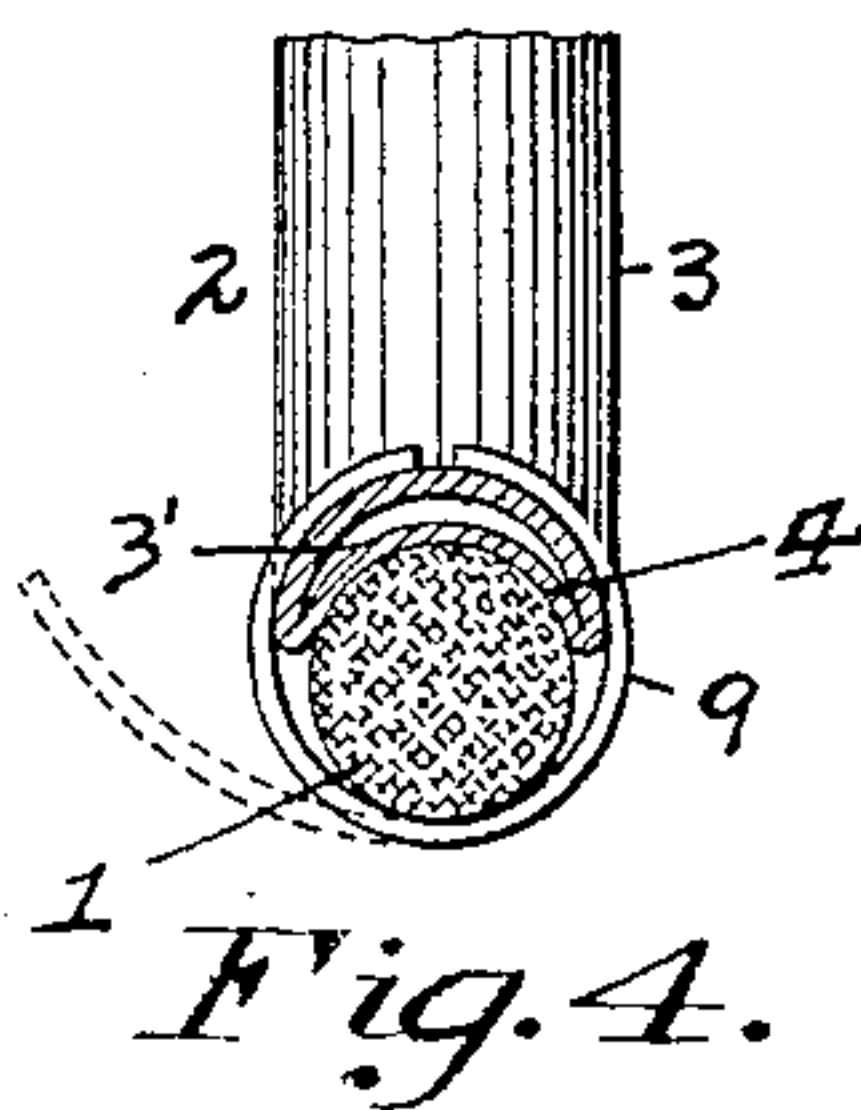
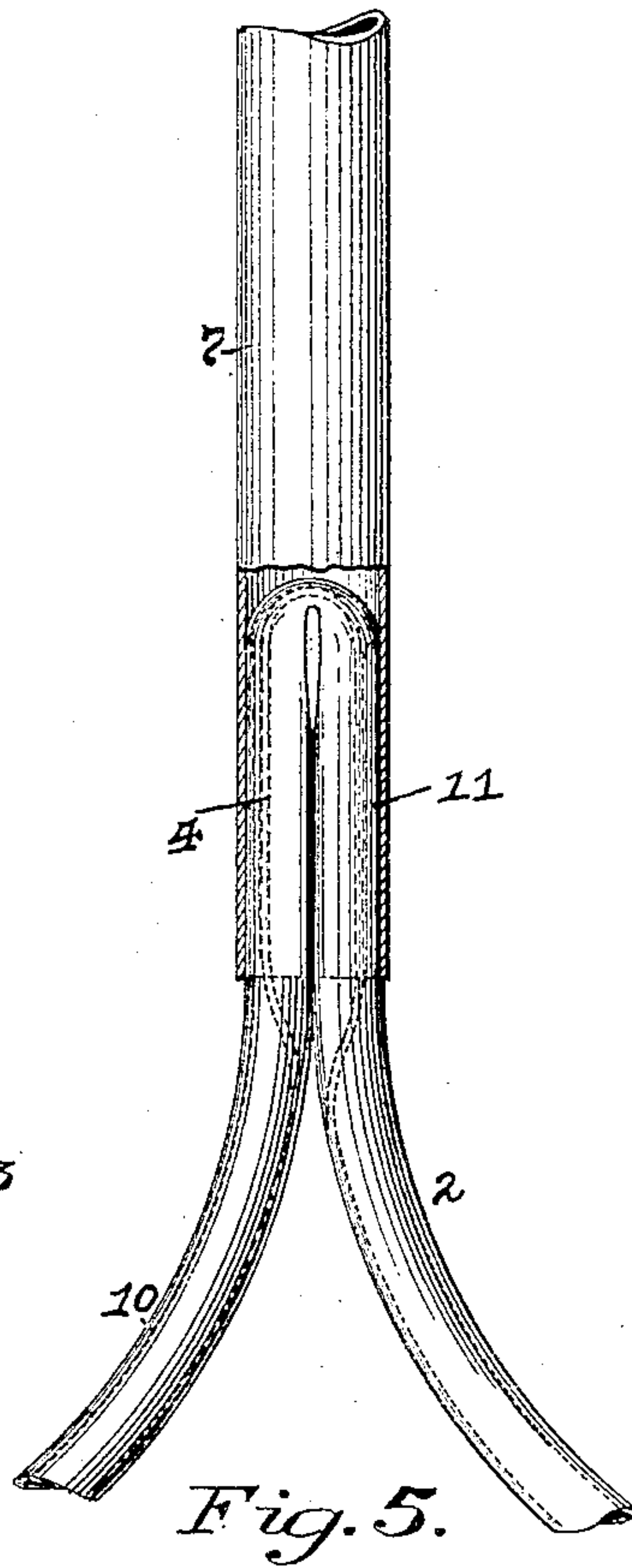
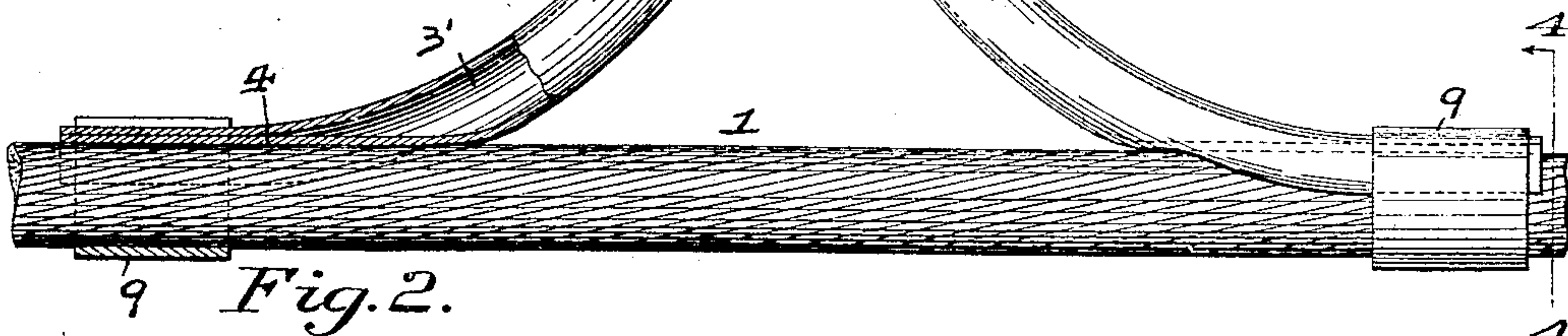
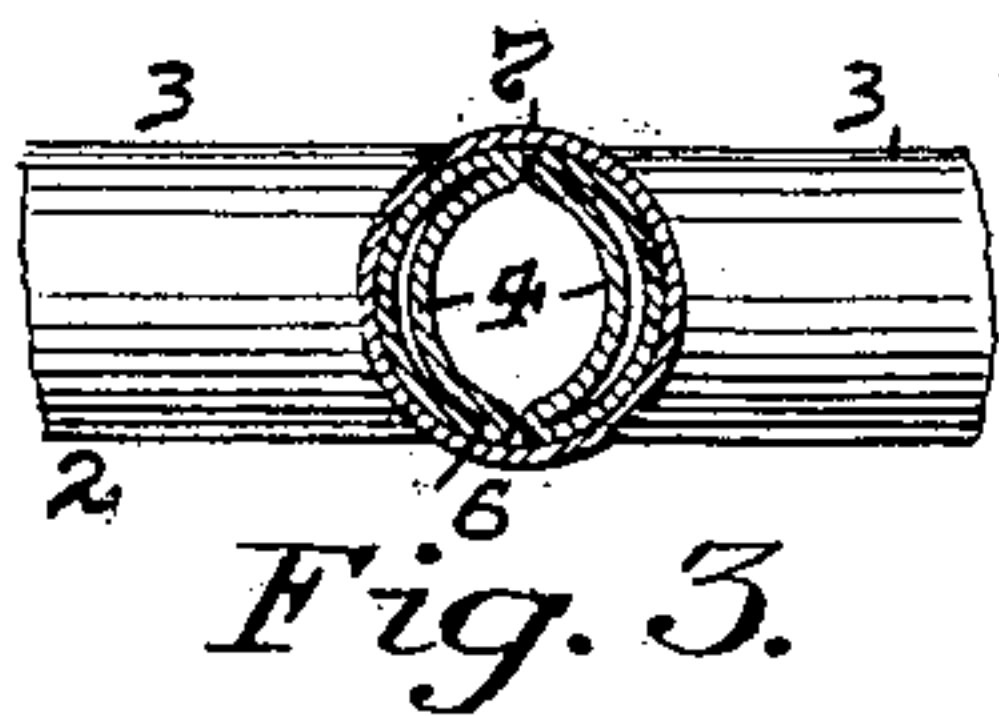
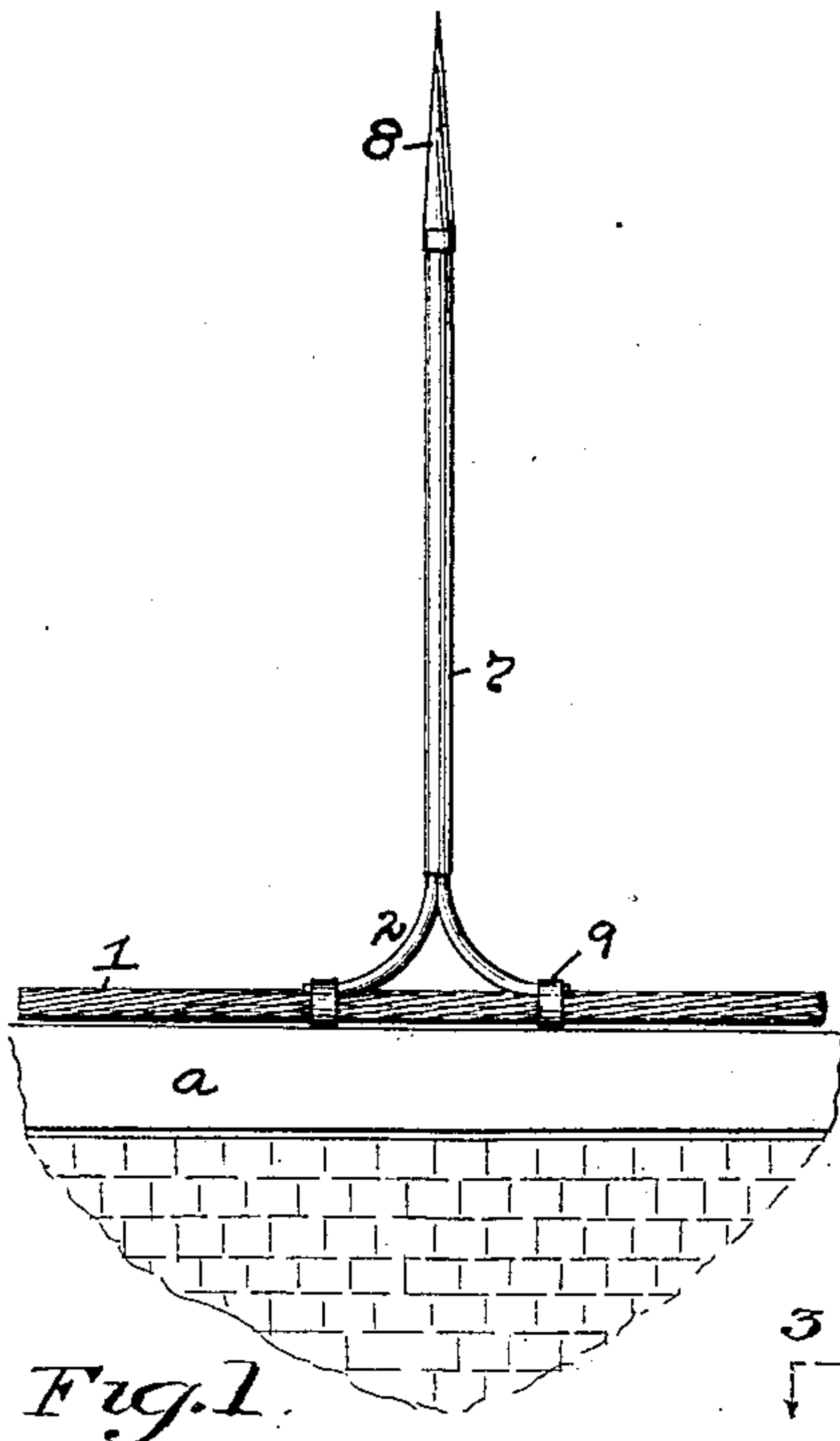


G. R. KRESS.  
LIGHTNING ROD.  
APPLICATION FILED FEB. 6, 1908.

904,969.

Patented Nov. 24, 1908.



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# UNITED STATES PATENT OFFICE.

GEORGE R. KRESS, OF PITTSBURG, PENNSYLVANIA.

## LIGHTNING-ROD.

No. 904,969.

Specification of Letters Patent.

Patented Nov. 24, 1908.

Application filed February 6, 1908. Serial No. 414,523.

*To all whom it may concern:*

Be it known that I, GEORGE R. KRESS, a resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Lightning-Rods; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to electrical conductors of the class generally known as "lightning rods", and has special reference to the connecting joint for such rods.

The object of my invention is to provide for a cheap, simple and efficient form of what is known as a T-bur or Y-connecting joint for lightning rods which can be easily and quickly manufactured or formed and be conveniently and rapidly set in position for use.

My invention consists, generally stated, in the novel arrangement, construction and combination of parts, as hereinafter more specifically set forth and described and particularly pointed out in the claims.

To enable others skilled in the art to which my invention appertains to construct and use my improved lightning rod connection, I will describe the same more fully, referring to the accompanying drawing, in which:—

Figure 1 is a side elevation of a terminal or point and its connected line conductor or rod, showing my invention applied thereto. Fig. 2 is an enlarged side elevation, partly in section, of my improved connection as applied to a conductor or rod. Fig. 3 is a cross-section on the line 3—3 Fig. 2, looking in the direction of the arrow. Fig. 4 is a like section on the line 4—4 Fig. 2, looking in the direction of the arrow. Fig. 5 is a detail view showing another form of my invention.

Like symbols of reference herein indicate like parts in each of the figures of the drawing.

As illustrated in the drawing, 1 represents a horizontal or main line section or conductor which is secured in any suitable manner to the adjacent portion of a building *a*, and is formed of the usual material and preferably a copper woven-wire rod. My improved connection is shown at 2, and is preferably formed from two copper sections of tubing 3, which are bent or formed in the curved lines or segments to form the tubular branches 3' and are formed or bent at each of their ends and on one side into a concave

recessed and flattened shape, as at 4. The upper ends of the curved sections 3 in forming the connection 2 are placed together so that the side edges 5 of the recessed portions 4 thereon can be connected together by soldering or by other suitable means, and form the tubular stem portion 6 at the upper end of the connection 2. The lower end of a section of tubing 7 can be placed over the tubular stem portion 6 and such tubing forms the top section point rod and carries the usual point connection 8 at its upper end.

The lower ends of the curved sections or branches 3' for the connection 2 are provided with the plates or straps 9, which are preferably formed of thin sheet copper and are secured at one end by soldering or other suitable means to the convex portion of said ends. The lower ends of the sections or branches 3' are connected to the main conductor or section 1 by the recessed portions 4 thereon fitting over and around said section 1 and are secured thereto by bending the straps around said section and over said ends.

In Fig. 5 my improved connection 2 is shown as formed from a single tubular section 10 which is bent or curved to form the doubled upper end 11 thereon for fitting within the lowered end of the tubing 7 and such end is provided with the recessed portions 4 for being soldered together at their side edges 5, if desired.

It will be obvious that my improved connection can be formed by casting, while various other modifications and changes in the construction and design of my improved connection may be resorted to without departing from the spirit of the invention, or sacrificing any of its advantages.

It will thus be seen that my improved connection provides for especial advantages being had in economy of time and labor in the connections and will permit of the expansion and contraction of the conductor wires at the joints. The connection will also overcome the use of abrupt or sharp corners, or angles and ample contacts are provided for the continuous flow of the electrical current through the parts, while at the same time a good, wide sweep is given to such current through the curved sections of the connection and no obstructions are placed in the way of the flow of said current. The connection will greatly stiffen the rod at the joint so formed and will promote the strength and rigidity of the conductor, while



such connection may be used wherever a joint is presented and forms gradual or wide bends or angles, as well as a continuous and unbroken conductor. The connection also  
5 being a unitary article will enable it to be made for use at the works and it can be applied in position without the employment of any special tools or implements and without any skilled labor.

10 What I claim as my invention, and desire to secure by Letters Patent, is:—

1. In a lightning rod connection, the combination of the top or point section, a continuous line rod, and a separate Y-shaped  
15 connecting joint connected to said section and rod.

2. In a lightning rod connection, the combination of the top or point section, a continuous line rod, and a separate Y-shaped  
20 connecting joint connected to said section and clamped to said rod.

3. In a lightning rod connection, the combination of the top or point section, a continuous line rod, and a separate Y-shaped  
25 connecting joint connected to said section and having means thereon for being connected to said rod.

4. In a lightning rod connection, the combination of the top or point section, a continuous line rod, and a separate Y-shaped  
30 connecting joint connected to said section and having clamping means thereon for connecting the same to said rod.

5. In a lightning rod connection, the combination of the top or point section, a continuous line rod, and a separate Y-shaped  
35 connecting joint connected to said section and having clamping plates thereon for being bent around said rod to connect said  
40 joint thereto.

6. In a lightning rod connection, the com-

bination of the top or point section, a continuous line rod, and a separate Y-shaped connecting joint connected to said section and having flattened portions thereon for  
45 fitting around said rod.

7. In a lightning rod connection, the combination of the top or point section, a continuous line rod, and a Y-shaped connecting  
50 joint connected to said rod and having flattened portions for being connected to said section.

8. As a new article of manufacture, a conductor for lightning rods formed of a Y-shaped connecting joint for being connected  
55 to said rods and having flattened portions at the inner stem ends of the same and opposing each other for being connected to the point rod.

9. As a new article of manufacture, a conductor for lightning rods formed of a separate Y-shaped and bent connecting joint for  
60 being connected to said rods and having bent flattened recessed portions thereon.

10. As a new article of manufacture, a conductor for lightning rods formed of a Y-shaped connecting joint and having bent  
65 flattened recessed portions at the stem ends of the same and opposing each other for being connected to the point rod.

11. As a new article of manufacture, a conductor for lightning rods formed of a Y-shaped connecting joint and having plates  
70 thereon for being bent around the line rod to clamp the same thereto.

In testimony whereof, I, the said GEORGE R. KRESS, have hereunto set my hand.

GEORGE R. KRESS.

Witnesses:

J. N. COOKE,  
JAMES L. WEHN.