

(No Model.)

T. H. PATEE.
LIGHTNING ROD COUPLING.

No. 257,889.

Patented May 16, 1882.

Fig 1

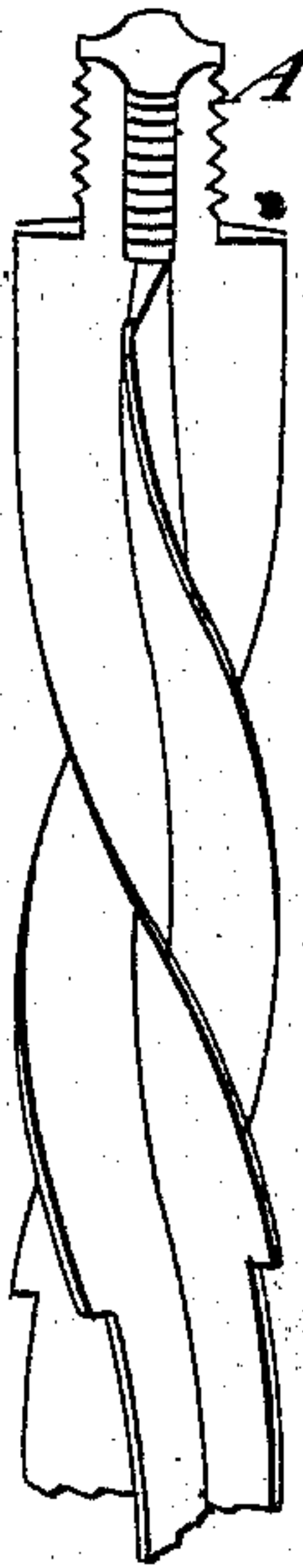
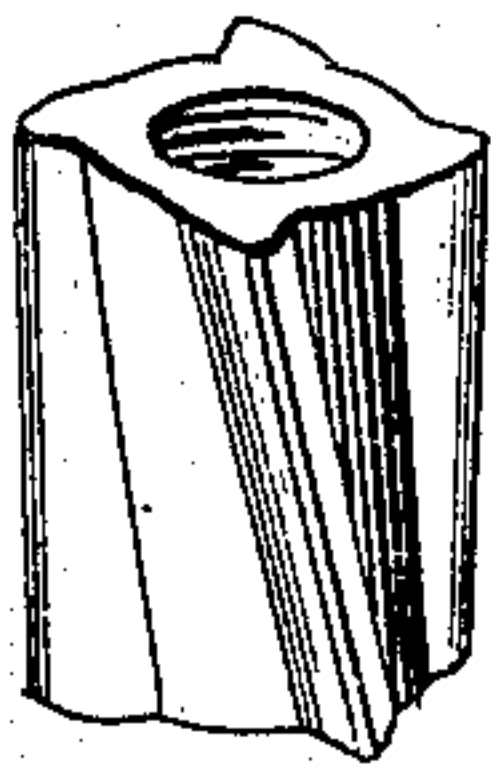


Fig. 2.

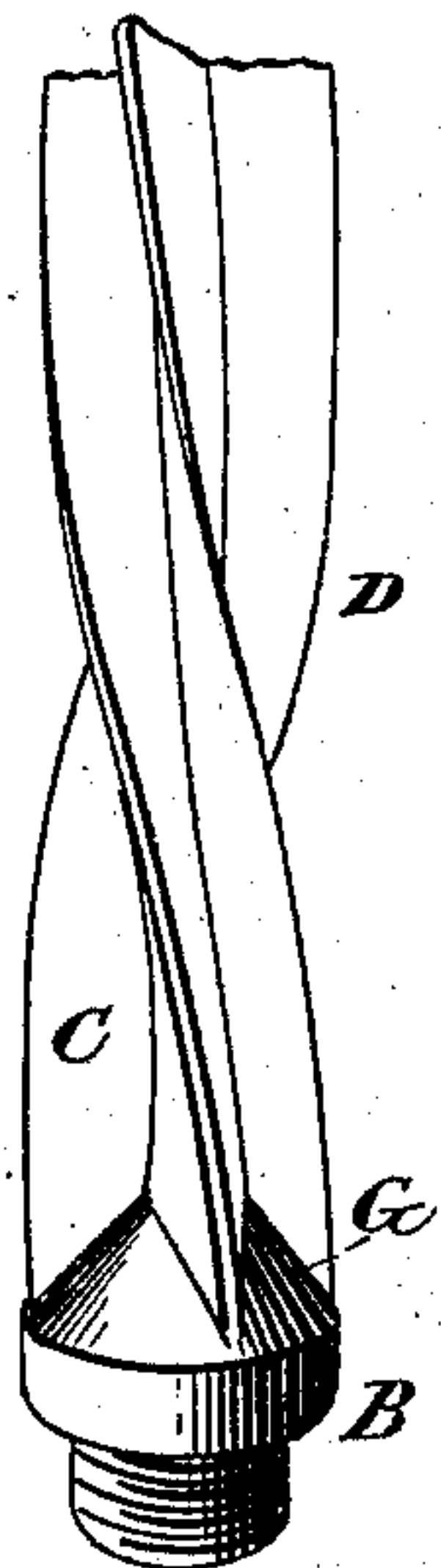
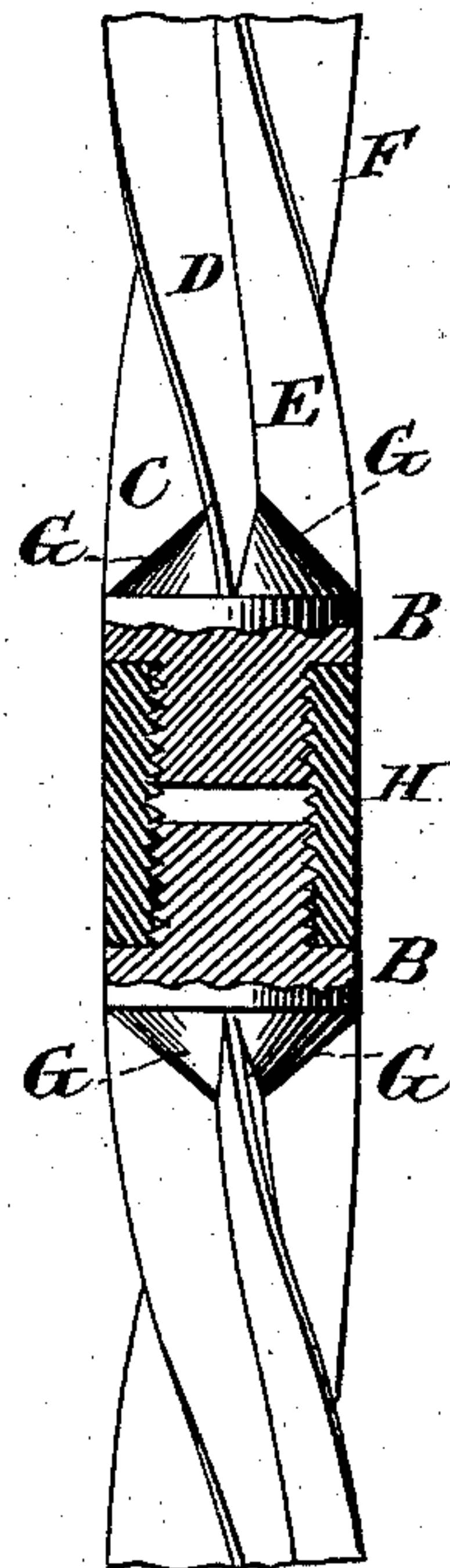


Fig. 3.



Witnesses.

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LIGHTNING-ROD COUPLING.

SPECIFICATION forming part of Letters Patent No. 257,889, dated May 16, 1882.

Application filed October 18, 1881. (No model.)

To all whom it may concern:

Be it known that I, THEODORUS H. PATEE, a citizen of the United States, residing at Greencastle, in the county of Putnam and State of Indiana, have invented certain new and useful Improvements in Lightning-Rods; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to what are termed "lightning-rods," which are made in sections and connected together by screw-threads; and the object of my improvement is to provide the sections of the rod at and near the points where they are joined together, or at and near the points where they enter the couplings, with an increased amount of metal, which shall constitute a portion of the rod itself and not require to be fastened thereto, as in ordinary cases, said increased amount of metal being designed to serve the twofold purpose of strengthening the rod at its joints and of increasing its conducting capacity at these points. I attain this object by constructing the parts substantially in the manner shown in Figs. 2 and 3 of the accompanying drawings, in which—

Figure 1 is an elevation of a portion of a lightning-rod and of a coupling, showing how they have been constructed and connected previous to my invention. Fig. 2 is an elevation showing parts of two sections of a rod having my improved construction applied thereto, and showing, also, one form of coupling for uniting the parts; and Fig. 3 is an elevation, partly in section, showing two sections coupled together.

Similar letters refer to similar parts throughout the several views.

Lightning-rods consisting of several spirally-arranged flanges projecting from a common center, or from a central hub, have usually been constructed substantially as illustrated in Fig. 1 of the accompanying drawings; but this construction has been found objectionable for two reasons: first, it leaves the rods deficient in strength at their joints, as there is so small a surface upon which to form the threads which

enter the couplings; but a more serious objection arises from the fact that, owing to the small amount of surface in contact between the sections of the rod and the coupling, the conducting power of the rod at the points where the sections are joined together is so much less than that of the other portions thereof as to greatly impair its efficiency. By referring to the part A in Fig. 1 it will be seen that those portions upon which the screw is formed are very narrow, and that they form all of the surface in contact with the coupling, except the small amount caused by the contact of the shoulders upon the flanges and the end of the coupling. For the purpose of removing these objections by providing a remedy therefor, I propose to form an enlargement, B, upon the ends of the sections, which shall form a part of the rod, and thus give additional strength thereto when the sections are united, as well as afford the conducting capacity required. In making this enlargement I employ any suitable form of machine for holding and enlarging the rod at these points, it being so arranged that a portion of the spaces between the flanges C, D, E, and F of the rod are filled up, as shown at G G in Figs. 2 and 3, and at the same time the enlargement B is formed, it constituting a shoulder upon which the end of the coupling-ferrule H rests when the parts are united. The connecting-ferrule is to be provided with a screw-thread upon its interior surface for the reception of threads formed upon the ends of the sections of the rods, as shown in Fig. 3, the ends of the ferrule and the shoulders being turned smooth, in order that the bearing-surface may be as perfect as possible, and thus strengthen the rod and promote or increase the conducting properties thereof.

Another advantage growing out of this method of constructing lightning-rods is that in placing them in position upon buildings and in making them conform thereto the joints are not liable to be broken or deranged, as they are when constructed in the manner shown in Fig. 1.

I have shown in the drawings one method of attaching the sections of the rod to each other, it consisting in the use of a threaded ferrule into which the threaded ends of the

sections enter; but I wish it to be understood that I do not limit my improvement or invention to any particular method of uniting the parts, as that may be largely varied, and for
5 the further reason that I do not claim in this application any method of uniting them.

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

10 A lightning-rod, or sections thereof, having enlargements wrought upon them at or near their ends, which form a part of the material

of which the sections are made, whereby said sections are strengthened at and near the points where they are joined together and the
15 conducting capacity of the rod is increased, all substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

THEODORUS H. PATEE.

Witnesses:

C. M. CONNELL,
G. W. BALLOCH.