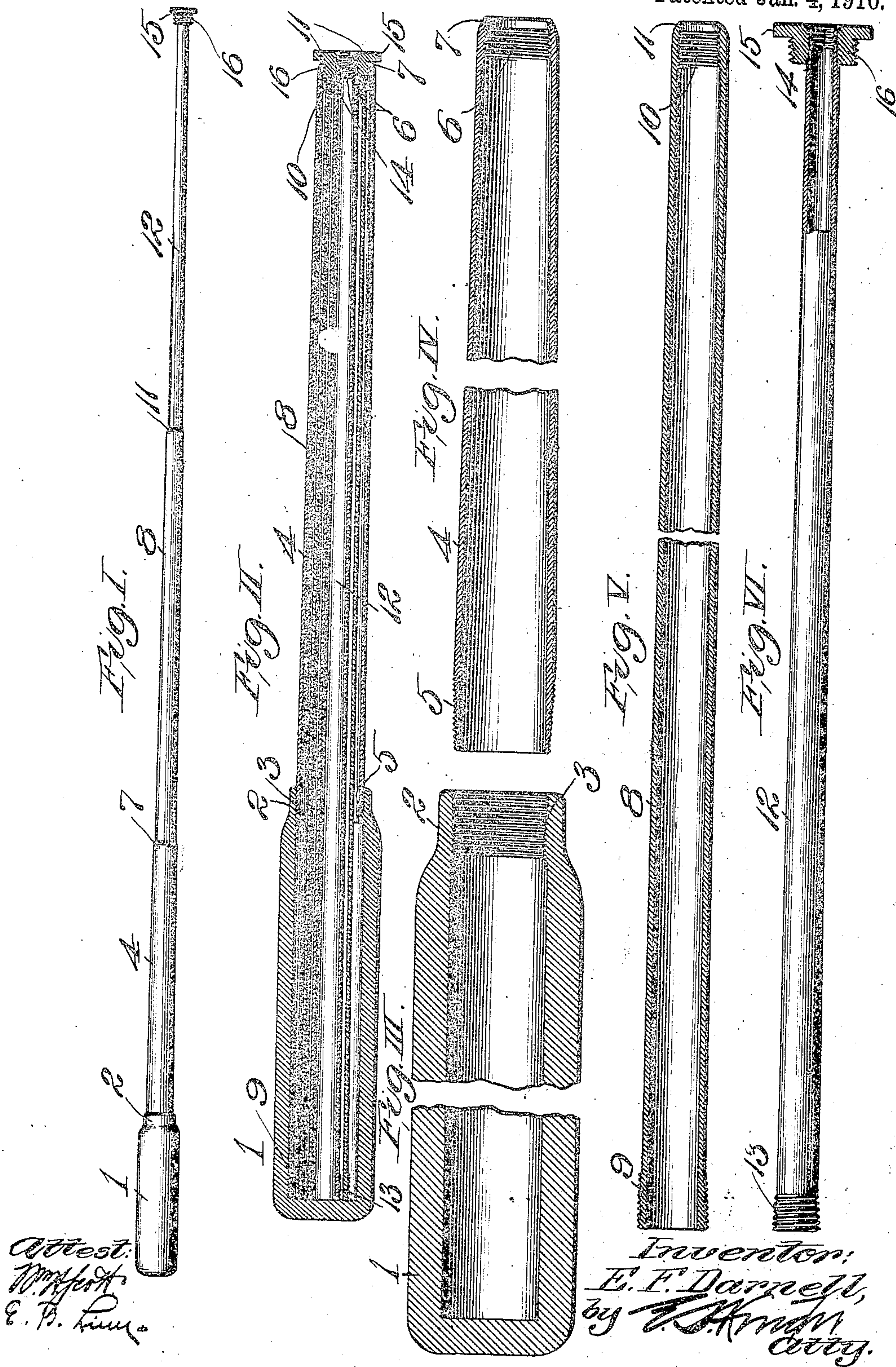


E. F. DARNELL.  
TELESCOPIC GUN ROD.  
APPLICATION FILED AUG. 9, 1909.

945,491.

Patented Jan. 4, 1910.





# UNITED STATES PATENT OFFICE.

ELMER F. DARNELL, OF HILLSBORO, ILLINOIS.

## TELESCOPIC GUN-ROD.

945,491.

Specification of Letters Patent.

Patented Jan. 4, 1910.

Application filed August 9, 1909. Serial No. 511,933.

*To all whom it may concern:*

Be it known that I, ELMER F. DARNELL, a citizen of the United States of America, residing in Hillsboro, in the county of Montgomery and State of Illinois, have invented certain new and useful Improvements in Telescopic Gun-Rods, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to an extensible and collapsible gun rod that is so constructed as to have its sections very rigidly held from movement relative to each other when the rod is in extended condition for use, the construction being also such that the sections may be quickly telescoped within each other into small compass and held collectively assembled without liability of either of the sections being misplaced.

Figure I is an elevation of my gun rod in extended condition ready for service. Fig. II is a longitudinal section through the rod in collapsed condition. Fig. III is an enlarged longitudinal section of the handle of the gun rod partly broken out. Fig. IV is an enlarged longitudinal section of the first joint partly broken out. Fig. V is an enlarged longitudinal section of the second joint. Fig. VI is in part an elevation and in part a longitudinal section of the third joint.

In the accompanying drawings:—1 designates the handle of my gun rod, which is preferably of hollow form and is provided at its forward end with a neck 2 containing an internal screw thread 3, the bore in the neck occupied by the screw thread being preferably tapered, as seen most clearly in Fig. III.

4 designates the first joint of the rod which is provided at its rear end with an external screw thread 5 that is screwed into the neck of the handle 1 and into engagement with the internal screw thread 3 therein. The joint 4 is tapered from its rear end to its forward end, the forward end being the smaller, and within the joint, near its forward extremity, is an internal screw thread 6, the spirals of which decrease in depth from the rear end to the forward end of the thread.

8 designates a second joint of my gun rod which tapers from its forward end to its rear end in a degree corresponding to the taper of the first joint 4. This second joint is

loosely mounted in the first joint so that it may be telescoped therein and it is provided with an external screw thread located at its rear end, which is adapted to engage the internal screw thread 6 in the first joint when the second joint is moved forwardly, and it is to be noted that the spirals of the thread 9 decrease in depth from the rear end of said screw thread to its forward end in order that it will properly fit the spirals of the screw thread 6 in the first joint, and provide for the two joints being tightly interlocked when the second joint is moved forwardly till the threads 9 and 6 are engaged, and then rotated to place the threads firmly in mesh with each other for the purpose of preventing endwise movement of the second joint within the first joint. Within the forward end of the second joint is an internal screw thread 10 that corresponds in nature to the internal screw thread 6 in the first joint.

12 designates the forward joint of the rod, which is tapered from its rear end to its forward end and is of a size sufficiently smaller than the second joint as to be susceptible of telescoping in said second joint. The forward joint is provided at its rear end with an external screw thread 13 of the same nature as the external screw thread 9 on the second section 8 and which is adapted to engage the internal screw thread 10 in the second joint and to be rigidly held to said second joint by such engagement when the forward joint is moved forwardly in the second joint, and rotated after the threads 13 and 10 have been placed in engagement with each other. The third joint is provided at its forward end with an internal screw thread 14 to provide for the connection to the forward joint of a wiper, or other implement that is to be used upon the rod in cleaning a gun.

The forward joint 12 is provided with a tip 15 located at its outer end, the tip being rigidly secured to the joint. The forward portion of this tip is of greater diameter than either of the joints of the gun rod, so that it will abut against the outermost, or first, joint when the gun rod is in a collapsed condition. The tip has a shank 16 that is screw threaded externally and is located back of its forward portion. This screw threaded shank is adapted to be placed in engagement with the screw thread 6 in the forward end



of the first joint 4 when the joints 8 and 12 are telescoped therein, thereby connecting the forward joint 12 and its tip to the first joint and holding the parts assembled when the gun rod is contracted.

I desire to direct particular attention to the fact that the screw threads, both external and internal upon the joints of my gun rod, are all produced directly upon or in the joints and are, therefore, integral parts of the joints, so that there is no liability of these threads becoming separated from the joints, as they would be liable to if they were produced in collars or bushings secured to the joints and which are extremely liable to become loosened in the hard usage to which a gun rod is put. I further wish to direct particular attention to the tapering of the screw threads upon and in the joints; or, in other words, the decreasing of the depths of the spirals of these screw threads in the manner stated, whereby the joints may be so bound together when extended as to cause them to retain their respective positions relative to each other.

It will be observed on referring to Figs. IV and V that the joints 4 and 8 are provided at their forward ends with inturned circular knife edges 7 and 11, which are located beyond the internal threads 6 and 10.

These knife edges are adapted to fit snugly around the joints that are drawn through them so as to avoid any angular corners at the ends of the joints.

I claim:—

1. An extensible gun rod, comprising a plurality of tapering joints telescopically fitted to each other and having matching screw threads externally and internally thereof in their bodies; the joints terminating at their forward ends in circular knife edges; substantially as and for the purpose set forth.

2. An extensible gun rod, comprising a plurality of joints telescopically fitted to each other, and one of which is arranged for screw threaded engagement with another of the joints to hold the joints from movement when in retracted positions.

3. An extensible gun rod, comprising a plurality of joints telescopically fitted to each other, and provided with screw threads and a tip carried by the forward joint and having a screw thread for engagement with the first joint.

ELMER F. DARNELL.

In the presence of—

WM. H. SCOTT,  
EDNA B. LINN.