(No Model.) 2 Sheets—Sheet 1.

W. C. ALLISON.

Supports for Electric Wires and Lamps in Cities.

No. 241,179. **Patented May 10, 1881.**

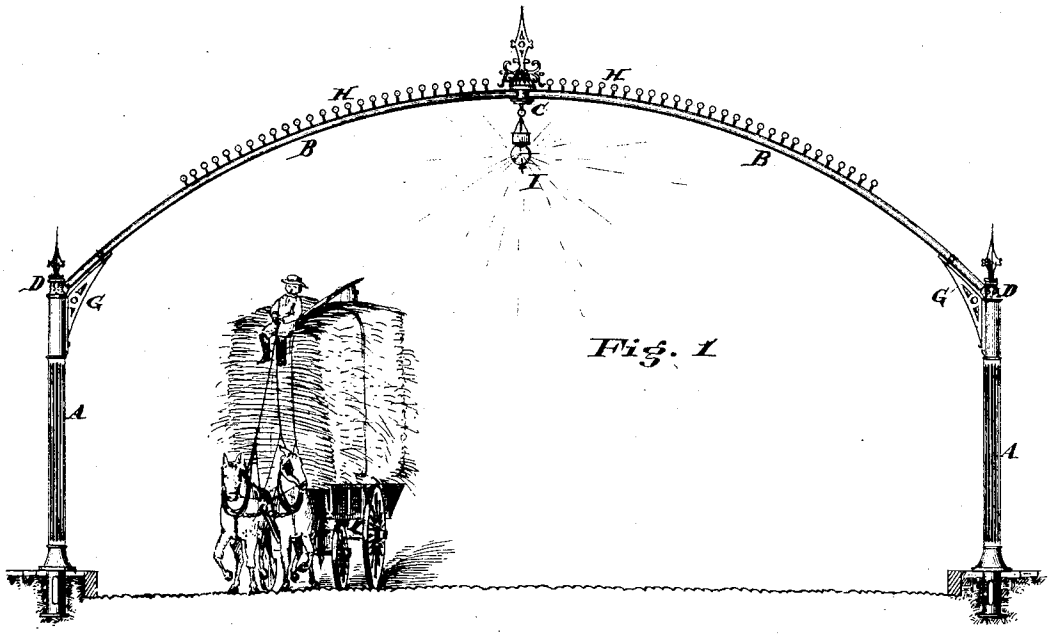


Fig. 1

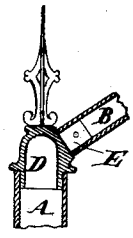


Fig. 4

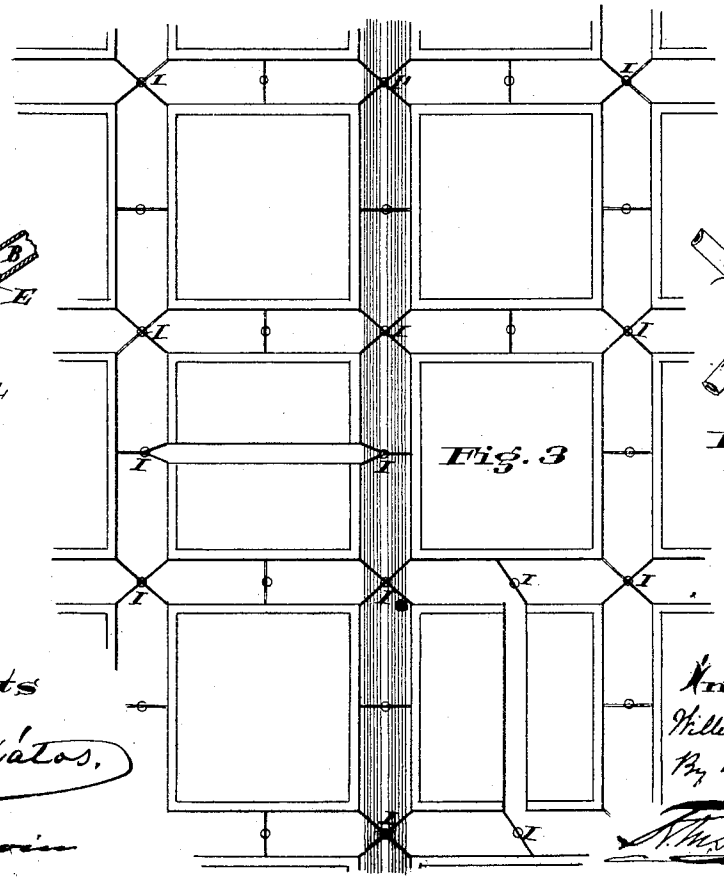


Fig. 3

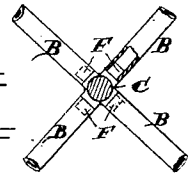


Fig. 5

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(No Model.) 2 Sheets—Sheet 2.

W. C. ALLISON.

Supports for Electric Wires and Lamps in Cities.

No. 241,179. **Patented May 10, 1881.**

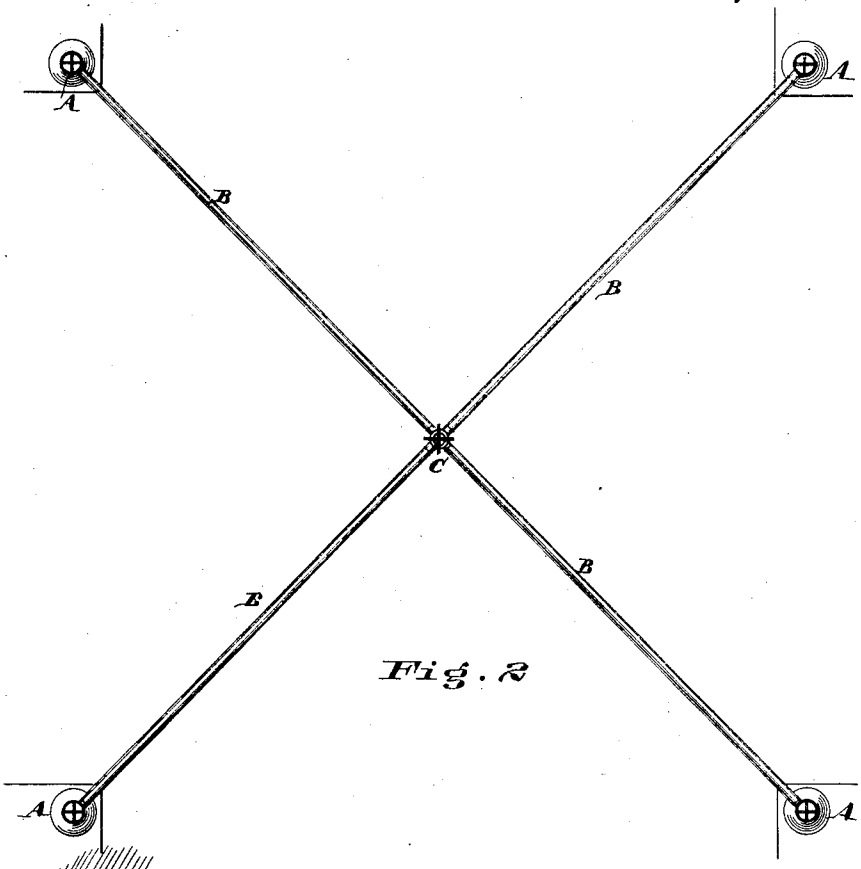


Fig. 2

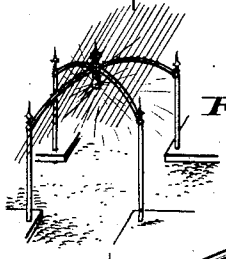


Fig. 7

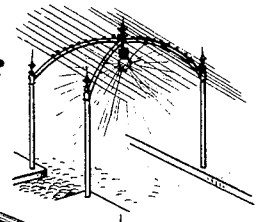


Fig. 8

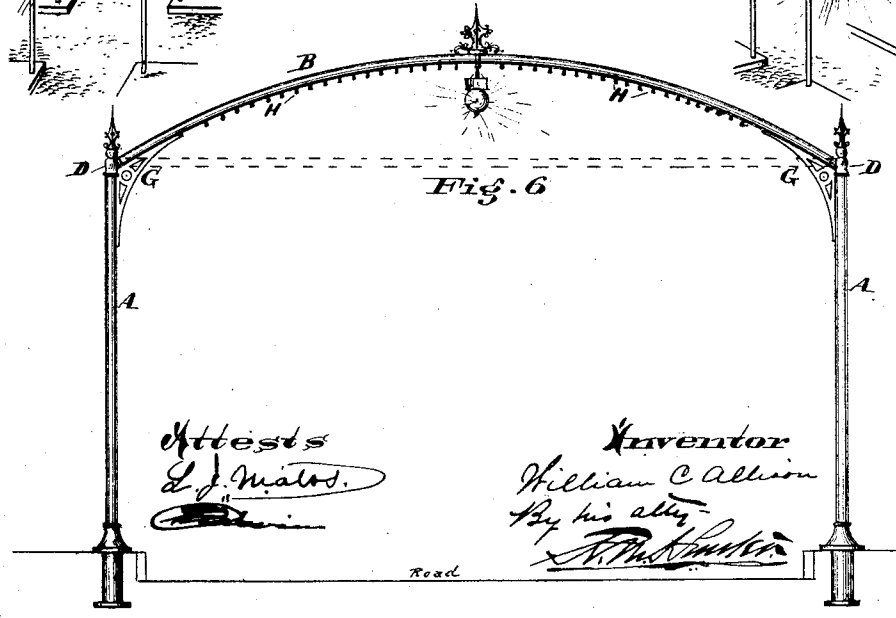


Fig. 6

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UNITED STATES PATENT OFFICE.

WILLIAM C. ALLISON, OF PHILADELPHIA, PENNSYLVANIA.

SUPPORT FOR ELECTRIC WIRES AND LAMPS IN CITIES.

SPECIFICATION forming part of Letters Patent No. 241,179, dated May 10, 1881.

Application filed February 17, 1881. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. ALLISON, of the city and county of Philadelphia, and State of Pennsylvania, have invented an Improvement in Electric-Wire and Electric-Lamp Supports in Cities, of which the following is a specification.

My invention has reference to supports for telegraph, telephonic, and electric wires in general, and also for electric lamps; and it consists in arching the streets from curb to curb diagonally from the four corners at the intersection of two streets, and providing said arches with insulated supports for wires, and in modifications, as set forth hereinafter, the arches to be made of tubing, solid bars, or their equivalent, and provided with insulated supports on top for the electric wires, which are supported from arch to arch.

The object of my invention is to provide suitable support for the increasing number of electric wires without preventing the passage of light to the upper stories of buildings, and at the same time to place the wires in a convenient location for easy repair and inspection.

My invention has further for its object the support of electric lamps in the middle of the crossings and streets, and about twenty feet from the ground, so that a maximum effect will be obtained and the light can be seen everywhere from the street.

In the drawings, Figure 1 is an elevation of a double-arch sprung from the four corners of two crossing streets, said arch being united in the middle. Fig. 2 is a plan of same. Fig. 3 shows a diagram of streets and the method of arranging the arches and lamps. Figs. 4 and 5 show details of construction. Fig. 6 shows an elevation of an arch for the middle of the square, (between two streets,) and as made entirely of wrought-iron tubing. Fig. 7 is a small perspective view of corner arch, and Fig. 8 is a perspective of triangular arch at junction of small and large streets.

A are the supporting-posts, and may be made of cast-iron, as shown in Fig. 1, or of tubing, as shown in Fig. 6. It may be constructed of any desirable design and properly secured to the ground. At the cross of two streets one of these posts A is secured upon each corner, and the arches B B, made of wrought-iron tubing, are sprung from post to post diagonally across the street, crossing in the middle, where they are secured to casting C; or a part of simple girders may be used. Hence each arch is composed of two sections secured to the casting D on top of the cast or wrought iron posts A and the casting C at the cross of the arches. This is shown in Figs. 1, 2, and 7. The castings D are secured in any suitable manner on top of posts A, as shown in Fig. 4, and a projecting lug, E, from said piece D extends upward at an angle corresponding to the arch, and over this projection the arch-tubing B fits, and is secured by driving a pin through or in any other equivalent manner. The four sections of the arches B are united in the middle by fitting over the lugs F on the central casting, C, as shown in Fig. 5; or the arches may be made of one section and spring from post to post, crossing in the middle; but I prefer the former as being more convenient to erect and keep in order or repair. The sections B are further secured to the post, and supported thereon by brackets G.

Along the upper part of the arches are the the insulated rings or pins H for supporting and carrying the electric wires. This insulated projection may project downward, if desired.

The electric lamp I is hung at the intersection of the two arches, and consequently is located in the middle of the two streets.

The arches or girders in the middle of the square are similar to those already described, only they are simple or single arches or girders, as shown in Fig. 6; and if in this case the arch B is made of sections, they must be very firmly connected in the middle, as this arch is not supported against lateral strain other than the electric wires, as in the case previously set forth. These arches are provided with the insulated support H for the electric wires, and may also have a suitable support for the electric lamp in the middle.

Where a small street runs into a larger one the arching would be in all respects similar in construction to those already cited, only in this case there will be three half-arches uniting in the middle, as shown in Fig. 8; or a single diagonal arch may be used, as shown at J in Fig. 3.

The material most suitable for these arches

is wrought-iron tubing; but the posts may be made of cast-iron, if desired.

By this arrangement of supports for the electric wires of all descriptions none of the light will be materially shut out, as the wires will be arranged in a single layer, and not four to eight or more above one another, as is at present the case. In a street of twenty-three squares, of four hundred and eighty feet long, and twenty-four electric lamps, or one at each cross of streets, a distance of twenty-two thousand five hundred and sixty feet or 4.26 miles of street will be illuminated.

The arches should be about twenty feet in the middle, so as to be sufficiently high to escape the highest load in turning a corner, and at the same time to support the lamp at such a height that the greatest luminous effect will be obtained.

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

1. A support for electric wires and an electric lamp at a crossing of two streets, which consists of two simple arches or girders sprung diagonally from corner to corner and crossing in the middle, from which the electric lamp is hung, said arches being provided with insulated supports for the electric wires, substantially as and for the purpose specified.

2. In a support for electric wires and an electric lamp, the posts A, provided with caps D, furnished with lugs E, sections of tubular arches B, center casting, C, provided with lugs F, and insulated supports H on the sections B for the electric wires, substantially as shown and described.

3. In a support for electric wires, the tubular posts A, provided with caps D to support the tubular arch or girder B, in combination with insulated wire-supports on the arch, substantially as and for the purpose specified.

In testimony of which invention I hereunto set my hand.

W. C. ALLISON.

Witnesses:

R. S. REED,

JOHN G. WHITMAN.