R. P. JACKSON.

LIGHTNING ARRESTER.

APPLICATION FILED SEPT. 6, 1910.

1,215,540. Patented Feb. 13, 1917.

Fig. 2.

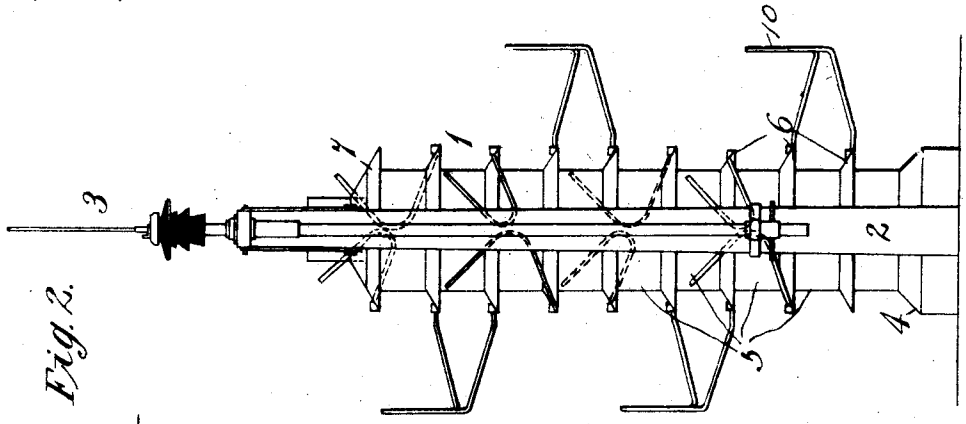
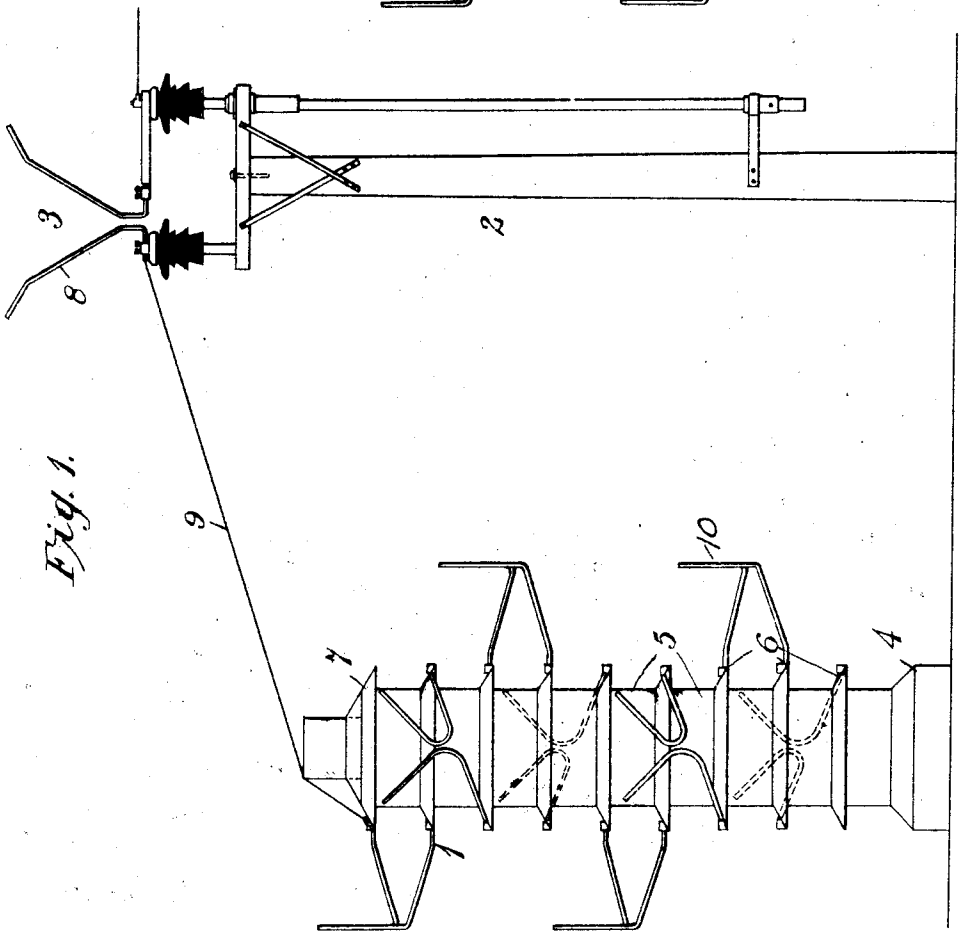


Fig. 1.



WITNESSES:

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RAY P. JACKSON, OF EDGEWOOD PARK, PENNSYLVANIA, ASSIGNOR TO WESTINGHOUSE ELECTRIC AND MANUFACTURING COMPANY, A CORPORATION OF PENNSYLVANIA.

LIGHTNING-ARRESTER.

1,215,540. Specification of Letters Patent. Patented Feb. 13, 1917.

Application filed September 6, 1910. Serial No. 580,765.

To all whom it may concern:

Be it known that I, RAY P. JACKSON, a citizen of the United States, and a resident of Edgewood Park, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Lightning-Arresters, of which the following is a specification.

My invention relates to lightning arresters and it has for its object to provide a device of this character that shall be specially adapted for the protection of very high-voltage electrical apparatus and circuits.

The lightning arrester which embodies my invention is adapted for high-voltage service and is simple in construction and capable of being assembled at the generating station, or other locality, where it is to be used, the parts which are necessarily supplied by the manufacturer being of minimum bulk and weight, and the parts which are supplied by the user being readily obtainable and such as are ordinarily kept on hand by station operators.

My lightning arrester embodies the principles set forth in Patent No. 894,150, granted July 21, 1908 to Westinghouse Electric & Manufacturing Co., upon an application filed December 4, 1905 by R. B. Ingram.

Figure 1 of the accompanying drawing is a front view, and Fig. 2 is a side elevation, of a lightning arrester constructed in accordance with my invention.

Referring to the drawings, the lightning arrester here shown comprises a pillar or column 1, which is composed of a set of concrete blocks of special composition, as hereinafter pointed out, and a pole or post 2 on which a horn-gap lightning arrester is mounted.

The pillar or column 1 comprises a base 4, a plurality of concrete blocks 5, and shields 6 of metal which are located between the blocks and extend outwardly and downwardly to form a series of shields to prevent water from running down the sides of the column. The column is provided with a top or shield 7 which is electrically connected to one arcing member 8 of a lightning arrester 3 by means of a conductor 9, and adjacent shields 6 of the column are provided with side or shunt horn structures, the parts of which are severally connected to the shields.

The side or shunt protective devices which constitute horn-gap members 10 are clearly shown in Fig. 1 of the drawings and constitute a series of air gaps which are shunted by the resistance column 1.

The concrete blocks are preferably constructed of equal parts of cement, sand and red oxid of iron, in order that suitable resistance properties may be obtained.

The concrete blocks may, of course, be very easily constructed and may be formed at the locality where the device is to be used. By this means, the weight of the parts which are necessarily supplied by the manufacturer is relatively light.

Structural modifications may be effected within the spirit and scope of my invention.

I claim as my invention:

1. A lightning arrester comprising a column of alternately disposed metal plates and high resistance blocks, and horn-shaped arcing members respectively connected to the metal plates and arranged in pairs to provide air gaps in shunt relation to the blocks between the plates to which they are connected.

2. A lightning arrester comprising a column of alternately disposed metal plates and high resistance blocks, and horn-shaped arcing members respectively connected to the metal plates and arranged in pairs to provide air gaps in shunt relation to the blocks between the plates to which they are connected, adjacent pairs of arcing members being displaced with respect to each other.

3. A lightning arrester comprising a column of high resistance blocks, metal plates between the blocks and thereby spaced apart sufficiently to substantially prevent the occurrence of arcs between them, and horn-shaped arcing members respectively connected to the metal plates and arranged in pairs to provide air gaps in shunt to the blocks between the plates to which they are connected.

4. A lightning arrester comprising a column of high resistance blocks, metal plates between the blocks and thereby spaced apart sufficiently to substantially prevent the occurrence of arcs between them, and horn-shaped arcing members respectively connected to the metal plates and arranged in pairs to provide air gaps in shunt to the

blocks between the plates to which they are connected, adjacent pairs of arcing members being displaced with respect to each other.

5. A lightning arrester comprising a column of alternately disposed metal plates and high resistance blocks, and arcing members respectively connected to the metal plates and arranged in pairs to provide air gaps in shunt relation to the blocks between the plates to which they are connected, said metal plates being provided with outwardly and downwardly-extending flanges to constitute a series of superposed petticoats.

6. A lightning arrester comprising a column of alternately disposed metal plates and high resistance blocks, and horn-gap arcing members respectively connected to the metal plates and arranged in pairs to provide air gaps in shunt relation to the blocks between the plates to which they are connected, said metal plates being provided with outwardly and downwardly-extending flanges to constitute a series of superposed petticoats.

In testimony whereof, I have hereunto subscribed my name this 18th day of August, 1910.

RAY P. JACKSON.

Witnesses:
C. W. McGhee,
R. J. Dearborn.