

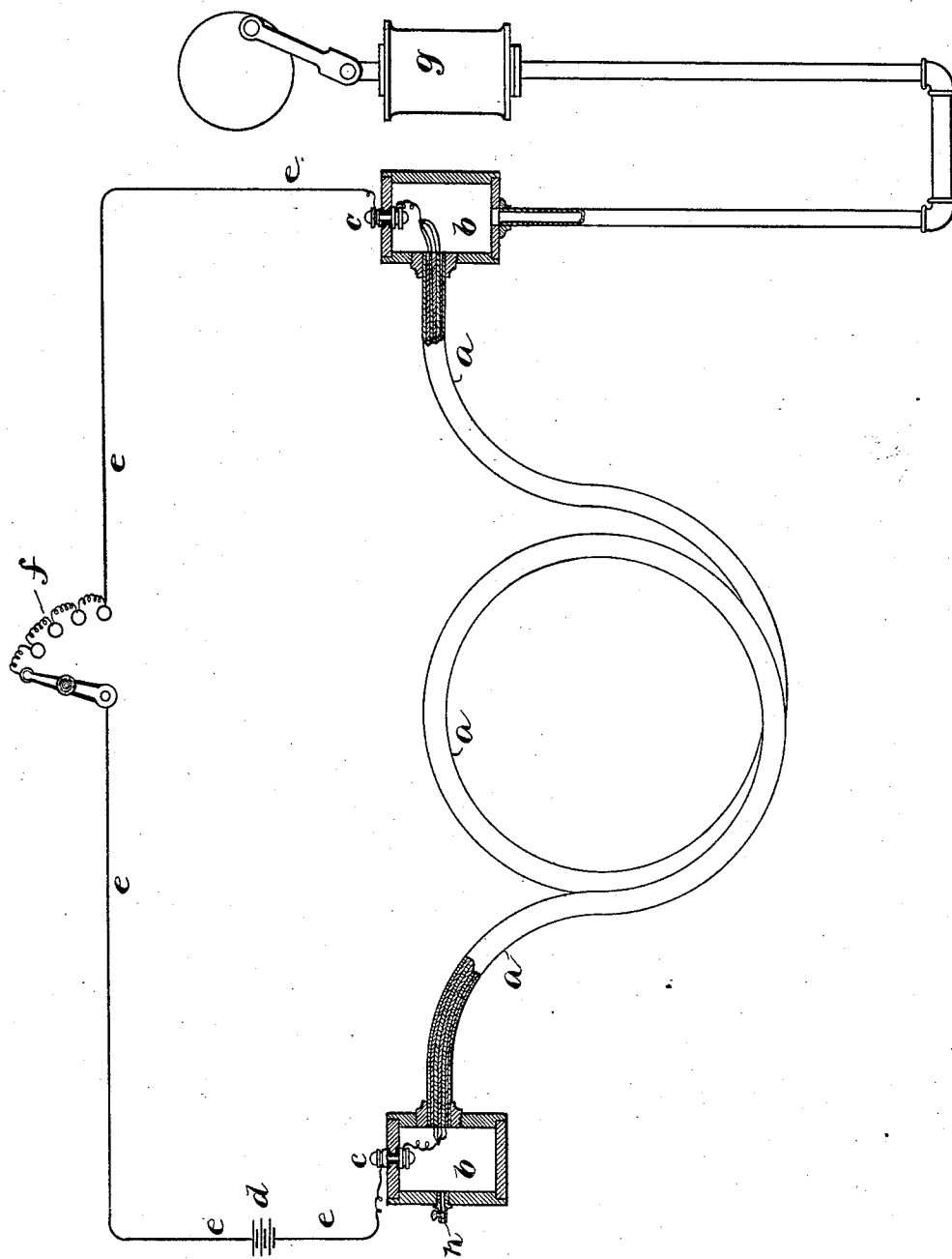
(No Model.)

W. R. PATTERSON.

ART OF DRYING CORES OF ELECTRIC CABLES.

No. 544,374.

Patented Aug. 13, 1895.



Witnesses:

George L. Cragg.
George Mc Mahon.

Inventor
William R. Patterson
By Barton & Brown
Att'y's.

UNITED STATES PATENT OFFICE.

WILLIAM R. PATTERSON, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE WESTERN
ELECTRIC COMPANY, OF SAME PLACE.

ART OF DRYING CORES OF ELECTRIC CABLES.

SPECIFICATION forming part of Letters Patent No. 544,874, dated August 13, 1895.

Application filed April 18, 1892. Serial No. 429,632. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM R. PATTERSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in the Art of Drying the Cores of Electric Cables, (Case No. 96,) of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawing, forming a part of this specification.

My invention relates to drying the cores of electric cables, more particularly that class of electric cables in which conductors are insulated by a covering of fibrous material. Its object is to effect a more complete desiccation of the insulating material than has heretofore been possible and to accomplish this with greater facility and more rapidly than has heretofore been practicable.

My invention consists in sending through the conductors of the core, after it has been drawn into its protecting-pipe, an electric current of such volume as to heat the core sufficiently to expel the moisture from the insulating material and to remove the vapor formed by this process by forcing a current of dry gas through the pipe.

The process heretofore in use of drying a core of a cable by the application of heat externally is open to the objection that the heat has to penetrate the layers which lie nearest the surface of the core before reaching the center of the core.

In my invention the result of thoroughly heating the entire core is attained more readily and quickly and the work is done more efficiently, since the heat, which is produced by the resistance of the conductors to the electric current, is applied through the mass of the core when desired and can be regulated to any extent.

My invention is particularly useful in drying the cores of cables which have been put into place, as, for instance, when drawn into ducts or conduits. By the application of my invention the core may be thoroughly dried without removing the cable from the duct.

The apparatus for carrying out my invention is illustrated in the accompanying drawing.

The cable *a* terminates at each extremity in closed chambers *b b*, the protecting-pipe of the cable being joined by a union in a well-known way to the coverings of the chambers *b b*. Attached to these chambers and leading an insulated conductor to the interior are the binding-posts *c c*, which carry an insulated connecting-wire, which I join preferably to all the conductors of the cable-core, grouping these conductors together for that purpose. From either pole of the battery *d* I lead the conducting-wires *e e* to binding-posts *c c*, as shown. By properly proportioning the source of electricity *d* and the conducting-wires *e e* I can pass any amount of current through the conductors of the cable-core, thus heating it to any desired degree.

To assist in regulating the current flowing in the circuit, which includes the conductors of the cable-core, I put in the circuit the adjustable rheostat *f*, of well-known form.

By heating the cable-core in the method above described the moisture contained in the insulating material surrounding the conductors is converted into vapor. To remove this vapor I connect a pressure-pump *g* with one chamber *b*, so that the current of gas or air will pass into that chamber, and leading from the other chamber I arrange an outlet *h*. Thus, by the operation of the force of the pressure-pump, a current of gas or air is forced through the space between the core and its protecting-pipe. To further assist in the process of carrying off the vapor arising from the moisture in the insulating material, I thoroughly dry, by means of heat, the gas which is forced into the chamber by the pressure-pump. As the object to be accomplished is the circulation of air or other gas, I may use a suction-pump instead of a pressure-pump. Instead of placing the core in the protecting-pipe or tube itself, I can apply the same process to the core in a closed chamber when the core is wound on a reel or disposed of in any other manner.

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

The herein described method of removing
5 moisture from the cores of cables provided
with a protecting sheath, which consists in
sending through the conductors thereof an
electric current of sufficient strength to heat
the core by conduction to a temperature which
10 will vaporize the moisture contained in the

core without carbonizing the insulation, and
simultaneously maintaining a current of gas
through the pipe surrounding the core; sub-
stantially as described.

In witness whereof I hereunto subscribe my 15
name this 5th day of March, A. D. 1892.

WILLIAM R. PATTERSON.

Witnesses:

GEORGE McMAHON,

GEORGE L. CRAGG.