

No. 768,756.

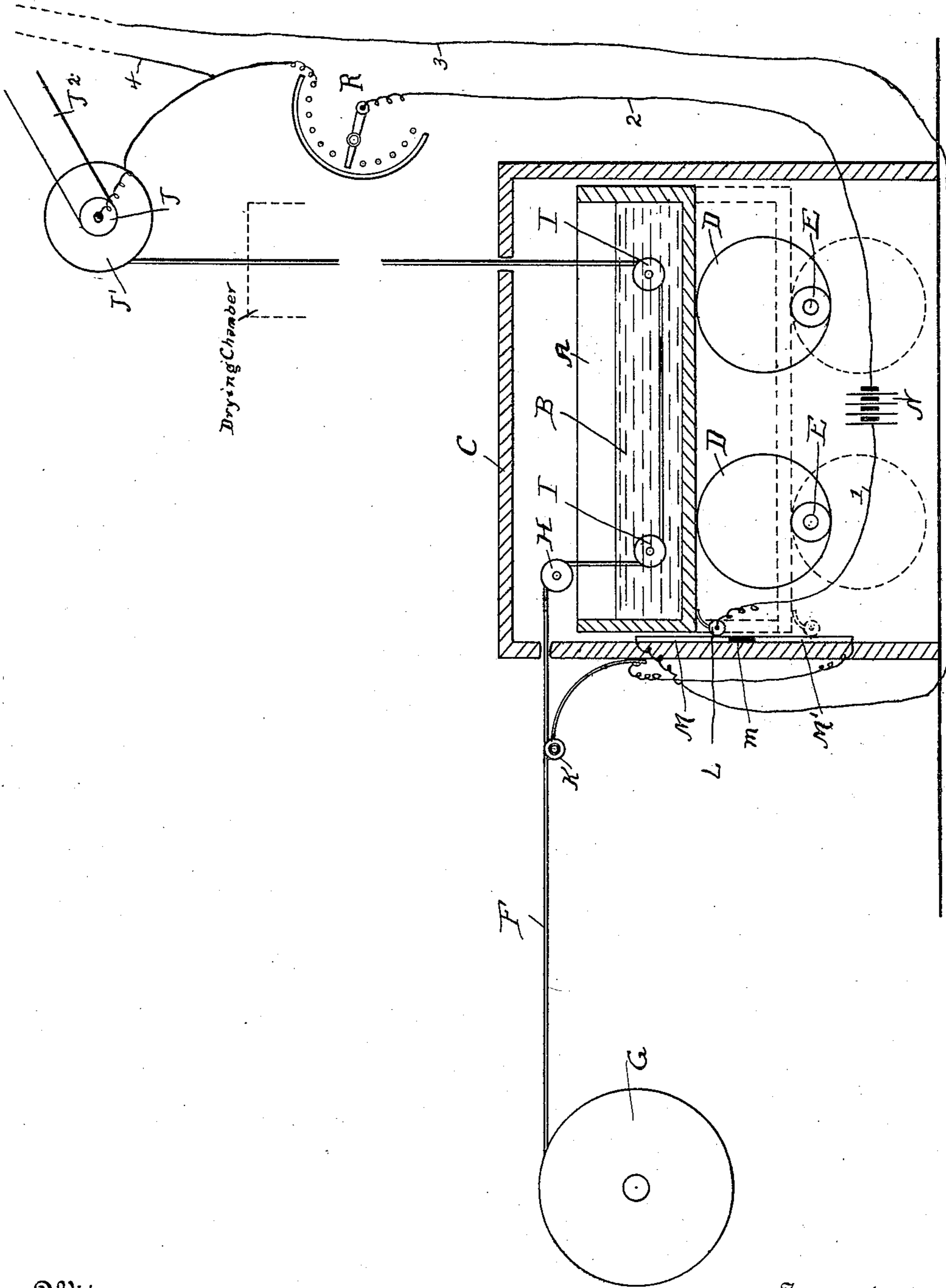
PATENTED AUG. 30, 1904.

I. KITSEE.

INSULATING ELECTRIC CONDUCTOR.

APPLICATION FILED OCT. 7, 1902.

NO MODEL.



Witnesses
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INSULATING ELECTRIC CONDUCTOR.

SPECIFICATION forming part of Letters Patent No. 768,756, dated August 30, 1904.

Application filed October 7, 1902. Serial No. 126,306. (No model.)

To all whom it may concern:

Be it known that I, ISIDOR KITSEE, of the city and county of Philadelphia, State of Pennsylvania, have invented certain new and useful
5 Improvements in Insulating Electric Conductors, of which the following is a specification.

My invention relates to an improvement in insulating electric conductors.

Its object is to facilitate the drying out of
10 the moist insulation.

In cases where the conductor is covered with an insulating material in its moist state the drying of that part of the material exposed to the air greatly retards the drying out of
15 the whole mass, for the reason that the part exposed to the air forms a film which prevents the effectual evaporation of the solvent in the layers below the film. More so is this the case where the insulation is of considerable
20 thickness, and this disadvantage is invariably met in the process of insulating wires with a solution containing amorphous cellulose; and the aim of my invention is to overcome the disadvantage of applying heat only to the outer
25 surface and to apply the heat from within as well as without.

In the drawing I have illustrated my invention as applied to insulating wires; but it is obvious that other conductors can be substituted therefor.
30

In the drawing, which is a longitudinal section of the device wherewith my invention is carried out, A represents the reservoir containing the solution B. C is the casing surrounding said reservoir and the operating parts.
35

D represents cams upon which the reservoir rests, these cams being secured to the continuously-rotating shafts E.

F is the wire passing from the reel G into the casing C, over the guide-roller H, into the reservoir containing the solution B, then passing from the same over the guide-rollers I, then out of the casing to the desired height, over the pulley J, with its attached reel J'.
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This pulley and reel are actuated through the means J² by any suitable device, such as are well known in insulating electric wires. The movement of this device should be controlled by an electromagnet connected, through wires
45 3 and 4, to the source of current N.
50

K is a spring-trolley always in contact with the uninsulated part of the wire F. This trolley is also in electrical contact with the stationary contact-plate M'.

To the movable reservoir is secured the
55 spring-trolley L in electrical connection through wire 1 with one pole of the source of electricity N, the other pole of which is connected to the wire 2 and with the interposition of the adjustable rheostat R and through the
60 conducting part of the pulley with one terminal of the wire F. To the casing C is also secured the stationary contact-plate M. These two contact-plates M and M' are electrically disconnected from each other through the in-
65 sulating material *m*.

The *modus operandi* of carrying out my invention with the device as illustrated is as follows: One of the great advantages in drying the insulation from the inside out through the
70 heating of the conductor lies therein that through this process the uniting of the insulating material with the conductor is greatly facilitated, as experience has proven that, whereas most of the moist insulating materials
75 if dried only through external heat can easily be peeled off the wire, the same insulating material if dried from within firmly adheres to the wire. The moist material is, so to speak, "baked" onto the conductor and forms,
80 therefore, with same a strong mechanical unit.

In another application, filed April 22, 1902, under Serial No. 104,833, I have described a process wherein the temperature of the conductor was raised during the time that said
85 conductor was carried through the insulating-bath; but, as pointed out in said application, cases may arise wherein the high temperature of the conductor during the process of insulation may not be advisable, and in such cases
90 the process described in this specification is to be preferred. The particulars noted therefore distinguish the present method from that covered by application Serial No. 104,833,
95 above referred to.

In the application above referred to I have also illustrated the *modus operandi* as outlined in this application, but have not laid claim to the process herein described.

I have illustrated the device to be preferred,
100

in this my invention; but it is understood that other means may be substituted therefor and that the insulating material may be in a semisolid or fluid state, provided that said insulation requires a comparatively high temperature for the purpose of drying out the same.

I have illustrated the process wherein successively-successive parts of the conductor are carried through the insulating-bath and during the time that the insulating process is not being carried on to transmit currents of electricity through the insulated parts; but it is obvious that this my invention is applicable if the whole conductor (wire) is already insulated and has to be provided with a second coat of insulation. In this case the source of current shall be connected to the terminals of the conductor, (wire,) and the circuit connecting this wire to the source of current shall be broken as long as parts of the wire are in the insulating-bath and shall be made during the time that the insulating process is interrupted.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The process of insulating electrical conductors which consists in alternately carrying parts of said conductors through an insulating-bath and then sending currents of electricity through those parts of the conductors which have been carried through said bath.

2. The process of insulating electric wires which consists in alternately submerging in an insulating-bath and taking out of said bath successive parts of the wire to be insulated and sending currents of electricity through

said parts to facilitate the drying out of the insulation when said parts are out of the insulating-bath.

3. The herein-described alternate process which consists in first subjecting a continuous conductor in part to the process of insulation, then subjecting said part of the conductor to a source of electric current, again subjecting a successive part of said conductor to the process of insulation, subjecting said successive part to a source of electric current, and continuing said alternate processes till the conductor in its whole length is provided with the necessary insulation.

4. The process of insulating an electric wire with an insulating material dissolved in its solvent, which consists in first providing said wire with said insulating material and then raising the temperature of the wire by the passage of an electric current before said insulating material has dried out, to a degree capable of drying out said insulating material.

5. In the process of insulating electric conductors with a moist insulation, the following steps: first, covering said conductors with said moist insulation, and second, raising the temperature of said conductors before said moist insulation has dried out, to a degree necessary to expel the moisture from said insulation.

In testimony whereof I hereby sign my name, this 9th day of June, A. D. 1902, in the presence of two subscribing witnesses.

ISIDOR KITSEE.

Witnesses:

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