

(No Model.)

S. R. LAWSHE.

LIGHTNING ROD.

No. 375,756.

Patented Jan. 3, 1888.

Fig. 4.

Fig. 1.

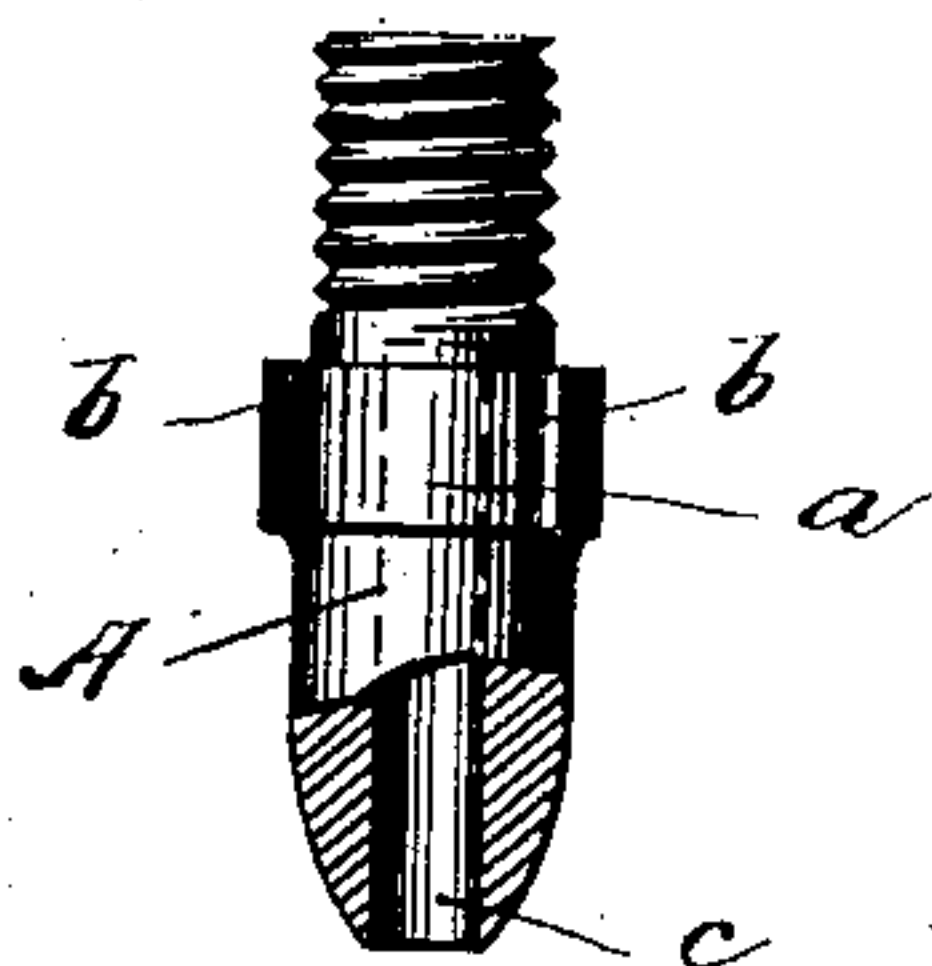


Fig. 2.

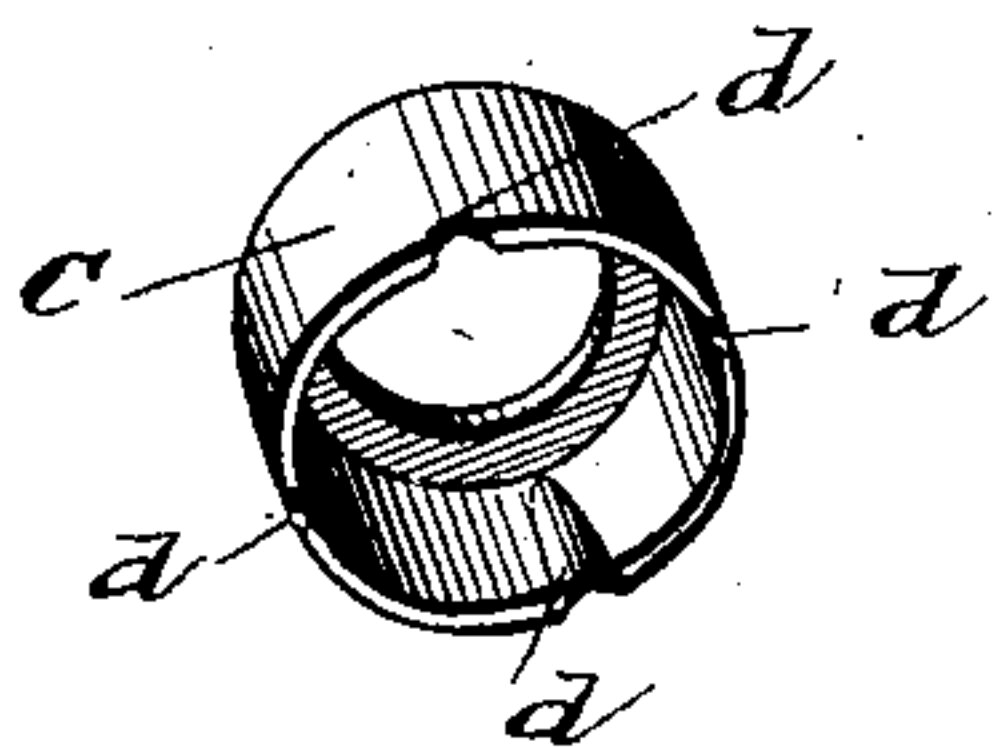


Fig. 3.

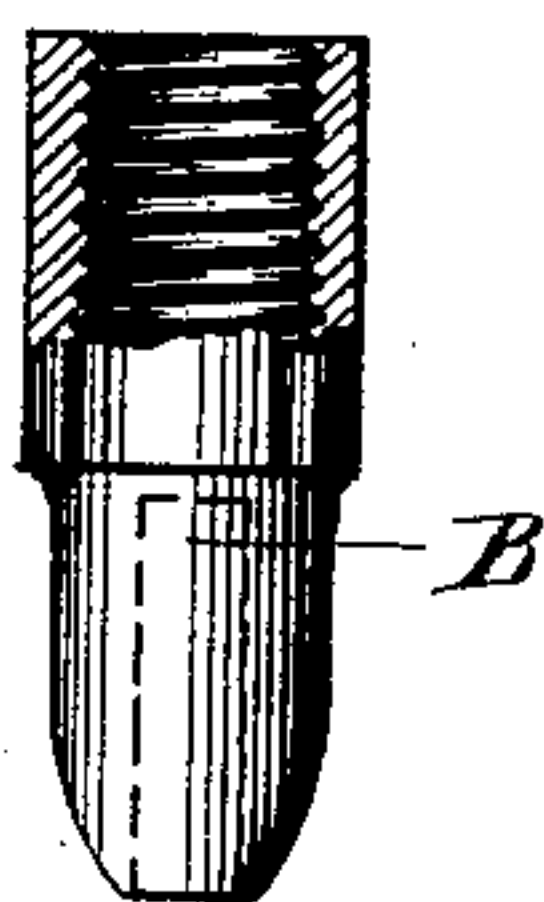
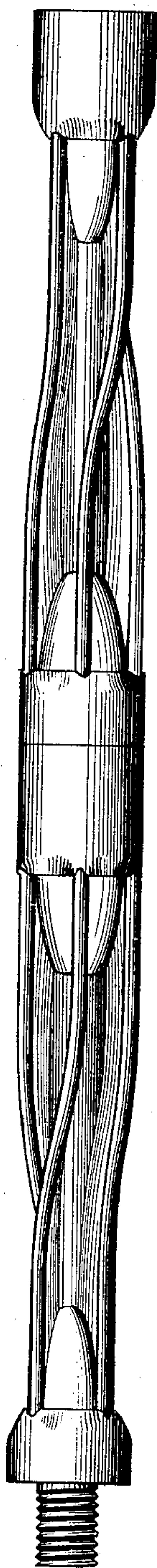
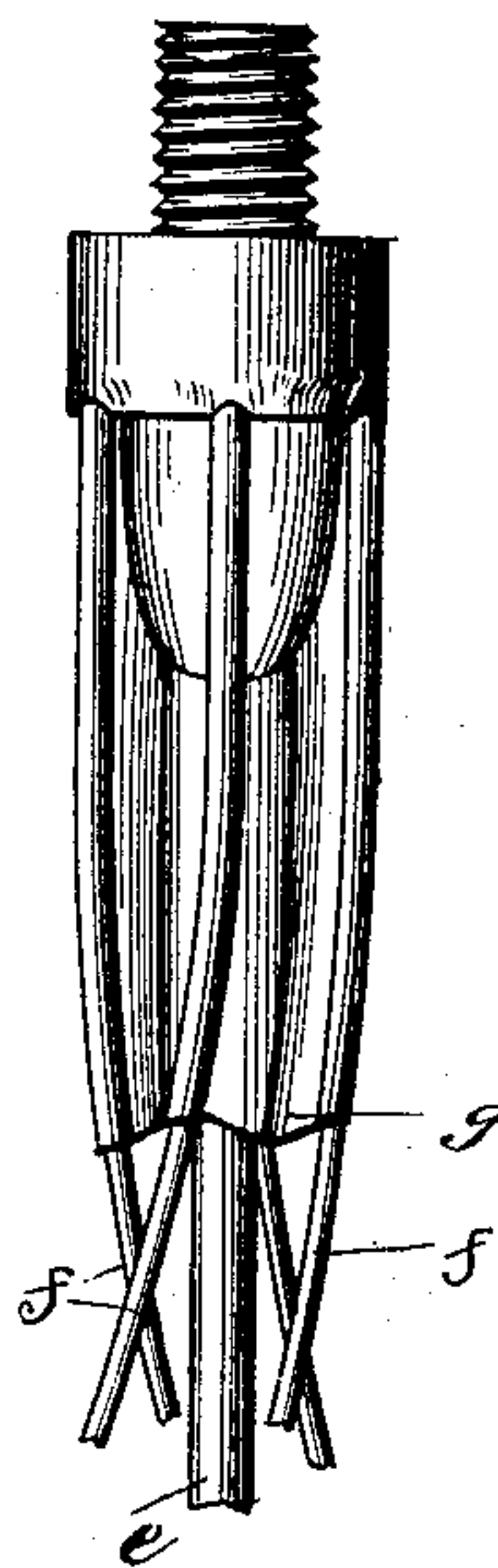


Fig. 5.



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SPENCER R. LAWSHE, OF CHICAGO, ILLINOIS.

LIGHTNING-ROD.

SPECIFICATION forming part of Letters Patent No. 375,756, dated January 3, 1888.

Application filed August 24, 1887. Serial No. 247,778. (No model.)

To all whom it may concern:

Be it known that I, SPENCER R. LAWSHE, a citizen of the United States, residing in the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Lightning-Rods and Lightning-Rod Couplings; and I do hereby declare the following to be a clear, full, and exact description thereof, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, and which form a part of this specification.

My invention relates to lightning-rods which are put together in sections and connected by screw-threads. I am aware that sections of lightning-rods have been connected by screw-threads by several inventors, and therefore do not claim any novelty in that feature of my invention.

My invention consists in lightning-rods composed of joints or sections which are so coupled as to carry the electric fluid passing through each portion of the rod from one section to another through its entire length, and the principal features of my invention, and whereby my invention differs from those of others, are as hereinafter described, reference being had to the accompanying drawings, which form a part of this specification.

Figure 1 represents one half of the brass coupling-piece A, having a shoulder, *a*, with grooves *b b*, and a threaded screw at one end, the other and unthreaded end of which tapers and has a hole, *c*, bored in it, as shown in sectional view, which hole extends about half-way through the piece, and into which hole the center wire or metal rod of the section is seated. Fig. 2 represents a collar, C, with grooves *d d* to match the grooves of the shoulder-piece shown in Fig. 1, and this collar fits the shoulder-piece of Fig. 1, the smaller and outer wires of the section fitting into these grooves between the collar and shoulder-piece. Fig. 3 represents the other half of the brass coupling-piece B, which is similar to the half represented in Fig. 1, except that it has a screw-thread cut within it adapted to receive and engage the screw-threaded end of the piece shown as Fig. 1. Fig. 4 represents the two sections of the lightning-rod joined together. Fig. 5 represents a section of the lightning-

rod, the upper half of which is shown with collar and covered, the lower half of which is shown without a covering or sheathing.

The several joints to my rod are composed of the couplings, a center wire, *e*, and two or more other wires, *ff*, of steel or iron or other suitable material, (four is the number preferred,) which are at a short distance from the center wire, but do not touch it, and are connected with it by means of the coupler and the copper sheathing or covering *g*. This copper sheathing or covering not only serves to keep the several wires of the rod separate, but also serves as a conductor of the electricity passing along the rod. The outside wires and copper sheathing may be so twisted as to give a spiral direction to the section for the sake of appearance; but this is not necessary, as they may be allowed to run straight or any way the fancy may direct, the principal idea being to cover by a copper sheathing the outside wires in such a way as to distribute the electricity to all of them, and at the same time keep them apart from each other and from the center rod, and to produce such an exterior appearance as shall be pleasing to the eye and adapted to the trade.

The hole or slot in the unthreaded end of the coupling-piece is for the purpose of receiving the center wire of the rod, thereby giving additional strength.

The ends of the wires of each section, (together with the ends of the copper sheathing,) join tightly or closely on the grooved shoulder of the coupling-piece and extend up so far as to be themselves covered by a copper collar (see Fig. 2) or other suitable metal band, having also internal indentures or grooves to receive the wires, which collar is fastened tightly by being crushed or contracted below the shoulder of the coupling-piece by any proper method, so that the outside wires fit tightly against the coupling-piece, and the outside sheathing is pressed so tightly against the coupling-piece and the collar as to produce a perfect union for the conducting of the electricity and prevent water and dirt from entering.

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

1. In lightning-rods composed of sections

containing a center rod or wire and two or more outside wires made of steel or iron or other suitable material, a sheathing of copper or other suitable material, arranged in such a way as to separate the outside wires from each other and from the center rod or wire.

2. In a lightning-rod made in sections, a coupling formed of two parts, one part of which has a threaded end or tenon, the other part of which has a threaded cavity to receive the other threaded end or tenon, each part having a shoulder with grooves to receive the outside wires of the section, the unthreaded ends of these parts having a hole bored about one-half the way to receive the end of the center rod or wire of the section, each part being

provided with a metal collar or band having internal grooves corresponding to the grooves upon the shoulder, which collar fits the shoulder and covers the wires and copper sheathing. 20

3. The combination, in a lightning-rod, of the center wire, *e*, the outside wires, *f f*, the coupling-pieces A and B, having a shoulder, *a*, with grooves *b b* and holes *c* at the taper end, provided with a collar, C, and the copper sheathing *g*, all substantially as and for the purpose set forth. 25

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