

(No Model.)

2 Sheets—Sheet 1.

F. E. DEGENHARDT.
ELECTRIC CONDUCTOR.

No. 463,107.

Patented Nov. 10, 1891.

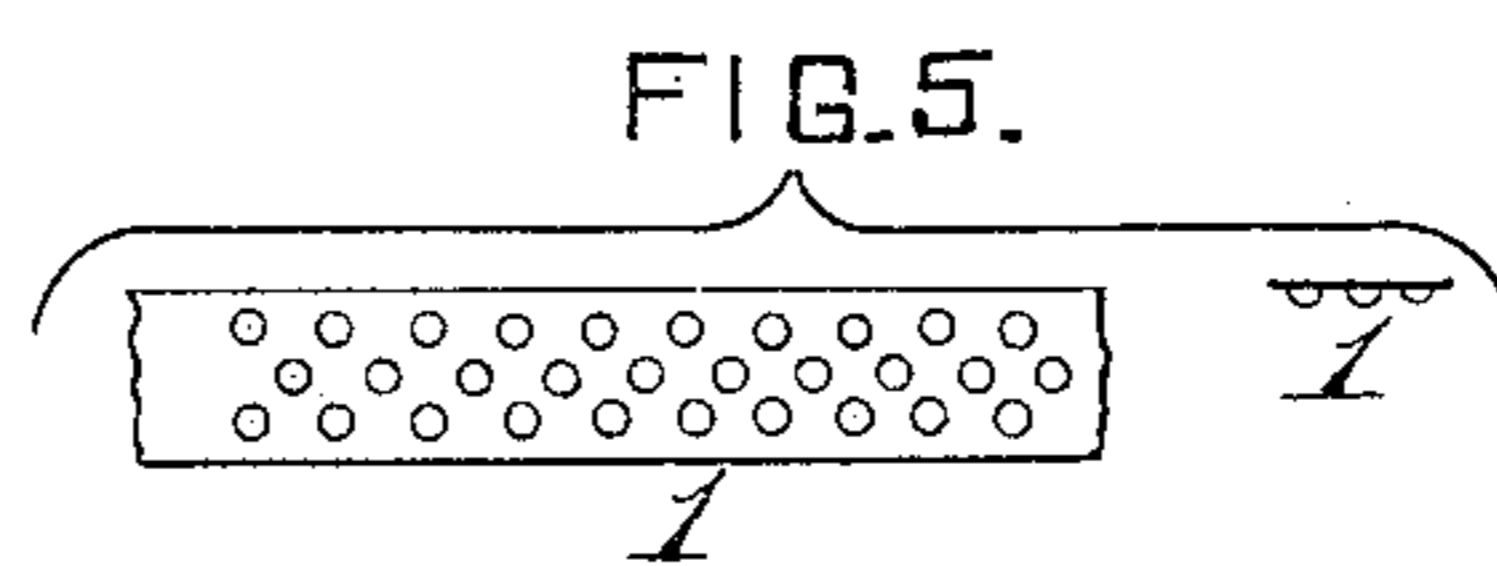
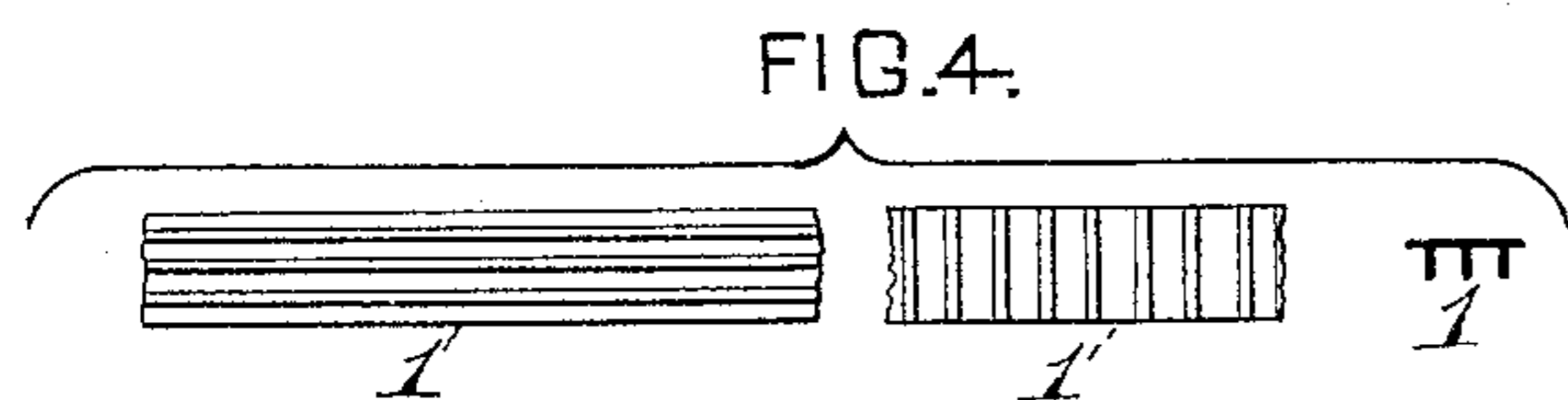


FIG. 1.

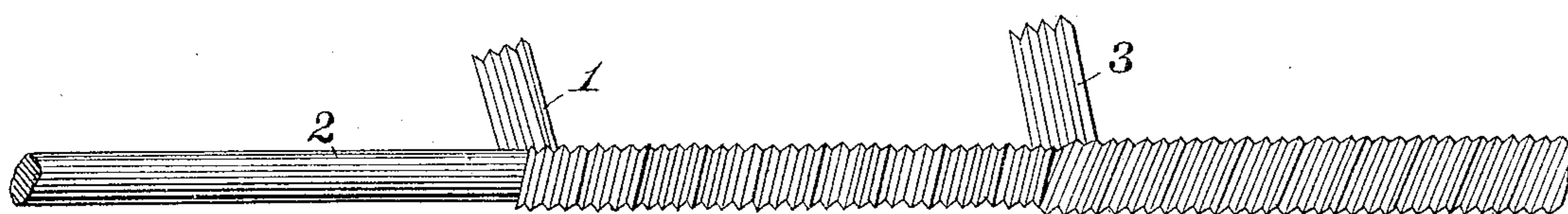


FIG. 2.

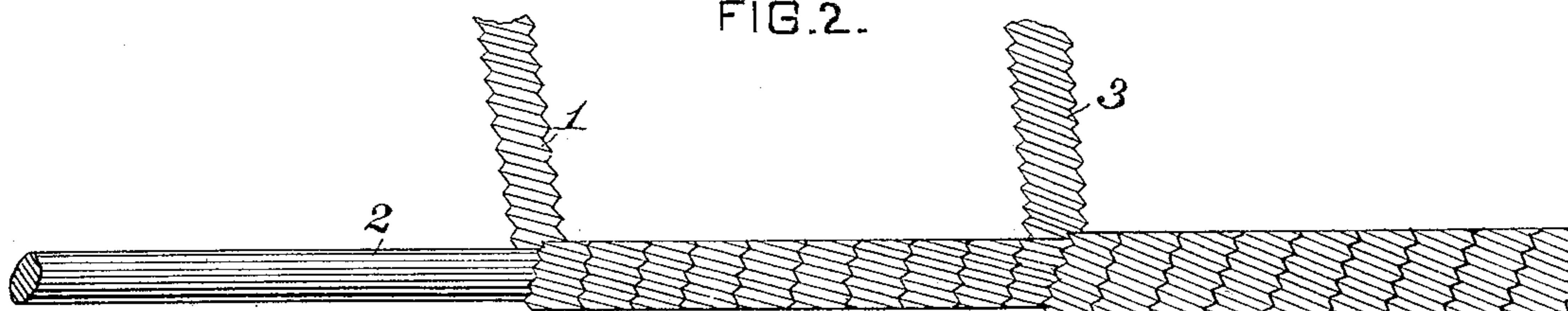
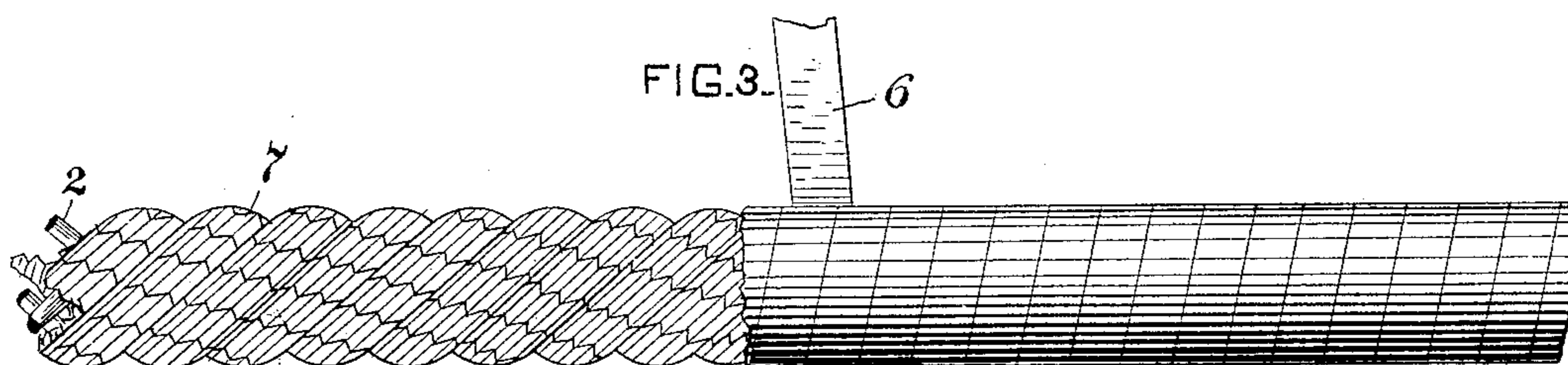


FIG. 3.



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FIG. 6.

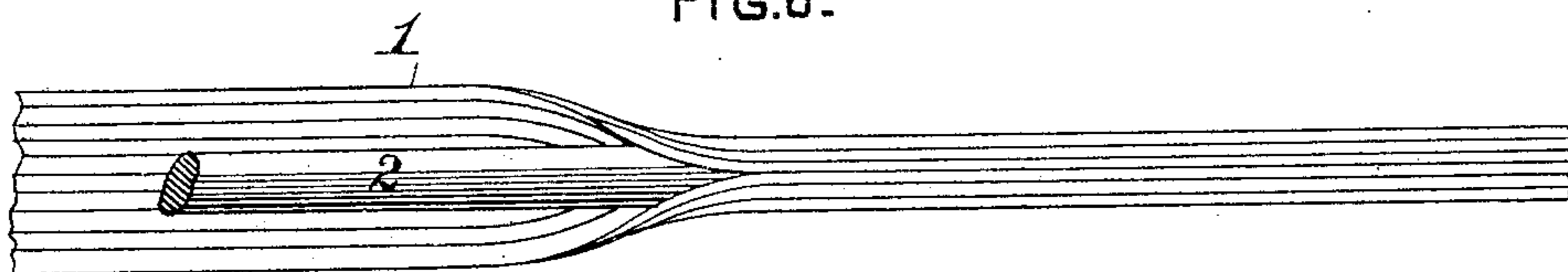
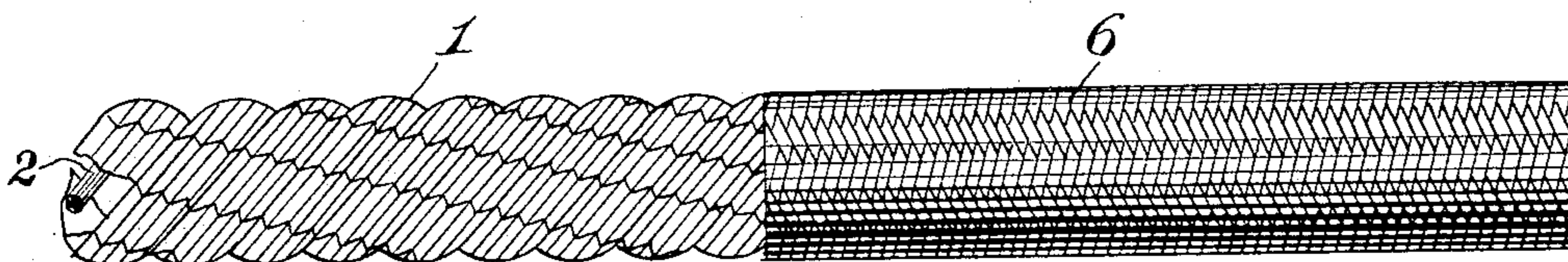


FIG. 7.



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UNITED STATES PATENT OFFICE.

FREDERICK E. DEGENHARDT, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE
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ELECTRIC CONDUCTOR.

SPECIFICATION forming part of Letters Patent No. 463,107, dated November 10, 1891.

Application filed September 1, 1890. Serial No. 363,591. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK E. DEGENHARDT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented or discovered a certain new and useful Improvement in Electric Conductors, of which improvement the following is a specification.

In an application of even date herewith I have described and claimed certain improvements in electric conductors, said improvements consisting in surrounding the conductors with a perforated strip of suitable material and then inclosing the whole in an impermeate covering, whereby air-pockets are formed around the conductor, thereby decreasing the static capacity thereof.

The invention described herein relates to certain further or additional improvements in that class or kind of conductors.

In the accompanying drawings, forming a part of this specification, Figure 1 is a view in elevation of a portion of a conductor insulated in accordance with my invention. Fig. 2 is a similar view of a modification of the same. Fig. 3 is a view in elevation of a cable embodying the invention. Fig. 4 is a detail view showing a modification of the covering-strip. Fig. 5 is a similar view of a further modification thereof. Fig. 6 is a view in elevation of a portion of a conductor, showing the application of a longitudinally-ribbed strip to a wire; and Fig. 7 is a view similar to Fig. 3, showing the substitution of a braid for a tape covering.

In the practice of my invention I take a strip of paper or other suitable non-conducting material and by any suitable means now in the art corrugate the same either longitudinally, as shown in Fig. 1, or transversely, as shown in Fig. 2. This corrugated strip 1 is then wound spirally around the conducting wire 2, or may be wrapped longitudinally around it. In thus applying the strip the inner apices will rest upon the conductor, and the recesses between such apices will form pockets for the retention of air or gas. If desired, a second or third strip may be applied, the number of such additional strips being dependent upon the depth of the corrugations, the deeper the corrugations the greater the volumes of air retained. If de-

sired, a suitable insulating sealing material may be applied to the outer corrugated strip or covering 3 of plain uncorrugated strip of paper or other fibrous material, or a braid or wrapping may be placed outside of the corrugated strip and the insulating and sealing material applied thereto.

In lieu of employing a corrugated strip—i. e., a strip bent or folded so that the depressions on one side correspond to the elevations on the opposite side—I may employ a strip having a series of transverse or longitudinal ribs, as shown in Fig. 4, or a series of projections on one or both sides, as shown in Fig. 5. A strip provided with such ribs or projections is either wound spirally around or wrapped longitudinally around the conductor, as hereinbefore described.

In forming cables a series of two or more wires, protected as above described, except that covering 5 may be omitted, is laid up into a core, which is then covered with a close braid or wrapping 6, over which a suitable insulating and sealing material may be applied. The core thus prepared is then covered with a sheath of lead, preferably formed by passing the core through a lead press in the manner well known in the art.

I claim herein as my invention—

1. The combination of a conducting-wire and a strip provided with alternate elevations and depressions surrounding said wire, thereby forming receptacles for the retention of air or gas, substantially as set forth.

2. The combination of a conducting-wire, a strip provided with alternate depressions and elevations surrounding said wire, and a close cover applied outside of the strip, substantially as set forth.

3. The combination of a series of two or more conducting-wires, each wire surrounded by a covering provided with alternate depressions and elevations, said wire being laid up into a core, and a close cover surrounding the core, substantially as set forth.

In testimony whereof I have hereunto set my hand.

FREDERICK E. DEGENHARDT.

Witnesses:

JAS. P. MCQUADE,
E. S. PEROT.