

M. LACHMAN.  
TELEGRAPH ARM.  
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951,190.

Patented Mar. 8, 1910.

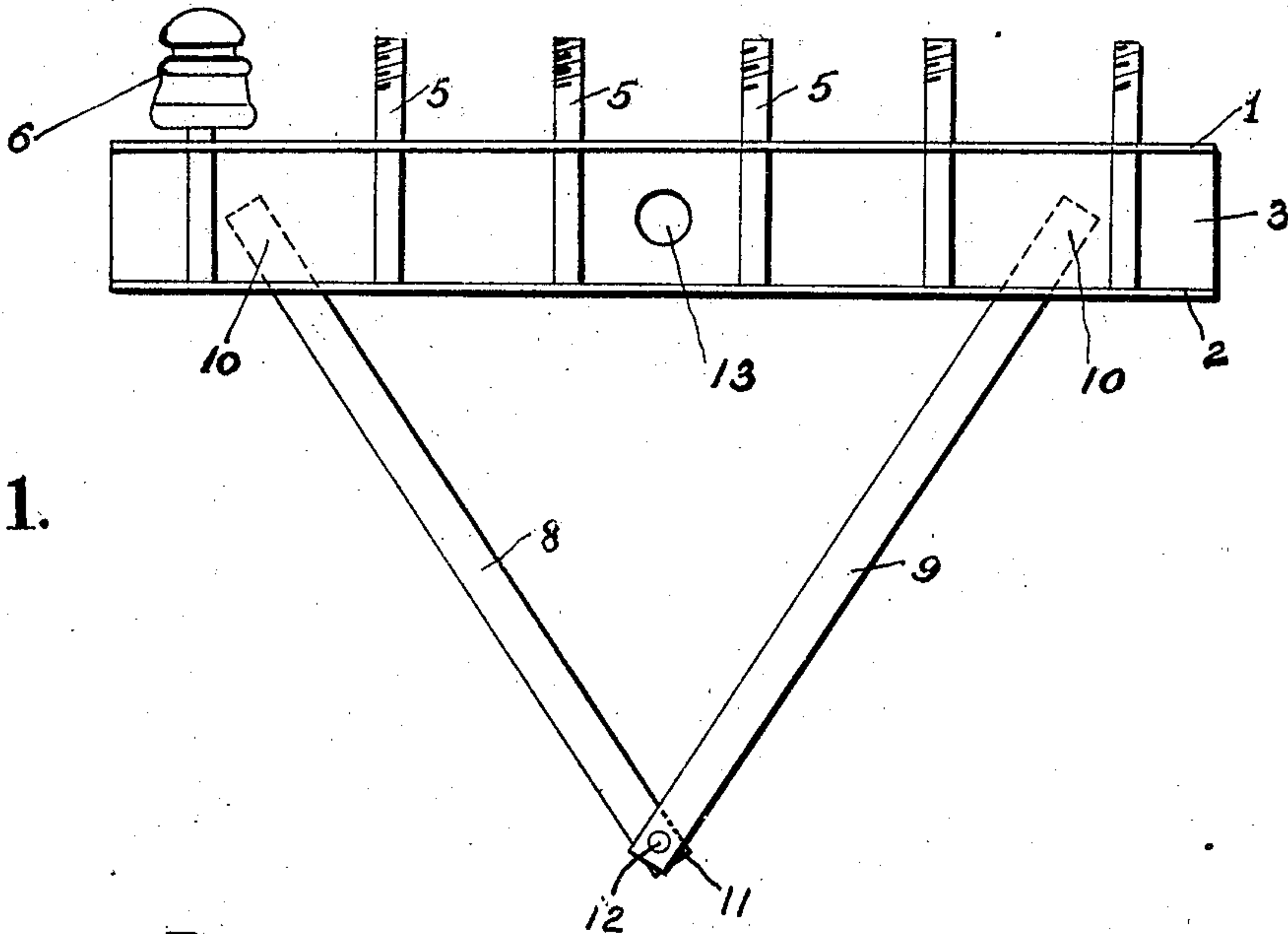


Fig. 1.

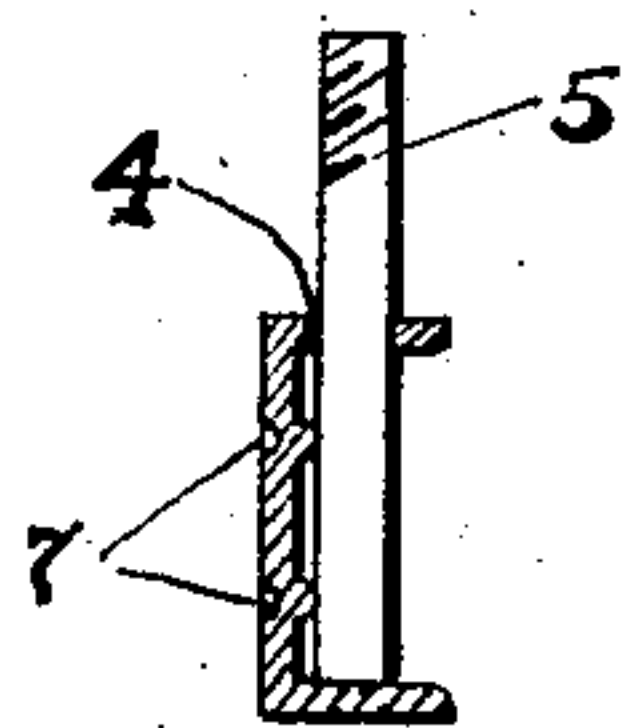


Fig. 4.

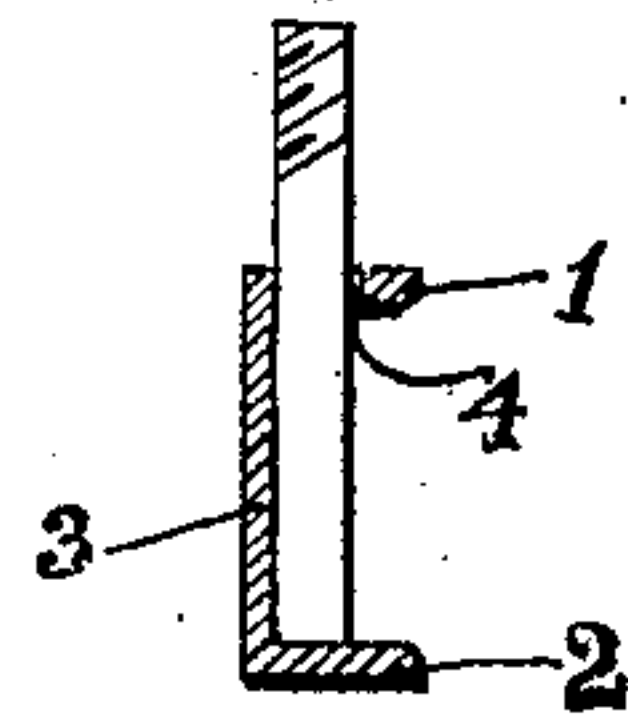


Fig. 3.

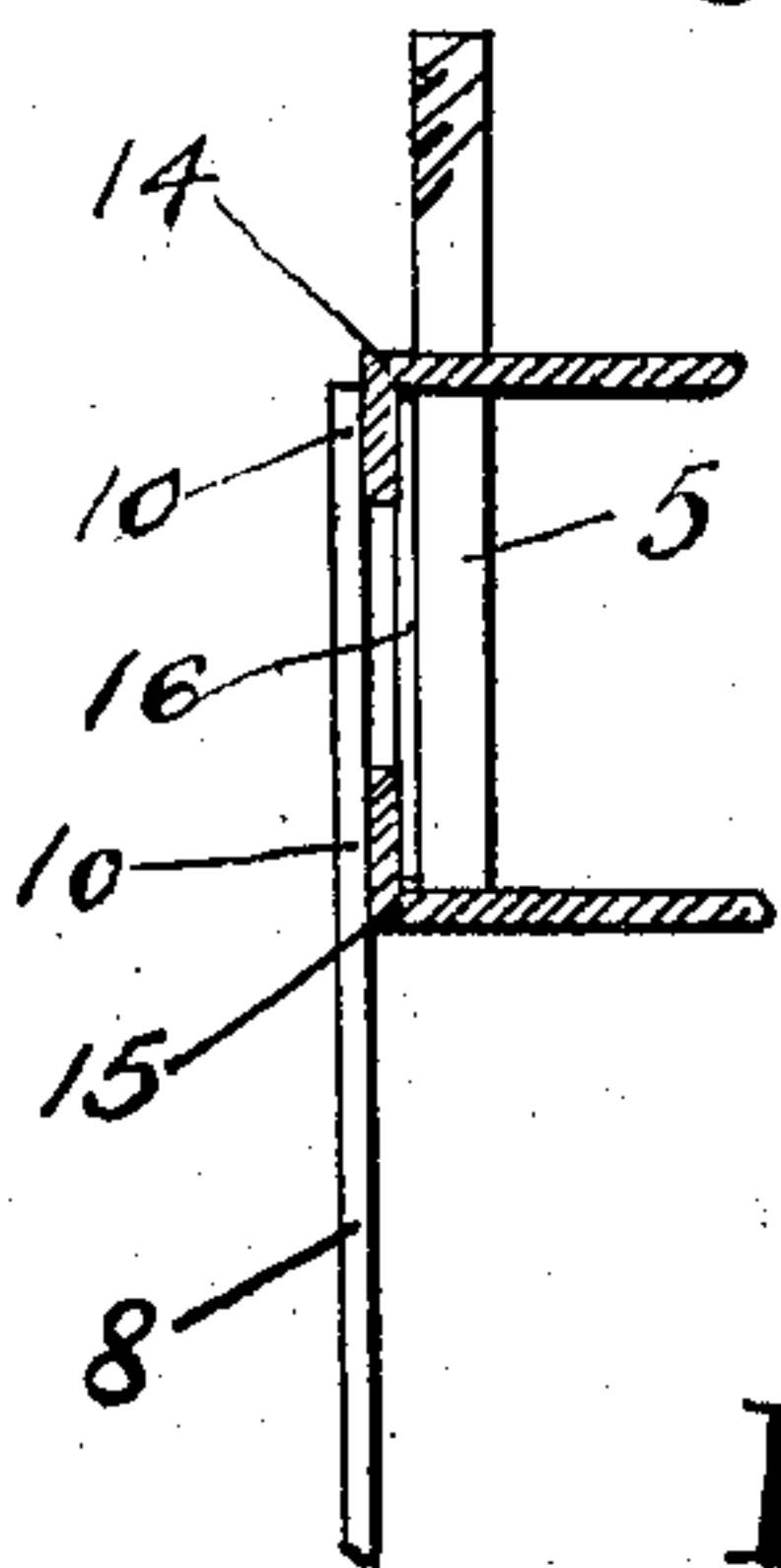


Fig. 6.

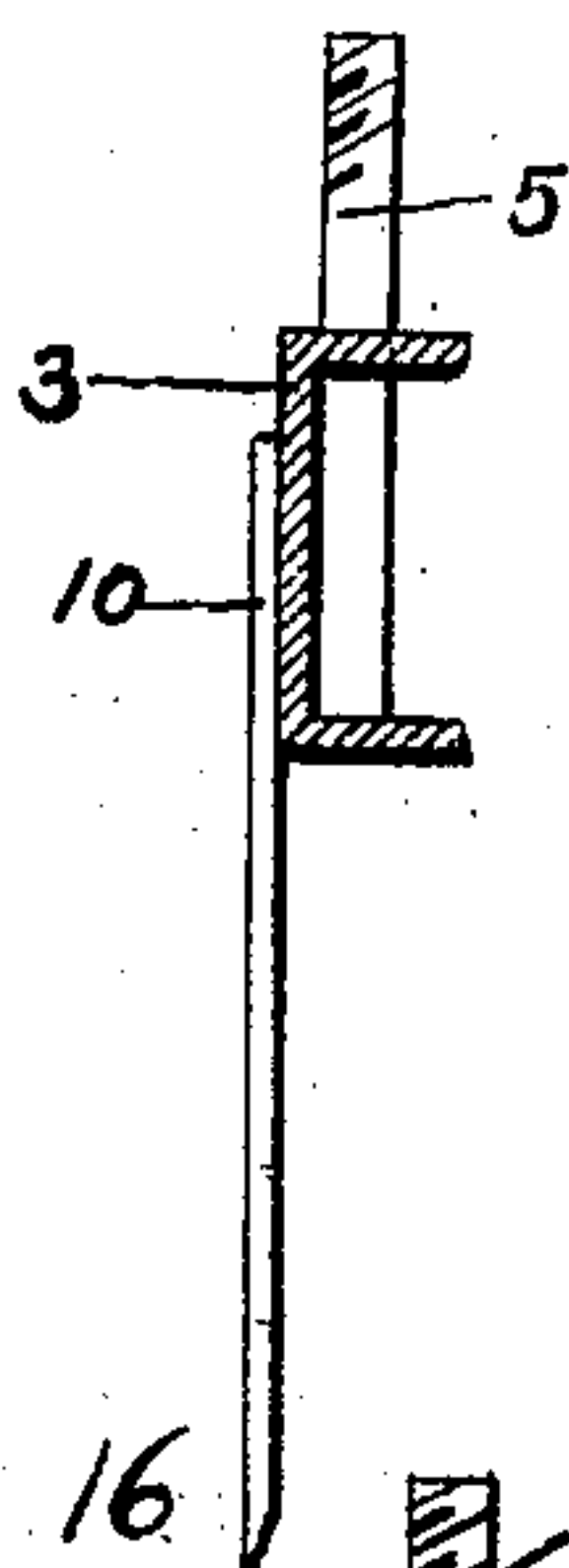
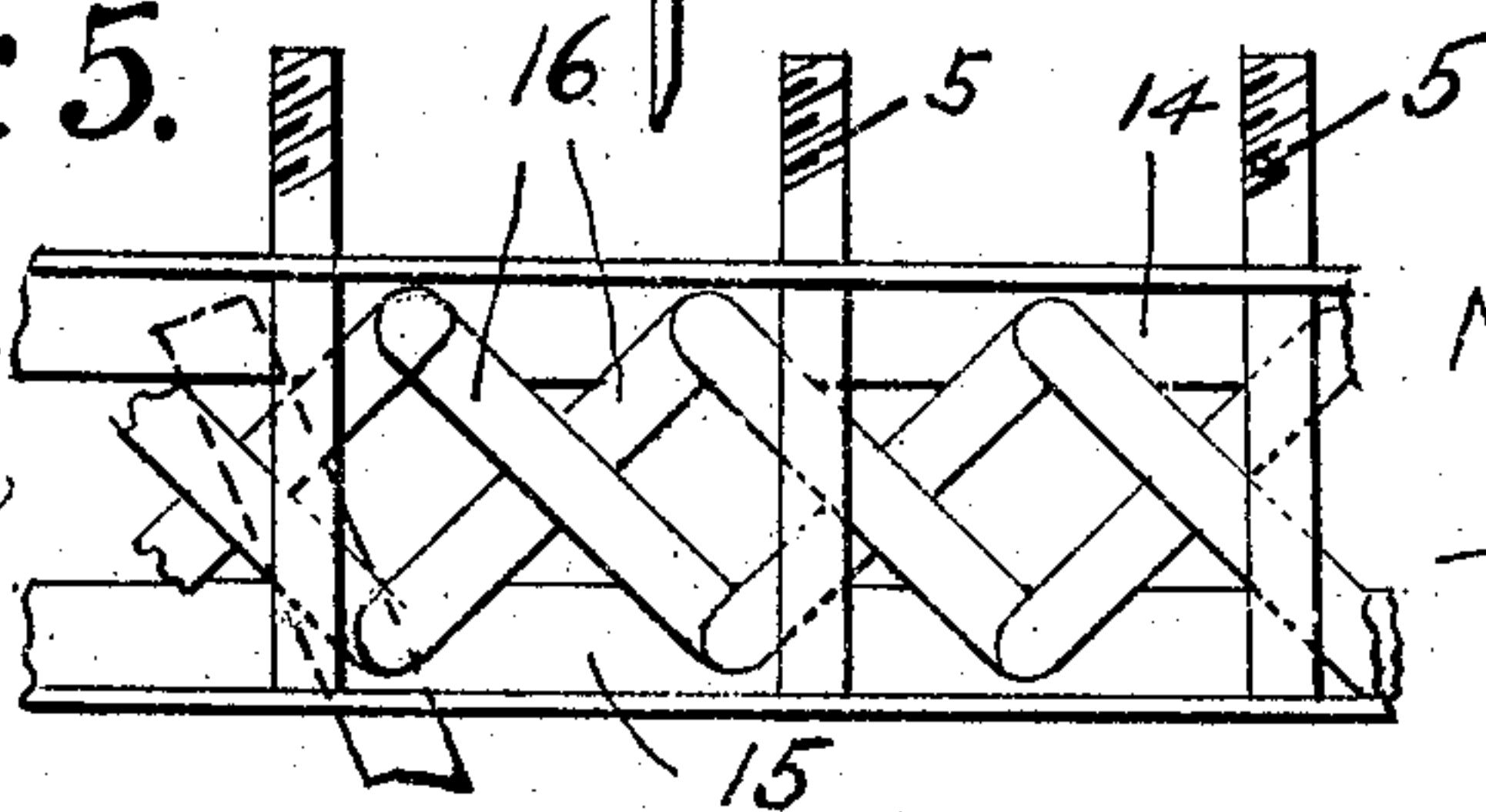


Fig. 2.

Fig. 5.

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# UNITED STATES PATENT OFFICE.

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## TELEGRAPH-ARM.

951,190.

Specification of Letters Patent.

Patented Mar. 8, 1910.

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*To all whom it may concern:*

Be it known that I, MAURICE LACHMAN, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Telegraph-Arms, of which the following is a specification.

My present invention relates to telegraph arms and more particularly to such arms as are constructed entirely of metal.

The main object of my invention is the construction of a telegraph arm entirely of metal which will be very strong and which can be very quickly made up.

A further object is to provide a metallic arm of the above class which will cost but little, if any, more than the wooden arms at present in use besides being of practically indefinite life and exceedingly rigid.

To these ends my invention consists mainly in the manner of mounting the pins, which carry the insulators, on the cross-bar or beam.

My invention consists further in securing the various parts which go to make up the completed arm to each other by the use of an electric welding process, thereby strengthening the connection between the parts and greatly cheapening the cost of construction.

My invention consists still further in the combinations of parts and details of construction hereinafter more particularly described and then specified in the claims.

Heretofore in constructing metallic telegraph arms, it has been the practice to use angle iron for the arm itself and stamp or drill holes in one leg through which the insulator pins pass. The pins are secured by clamping nuts threaded to the pins and clamping on the leg of the cross arm. This is expensive and also weakens the entire cross arm by having the holes in the one leg. Further, the pins secured in this way are not sufficiently strong to take the strain due to the pull of the telegraph wires during a strong wind, etc.

In the preferred form of carrying out my invention I employ a length of channel iron as the cross arm and pass the insulator pins through but one flange thereof, thereby retaining the other flange intact to retain the strength of the arm. The pins pass through the holes in the one flange and are secured to the cross arm by electrically welding the

side of the pins to the base of the channel. It will be seen that the pin passes through the flange and is firmly secured to the cross arm at a place other than at said opening, thus causing the base of the channel which is the strongest part to take the strain on the pins.

It will be understood that my invention is not limited to the use of a cross beam of channel iron as other suitable forms might be employed without departing from the spirit thereof.

By the term "channel" or "channel iron" it will be understood that I do not limit myself to a channel in which the base and flanges are integral, but it might be made up of separate pieces secured together in the form of a channel.

In the accompanying drawings, Figure 1 illustrates a front elevation of a telegraph arm constructed in accordance with the preferred manner of carrying out my invention. Fig. 2 is a side view of the same. Fig. 3 is a vertical section taken on the line X X Fig. 1. Fig. 4 is a similar section showing the parts before welding. Fig. 5 illustrates a modification. Fig. 6 is an edge view of the modification shown in Fig. 5.

In the preferred form of carrying out my invention I employ for a cross beam a length of channel iron comprising the usual flanges 1, 2 and the base 3. A number of holes or openings 4 are formed in the flange 1 by punching, drilling or otherwise, the holes being preferably so arranged that the rear edge will coincide more or less closely with the inner face of the base 3 of the channel and form a continuation thereof.

5 indicates pins or rods laterally projecting from the flange 1 and which pass through the openings 4 in the flange 1 and butt against the inner surface of the flange 2. By this manner of placing the pins on the cross beam, it is positively assured that the projecting ends of the pins will all be of the same length. The pins 5 might be round, square, or of any other desired contour and serve as the support to which the usual insulator 6 is secured in any suitable manner. The pins are securely fastened to the channel iron by electrically welding them thereto, thus lowering the cost of securing them to a minimum and adding great strength, as when welded, the part of the pins between the flanges 1 and 2 becomes



practically part of the channel and forms ribs which add to the strength of the channel. The pins might be welded to the channel by any suitable method of electric welding, but I prefer to secure them to the base 3 of the channel iron by raising points or projections 7 in said base which are brought into contact with the sides of the pins 5. The welding is effected by passing an electric current through the pin and the projections 7 and forcing the parts together by pressure as will be understood by anyone skilled in the art.

The pins might be welded to the base 3 at one or more points or it might be welded all along its sides, but I find that by providing the base 3 with two contact points as shown and employing a round pin that the best results are attained.

8 and 9 indicate metallic braces, the end of each brace being electrically welded to the base 3 as at 10 by any suitable method, such as for instance providing contact points on either or both parts, passing an electric current through them and applying pressure. Preferably, the other ends of the braces are welded to each other as at 11, although this is not essential, and provided with an opening 12 through which they are secured to the telegraph pole or other support.

13 indicates a hole through which the cross beam may be secured to the pole or other support by a suitable clamping bolt, although other means for fastening the cross beam to its support might be employed.

By this construction it will be observed that the strain on the pins will be taken by the base of the channel as the pins become part thereof when welded.

In the modification shown in Figs. 5 and 6 the channel is constructed of two lengths of angle iron 14, 15, joined together by electrically welding the strip 16, arranged in the form of lattice work, to one leg of each

angle iron. Thus the one leg of each angle iron and the latticed strips 16 secured thereto become the base of the channel and the other legs become the flanges. The strips 16 might also be welded to each other at their points of intersection. The pins 5 are electrically welded to the latticed strips in a manner similar to that described in the preferred form and the braces 8 and 9 are preferably welded to the one leg of each angle iron forming the base of the channel.

What I claim as my invention is:

1. In a telegraph arm, the combination with a beam provided with a laterally projecting flange, of pins projecting laterally through openings in said flange and secured to the member from which the flange projects.

2. In a telegraph arm, the combination with a beam provided with a laterally projecting flange of pins projecting laterally through openings in said flange and electrically welded to the base of said beam along the side of said pins.

3. In a telegraph arm, the combination with a cross beam formed of channel iron, of pins laterally projecting through openings in one flange of said channel iron and electrically welded to the base of said channel iron along the side of said pins.

4. In a telegraph arm, the combination with a length of channel iron, of pins laterally projecting through openings in one flange of said channel iron and seated on the inner surface of the other flange, said pins being electrically welded to the base of said channel iron along the side of said pins.

Signed at New York in the county of New York and State of New York this 25th day of January A. D. 1909.

MAURICE LACHMAN.

Witnesses:

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IRENE LEFTOWITS.