

J. J. SANDERS.
WIRE TIE.
APPLICATION FILED JULY 6, 1911.

1,015,513.

Patented Jan. 23, 1912.

FIG. 1

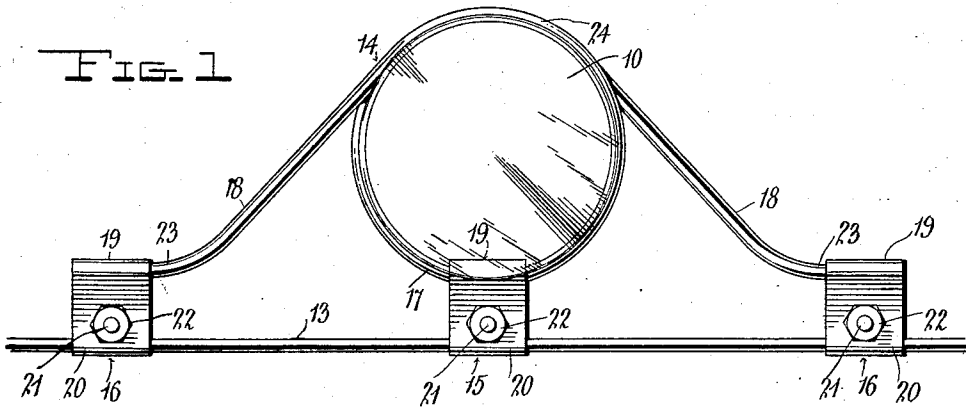


FIG. 2

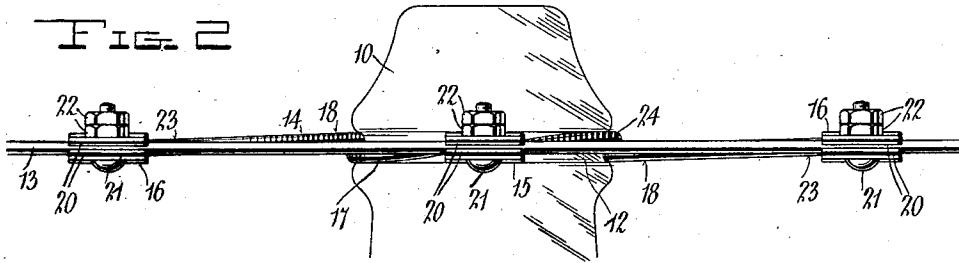


FIG. 3

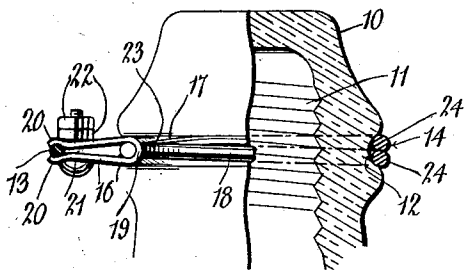
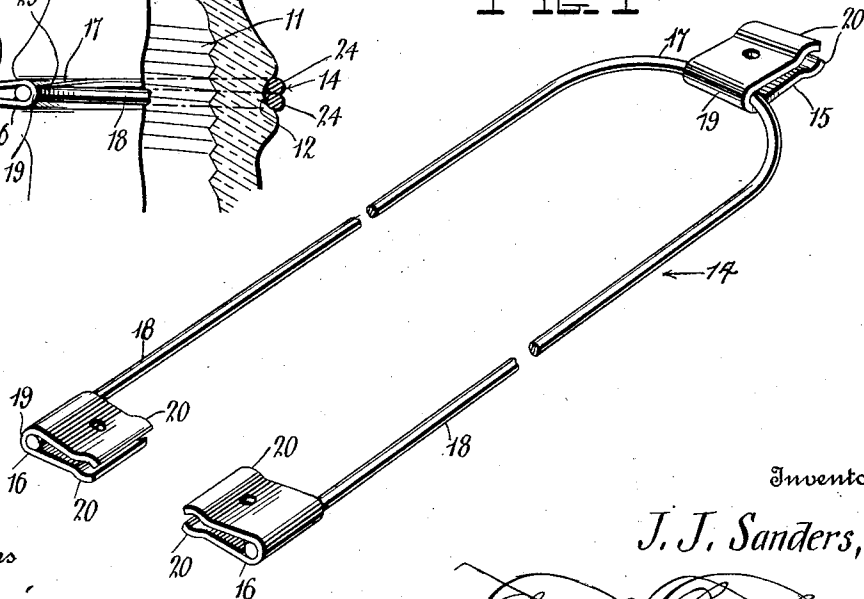


FIG. 4



Witnesses
A. J. Burch.

Inventor
J. J. Sanders,
By *[Signature]*
Attorney's

UNITED STATES PATENT OFFICE.

JOHN J. SANDERS, OF EAST GRAND FORKS, MINNESOTA.

WIRE-TIE.

1,015,513.

Specification of Letters Patent.

Patented Jan. 23, 1912.

Application filed July 6, 1911. Serial No. 637,069.

To all whom it may concern:

Be it known that I, JOHN J. SANDERS, a citizen of the United States, residing at East Grand Forks, in the county of Polk, State of Minnesota, have invented certain new and useful Improvements in Wire-Ties; 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.

This invention relates to a wire tie and more especially to a device of this character adapted for securing line wires to insulators in telephone and telegraphic work or lines.

The principal object of my invention is to provide an improved and extremely simple wire tie which may be economically manufactured and which may be so constructed as to be readily applied to an insulator cap now generally in common use by bending the wire forming the tie in a novel manner and clamping the line wire at spaced points thereto.

Another object of the invention consists in the provision of a wire tie for the purpose specified which comprises a section of wire in approximately U-form and provided with clamps at the extremities of its leg portions and at its bight portion so that the tie can be fitted to the groove in an insulator and the line wire readily clamped in position to the bight portion and the leg portions then bent or coiled around the insulator and the clamps at their extremities also secured to the line wire so as to obviate breaking of the line wire due to their loose connection with the insulator and serving to hold the wire taut so as to sustain the weight of ice and sleet in inclement weather without sagging.

With the above and other objects in view, the invention consists of certain other combinations and arrangements of parts as will be hereinafter more fully described and claimed, it being a still further object to provide a device which will not be likely to get out of working order.

In the drawings:—Figure 1 is a top plan view of my improved tie wire applied to an insulator and showing a section of a line wire secured thereby. Fig. 2 is a side elevation of the device. Fig. 3 is an end elevation of the invention, partly in section.

Fig. 4 is a detail perspective view of the tie member with the clamps carried thereby.

Referring to the drawings by numerals, 10 designates an insulator cap of the construction now generally employed and preferably provided with a threaded bore 11 by which it is secured in position, the said insulator being also provided with an annular groove 12 adapted to receive the fastening wires in order to secure a line wire 13 to the insulator.

My improved tie wire is provided to hold the line wire 13 tightly in position and to hold it from slacking back and crossing up with other line wires below it, should the line wire break and by this means, prevent interference of the broken wire ends with the other line wires and also to support the same from movement and thereby prevent the same from wearing out and subsequently breaking owing to the loose connection of the line wires with the insulators now generally provided and thereby saving considerable expense in the maintenance of the lines in proper condition. To this end, I provide a tie which comprises a section of wire 14 which in its manufactured form as produced, is bent in approximately U-form and is formed of copper or iron wire of any suitable gage and of proper length to suit the size of the insulator with which it is employed. Clamping jaws 15 and 16 are attached to the central bight portion of the U-shaped member or tie and to the extremities of its leg portions 17 and 18 respectively and as these clamping members are of the same construction, a description of one will suffice for all. Each clamping member comprises a strip of metal, preferably copper which is bent upon itself as shown at 19 and soldered or otherwise secured to the tie wire 14 at the points mentioned, the free extremities of each clamp being spaced apart and formed with raised portions 20 having interior concavities adapted to receive the line wire 13 therein. Clamping bolts 21 are extended through registering apertures in the rebent portions of the clamps and have a pair of binding nuts 22 threaded thereon, thereby holding the line wire securely between the concaved portions of the clamps.

By reference to Fig. 4 of the drawings, it will be seen that the clamp 15 is directed outwardly from the bight portion of the

section of wire 14 while the clamps 17 are extended inwardly toward each other and in the use of the device, the bight portion 17 is engaged within the groove 12 of the insulator and the legs 18 bent or coiled in opposite directions around and within the groove of the insulator sufficiently to retain the tie thereon and the line wire 13 is then tightly clamped in position between the member 15. When this has been done, the portions 18 are then bent toward the line wire as shown at 23 beyond the overlapped coiled portions 24 upon the insulator diametrically opposite to the clamp 15 and the extremities which are extended parallel to the line wire 13 support the clamps 16 upon opposite sides spaced from the central clamp and these clamps 16 are then secured to the line wire in a similar manner.

From the foregoing description in connection with the accompanying drawings, it will be seen that the tie thus provided will efficiently serve the purpose of supporting wires upon insulators and will avoid the objections noted, especial attention being called to the fact that the overlapped coiled

portions 24 extend the full height of the groove in the insulator and with the clamp 15 also engaged in the groove, the extremities of the tie are held rigidly in a horizontal plane at all times and will withstand considerable strain.

I claim:—

1. A wire tie comprising a section of wire bent in approximately U-form and clamping means carried at the extremities and at the bight portion thereof.

2. A wire tie for attachment to insulators comprising a section of metal bent in U-form and clamps secured to the extremities of the leg portions and to the bight portion thereof, said metal being adapted to be coiled about the insulator by bending the leg portions in opposite directions for attachment of the clamps to a line wire.

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

JOHN J. SANDERS.

Witnesses:

CHRIS GILBERTSON,
GERTRUDE E. SHAW.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."