

(No Model.)

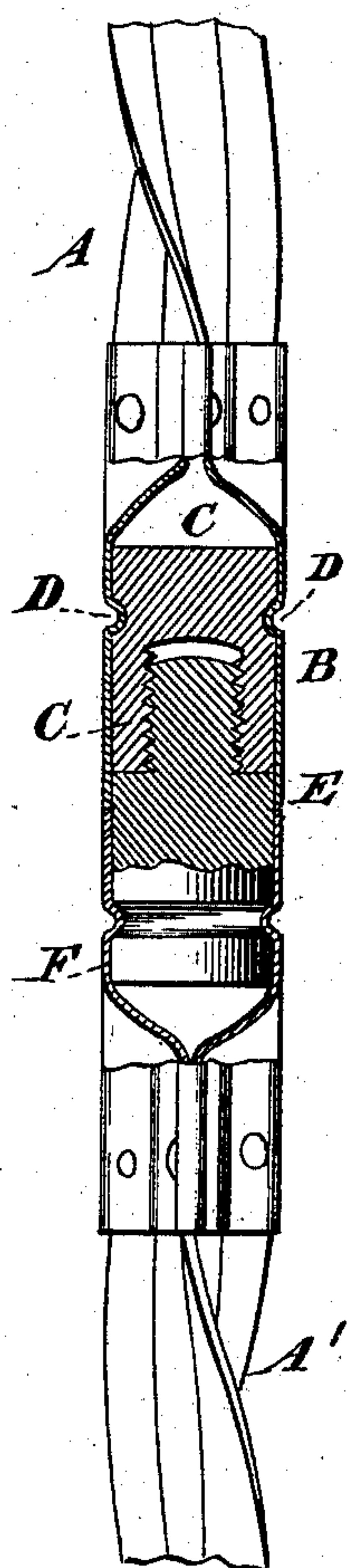
2 Sheets—Sheet 1.

T. H. PATEE.  
LIGHTNING ROD COUPLING.

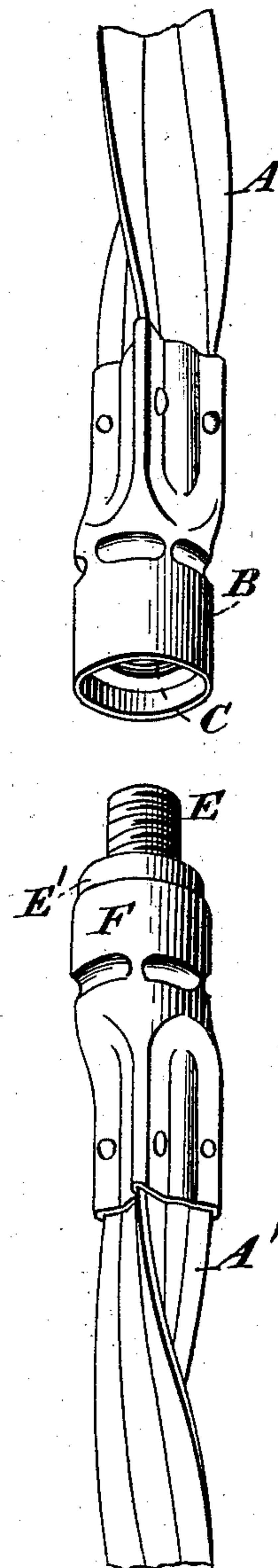
No. 257,891.

Patented May 16, 1882.

*Fig. 1.*



*Fig. 2.*



*Witnesses.*  
*A. Rupert.*  
*C. M. Connell*

*T. H. Patee*  
*Inventor.*  
*Holloway & Blanchard*  
*Attys*

(No Model.)

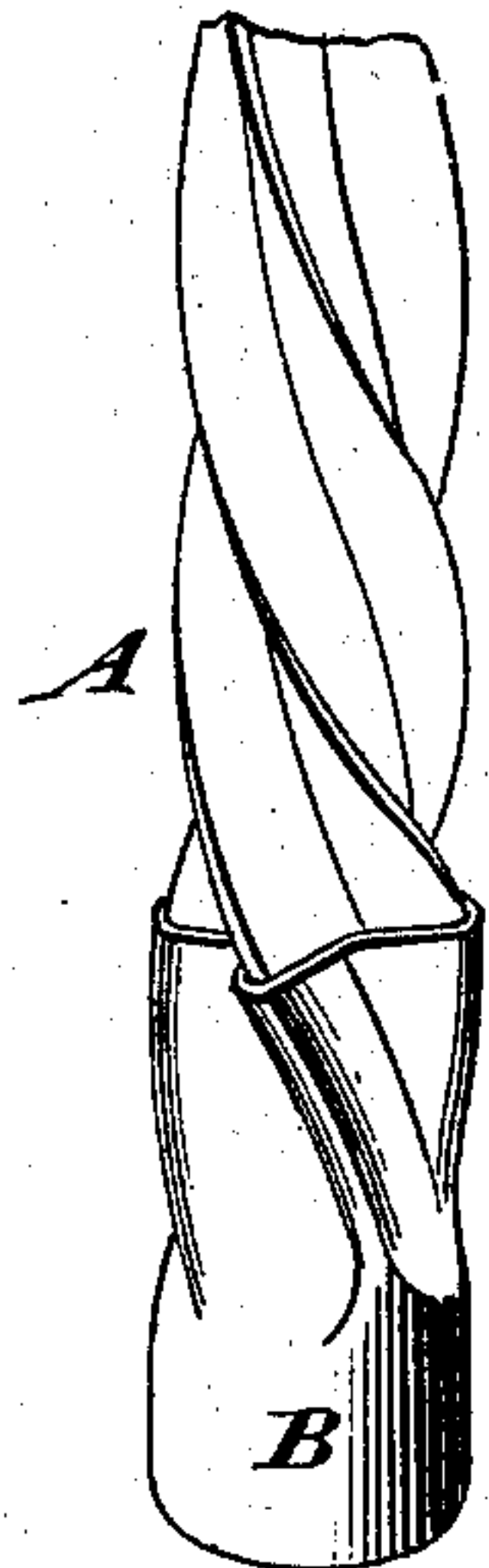
2 Sheets—Sheet 2.

T. H. PATEE.  
LIGHTNING ROD COUPLING.

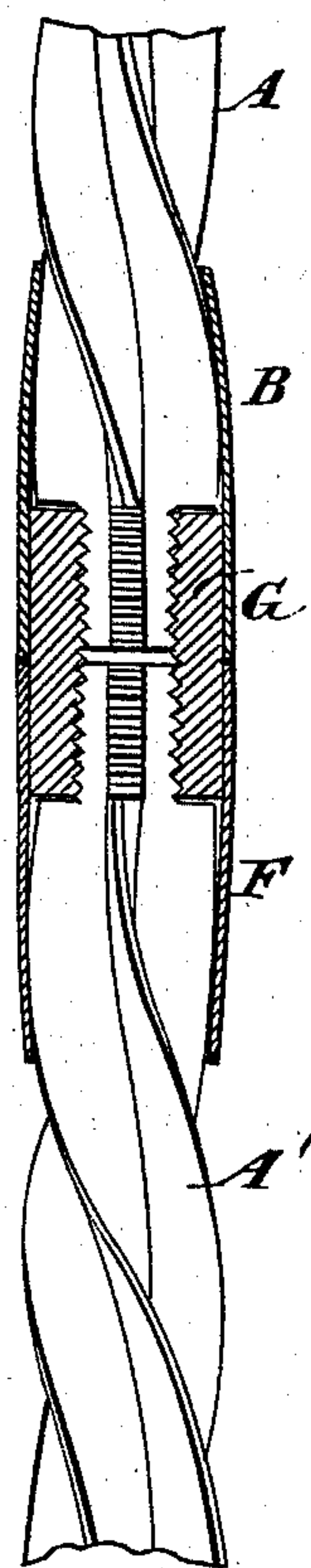
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*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



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# UNITED STATES PATENT OFFICE.

THEODORUS H. PATEE, OF GREENCASTLE, INDIANA.

## LIGHTNING-ROD COUPLING.

SPECIFICATION forming part of Letters Patent No. 257,891, dated May 16, 1882.

Application filed November 1, 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-Rod Couplings; 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 coupling-sections for lightning-rods; and the objects of my improvements are, first, to provide a novel coupling, a portion of which is made of sheet metal and another portion of cast or wrought metal, the sheet-metal portion being secured to the spirally-formed sections of the rod by being swaged or pressed into the spaces between the flanges of the last-named portions or sections, and, if found desirable, riveted thereto, the cast or wrought portions being passed into the sheet-metal parts and secured therein by having portions of said sheet-metal parts forced into a groove or cavity formed in them, one of which is provided with a male and the other with a female screw for uniting the parts; and, second, to provide a continuous or unbroken surface for the passage of the electrical current throughout the entire length of the rod. I attain these objects by the devices illustrated in the accompanying drawings, in which—

Figure 1, Sheet 1, is an elevation partly in section, showing my improved coupling-section and portions of two spiral sections; and Fig. 2 is an elevation showing the parts separated, the construction of the parts, the method of securing the cast or wrought parts in the sheet-metal portions, and the manner of securing the latter to the spiral sections of the rod.

Similar letters refer to similar parts in both views.

In constructing lightning-rods two things are essential, the first of which is such a method of constructing and uniting the parts that they shall present an unbroken surface at the points where they are joined together, in order that there may not be any break in the current as it passes these points; and, second, to provide a

convenient method of securing the coupling portions to the spiral sections in such a manner as to cause them to present the greatest possible amount of contact-surface, in order that the full amount of electricity which passes through the spiral sections of the rod may be conveyed through the coupling-section to the next spiral section without being checked or retarded by the coupling.

With these objects in view I construct a rod which consists of as many spiral or equivalently-formed sections A A' as are necessary to give the rod the required length, and to one end of each of such sections there is attached a sheet-metal coupling section or part, B, it being made of material which has the greatest amount of conductivity, and in the form of a cylinder, one end of which is passed onto the end of the section A and is then swaged or pressed by dies into the spaces between the flanges of said section, as shown in Fig. 2 of the drawings, after which it may be riveted thereto, as shown in the same figure. This method of attaching the part B to the rod insures the requisite contact of surfaces, and at the same time provides a strong joint. The above-described operation leaves the outer end of the portion B cylindrical in form, and into this cylindrical portion there is placed a cast or wrought piece of metal, C, near the inner end of which there is formed a groove or a series of depressions, D, into which a portion or portions of the part B are swaged or pressed, as shown in Figs. 1 and 2, they serving to secure the part C in the cylindrical part B. The cast or wrought plug C has its outer end provided with a female thread, as shown in Fig. 1, the office of which is to receive a male-screw formed on the end of a plug, E, which is placed in a sheet-metal socket or cylinder, F, placed upon the section A' of the rod. The part F, just alluded to, is in all respects like the part B, and is secured to the section A' by the same method employed for securing B to section A, and the plug E is secured in the cylindrical part F in the same manner.

It will be seen, upon referring to Fig. 2, that the cylindrical portion does not extend to the outer end of the enlarged portion E' of the plug E, and it will also be seen that the cylindrical portion of B extends outward beyond



the end of the plug or part C. The object of this arrangement and construction of the parts is to cause the ends of B and F to meet and touch each other over or upon the plug E when the parts are united, as shown in Fig. 1, and thus make an unbroken passage for the current through the coupling-section. The contact-surface I prefer to still further increase by causing the enlarged part of E to come in contact with the end of the part C when the parts are united, as shown in Fig. 1. It is not, however, indispensable to the working of the device that these parts should be in actual contact, as the rod, when otherwise constructed substantially as herein described, will operate without such contact.

In Figs. 1, 2, and 3 of Sheet 2 I have shown a modification of my improved coupling, in which the device employed for uniting the parts consists of a cast or wrought cylinder, G, one portion of which is secured in the sheet-metal part F, from which it extends for some distance, as shown in Fig. 1 of said sheet, in order that it may enter the sheet-metal portion B. This cylinder is screw-threaded internally at both of its ends, or throughout its entire length, in order that it may receive male screws formed on the ends of A and A', by which means the two sections of the rod are held together, such an arrangement being shown in

Fig. 2. The method of uniting the sheet-metal portions of this coupling to the spiral or equivalently-formed sections is the same as shown in Sheet 1, and the parts, when united, form the same unbroken surface for the passage of the current.

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

1. In a coupling-section for lightning-rods, the sheet-metal portions B and F, their outer ends being formed with projections and depressions, whereby they are made to fit the spiral or intermediate sections of the rod, substantially as shown and described.

2. The combination, in a coupling-section for lightning-rods, of the sheet-metal part B and cast or wrought portion C, substantially as and for the purpose set forth.

3. The parts B, C, E', and F, in combination with the spiral or equivalently-formed sections A A' of a lightning-rod, substantially as set forth.

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

THEODORUS H. PATEE.

Witnesses:

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