

(No Model.)

A. WILKINSON.

CABLE FOR TELEGRAPHIC AND OTHER PURPOSES.

No. 301,417.

Patented July 1, 1884.

Fig. 1.

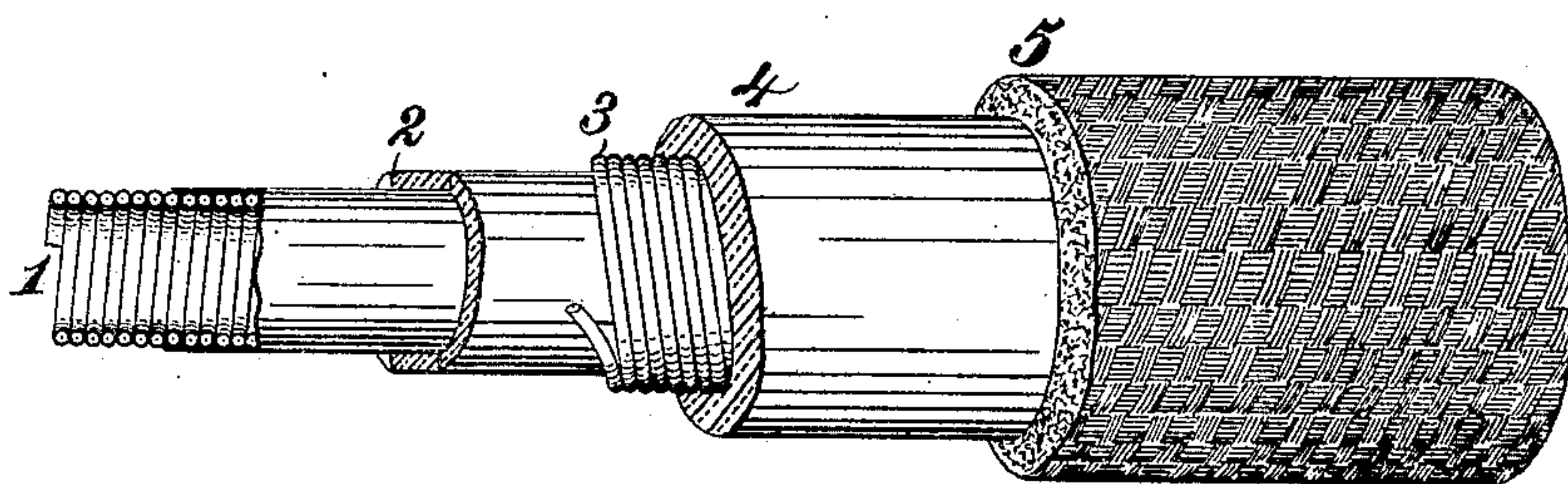
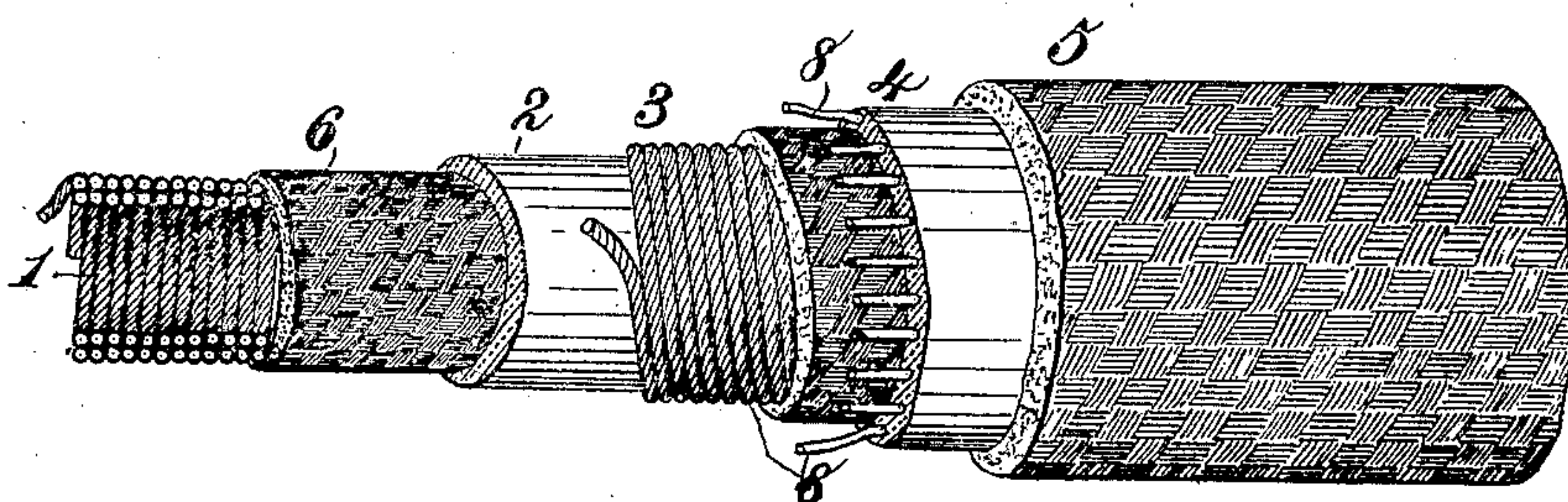


Fig. 2.



Witnesses,

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UNITED STATES PATENT OFFICE.

ALEXANDER WILKINSON, OF LONDON, ENGLAND.

CABLE FOR TELEGRAPHIC AND OTHER PURPOSES.

SPECIFICATION forming part of Letters Patent No. 301,417, dated July 1, 1884.

Application filed November 23, 1883. (No model.) Patented in England June 24, 1882, No. 3,003.

To all whom it may concern:

Be it known that I, ALEXANDER WILKINSON, a subject of the Queen of Great Britain, residing at London, England, have invented
5 certain new and useful Improvements in Cables for Telegraphic and other Purposes, (for which I have obtained Letters Patent in Great Britain, bearing date June 24, 1882, No. 3,003, of which the following is a full, clear, and exact specification.

The object of this invention is to provide a novel and efficient cable for telegraphing, telephoning, and electric-lighting purposes, which is also capable of serving as a gas-supply for distant stations, which object I accomplish in the manner and by the means hereinafter described and claimed, reference being had to the accompanying drawings, in which—

20 Figure 1 is a sectional plan view of a cable constructed in accordance with my invention, and Fig. 2 a similar view showing a modification.

In carrying my invention into effect I employ an interior tube, 1, which is composed of wire, coiled or spun upon a mandrel of suitable diameter, each coil being in direct contact with the adjoining one, which coiled-wire tube is coated with tin, or a compound thereof, by passing the tube through a bath of the molten metal, thus not only providing a thin coating, but filling up the interstices between the coils on the exterior of the tube. The tinned coiled-wire tube is then covered
35 with some suitable insulating material, 2—such, for example, as rubber—and upon this is coiled a naked wire, 3, with the coils either in contact or separated, as required. These coils may extend in the same or in a reverse direction to those of the interior tube, according to the degree of flexibility or rigidity it is required to impart to the structure. The secondary coiled wire 3 is then covered with insulating material, 4—such as rubber—
45 and, if preferred, this second layer of insulating material may be covered by a tube, 5, of braided material, or wrapped with such braided material, for protecting the structure from the influences of the atmosphere or other
50 destructive elements.

Instead of coating and filling the interstices of the coiled-wire tube 1 with tin, I may pass it through a bath of insulating material for the same purpose, on which the secondary wire
55 3 is coiled.

In the modification shown in Fig. 2, I construct the interior tube, 1, of two layers of coiled wire, which are effectually coated or covered with insulating material prior to being coiled, for the purpose of preventing false
60 contact-points or derived currents, one of said coiled-wire tubes being inclosed within the other, and the outer one covered by a braided tube, 6, or wrapped with braided material. To this braided covering is applied the continuous covering 2, of insulating material,
65 and upon the latter the secondary coiled wire 3 is arranged, while upon the secondary coil is a covering of braid, on which is placed the insulating material 4, which in this instance
70 contains a series of longitudinal wires, 7, and upon the insulating material 4 is placed the braided covering 5.

The interior coiled-wire tube serves as an efficient means for conveying gas to be used
75 for lighting or signaling purposes. The secondary coil of wire 2 serves to transmit electric currents for telegraphing or electric-lighting purposes, and the longitudinal wires serve as telephone-wires. It will of course be obvious that the coiled-wire inner tube will also
80 serve to transmit electric currents; and, further, that all the wires can be used for any required purpose where an electric circuit is required.

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

1. A cable consisting of an interior tube, 1, composed of coiled wire, with all the coils
90 in direct contact, and their interstices filled to make a closed tube, the insulating-covering 2, the coiled naked wire 3, the insulating material 4, and the longitudinal wires in the insulating material 4, substantially as described.

2. A cable consisting of an inner tube, 1, composed of coiled wire, with the coils in direct contact, and their interstices filled with tin or its described equivalent, the insulating-covering 2, the naked coiled wire 3 thereon, and the insulating material 4 on the coiled
100 wire 3, substantially as described.

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