

Public (1896) Department.

ORDINARY MS.

G.O., No. 21

Dated 7th Jan. 1896

[Despatch Abstract.]

INVENTIONS.

Gazetting specifications of certain-----.

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

Fig. 1.

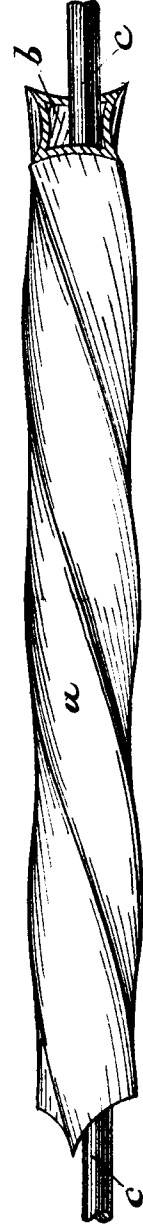


Fig. 2.

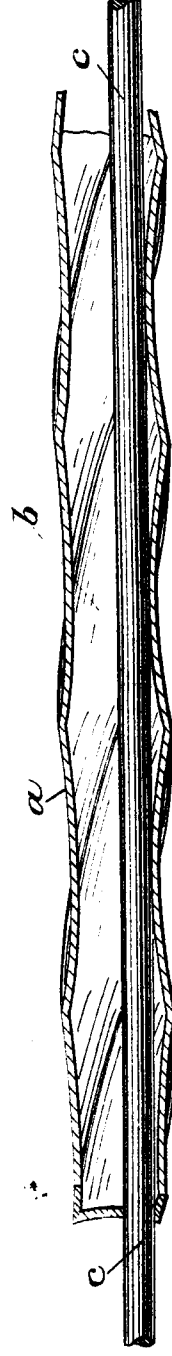


Fig. 6.

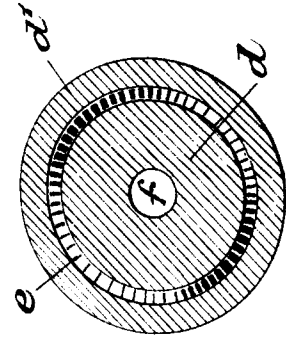


Fig. 5.

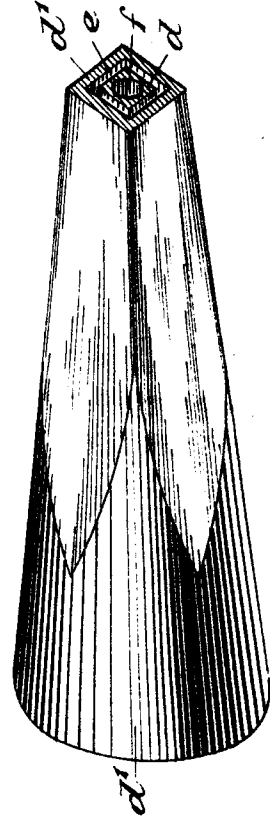
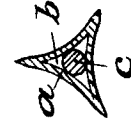


Fig. 3.



Fig. 4.



Specification.

To all whom it may concern:

Be it known that I, Theodore Guilleaume, of Mülheim-on-the-Rhine, in the German Empire, Cable Manufacturer, am in possession of an invention for "Improved means for insulating electric conductors", and I, the said Theodore Guilleaume, do hereby declare the nature of the said invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement thereof, that is to say:-

This invention relates to the insulation of electric conductors, on the 'air-space' system, and consists in improved means for forming the air-space about the conductor and for preserving the same against crushing.

According to the usual practice, the air-space enclosing the conductor is circular in cross-section and readily yields to external pressure.

Moreover the conductor is throughout its whole length, in contact with

the material forming the walls of the air-space, the insulation being thereby prejudicially affected.

In the accompanying drawings, Fig. 1 is an elevation of an electric conductor insulated according to the improved method, Fig. 2 being a longitudinal section, Figs. 3 and 4 are transverse sections of conductors respectively enclosed in quadrangular and triangular 'air-space' insulating tubes. Fig. 5 is a perspective view of a die or folding instrument adapted for use in the production of the said tubes, Fig. 6 being a face view of the entering end thereof.

According to the improved method of construction, the subject of the present invention, the tube a enclosing the air-space b and conductor c is triangular, quadrangular or polygonal in cross-section, and is twisted longitudinally (Figs. 1 and 2). Owing to the angular form of the tube a, it offers considerably greater resistance to external pressure than is presented by a cylindrical tube; and, owing to the conductor c following a course parallel with the axis of the said tube, and only touching the sides of the spiral air-chamber at intervals, the insulation by air exclusively is more nearly accomplished. The conductor, moreover, in taking a straight course, is shorter, and therefore less costly, than in a case where the conductor follows the convolutions of the air-enclosing tube.

In the production of a twisted triangular, quadrangular or polygonal tube for 'air-space' insulation, and in applying the same about an electric conductor, a die or folding instrument of the

character illustrated in Figs 5 and 6 is employed. This instrument consists of two parts d, d' which resemble one another in form; the part d being arranged within the part d'. Between these two parts is a passage e, through which the paper or other insulating material for forming the twisted tube a passes. This passage e is or may be annular at the entering end (Fig. 6) and gradually changes as it approaches the exit end, to a triangular, quadrangular or polygonal form, according to the shape of the air-enclosing tube to be produced. Through the centre of the inner part, there is formed an avenue f for the passage of the conductor c. Whilst the material for forming the air-enclosing tube a traverses the passage e, between the two parts d d' of the folder or former, the instrument is rotated, the conductor c meanwhile traversing the central passage f. The conductor thus issues enclosed within a twisted tube of an angular character; which tube may then be taped and provided with an outer sheathing; or several conductors so insulated may be assembled in a cable.

Having now particularly described and explained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:-

1. The herein described method of insulating an electric conductor on the 'air space' system, same consisting in enclosing a naked conductor in a twisted quadrangular, triangular or polygonal tube of non-conducting material, the conductor being entirely air-insulated, except

where in contact with prominences which are presented in the internal surface of the envelope and which result from angularity of section and twisting.

2. An electric conductor enclosed in a twisted quadrangular, triangular or polygonal tube of non-conducting material, said conductor being entirely air-insulated except where in contact with prominences which are presented in the internal surface of the envelope and which result from angularity of section and twisting.

3. The combination with a naked electric conductor c , of a tubular envelope t of non-conducting material, angular in cross-section and twisted, so as to present in its internal surface prominences with which the conductor is alone in contact, substantially as set forth.

4. For use in the production of air-insulated electric conductors of the kind herein referred to, a folding or forming instrument, constructed substantially as described with reference to Figs. 5 and 6 of the accompanying drawings, and comprising two parts arranged the one within the other, and having between them a space or passage which gradually contracts in diameter and changes from an annular form at the entering end to an angular at the exit end, the inner part being moreover provided with a central opening for the passage of the conductor.

This 14th day of October 1895.
(Sgd.) Theodore Guilleaume

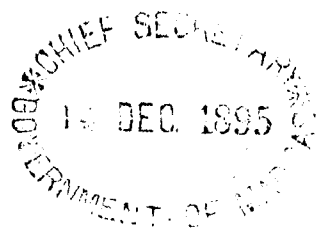
Witnesses:-

Georg Müller.

G. A. Schmidt.

No. 3143 P.

Dated - 6
Recd - 14 } Dec 1895
Reg - 17 }
Encl. 2.



The accompanying copy of a ^{Specification}_{Application}, of which the original (bearing register number 271 of 1895) was ^{filed}_{registered} on the 23rd of November 1895 in the Office of the Secretary to the Government of India in the Department of Revenue and Agriculture, is forwarded to the ^{Government}_{Chief Commissioner} of Madras in conformity with the provisions of Section 11 of the Inventions and Designs Act, 1888.

M. Ling

Offg. Secretary under the Inventions
and Designs Act.

C. B. D.

DEPARTMENT OF REVENUE & AGRICULTURE,

(PATENTS),

Calcutta, the 6th December 1895.

Specification
DESIGN.

C. No 4232

PUBLIC DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

READ the following endorsement of the Assistant
Secretary to the Government of India, Revenue and Agricultural Department,
dated 6th December 1895, No. 3143 P.

ORDER ~~No. 114~~ ²¹ d/ 7 Jan 96

THE following Notification will be published in the Gazette once.

specification of an invention has been filed
The following ~~design~~ ^{has been registered} in accordance with Section ~~61~~ ¹¹ of
Act V of 1888 (the "Inventions and Designs Act"), and is open to inspection
at the office of the Chief Secretary to Government, Fort St. George, on the payment
of a fee of one rupee:—

*"Improved means for insulating electric conductors?"
(By Theodore Guillaume, of Mülheim-on-the-
Rhine, in the German Empire, Cable Manufacturer)*

bl.
b-66.
6/1

Gazette. 7/1/96

26.1

Specification

Public

14

7-1-6

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189

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STATEMENT WITH DITTO

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