

(No Model)

ERNEST A. GEORGES, CALLED CHARLES STREET.
CATHODE FOR ELECTROLYSIS.

No. 583,255.

Patented May 25, 1897.

FIG. 1.



FIG 2.

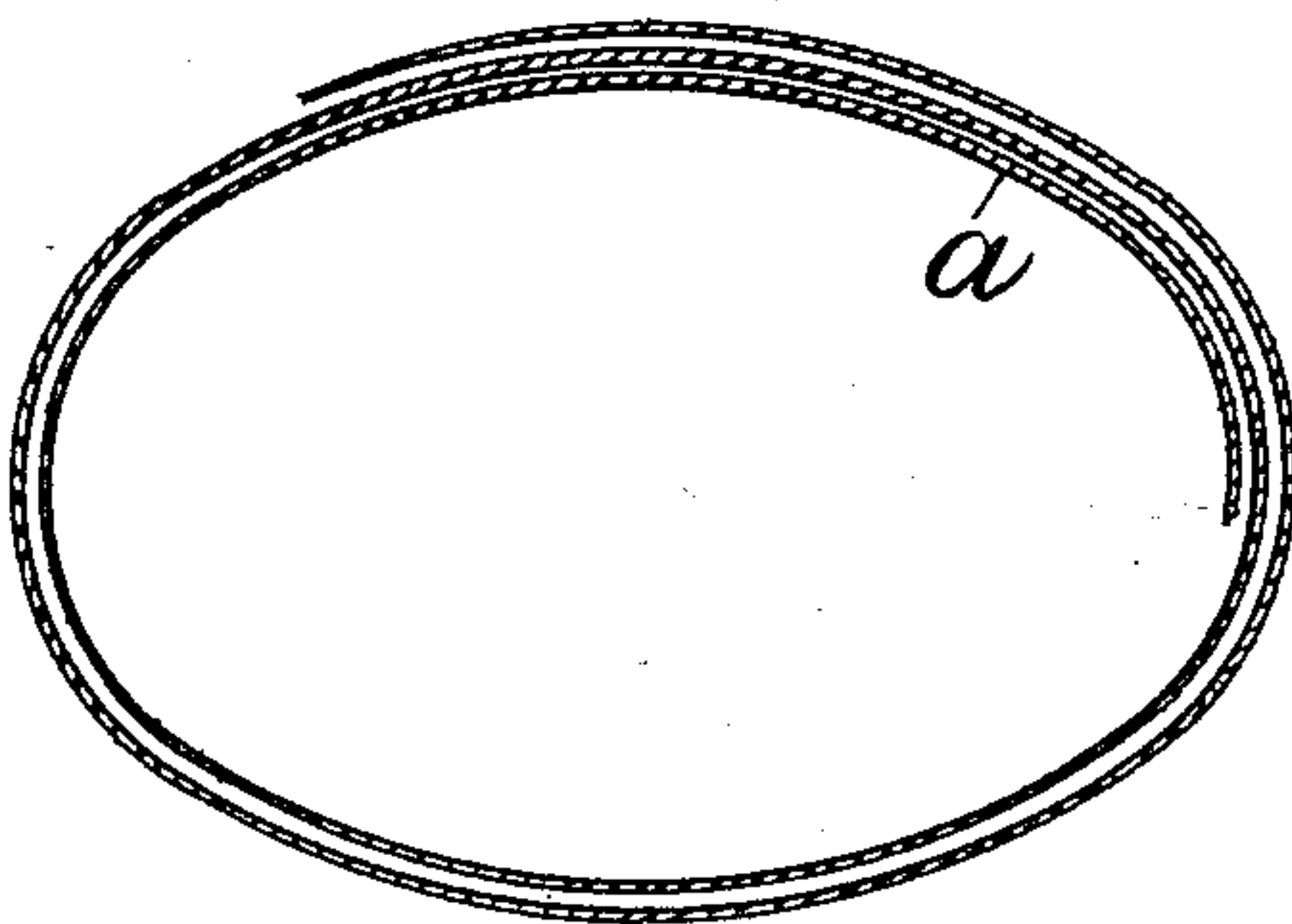


FIG. 3.

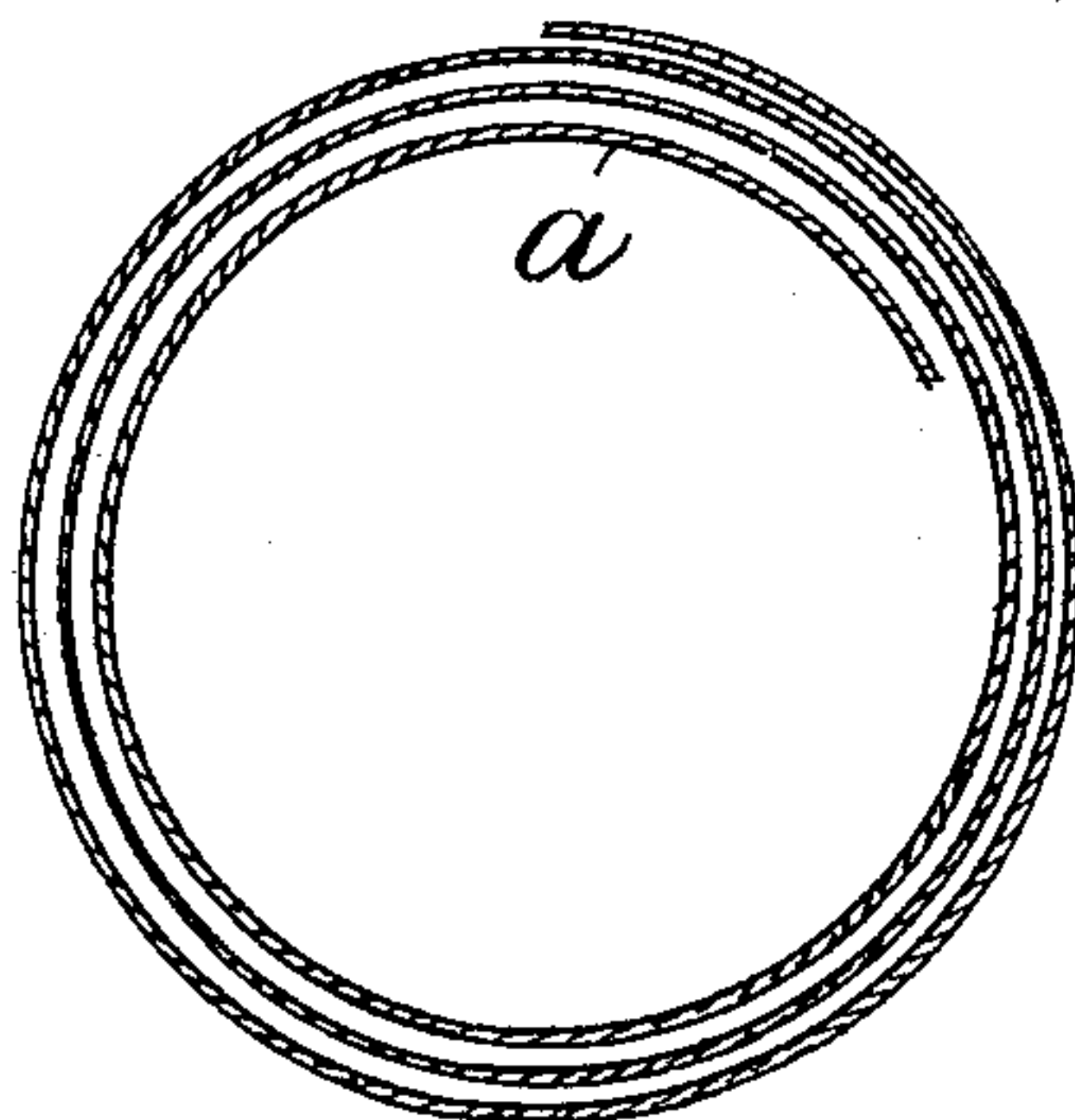


Fig. 4.

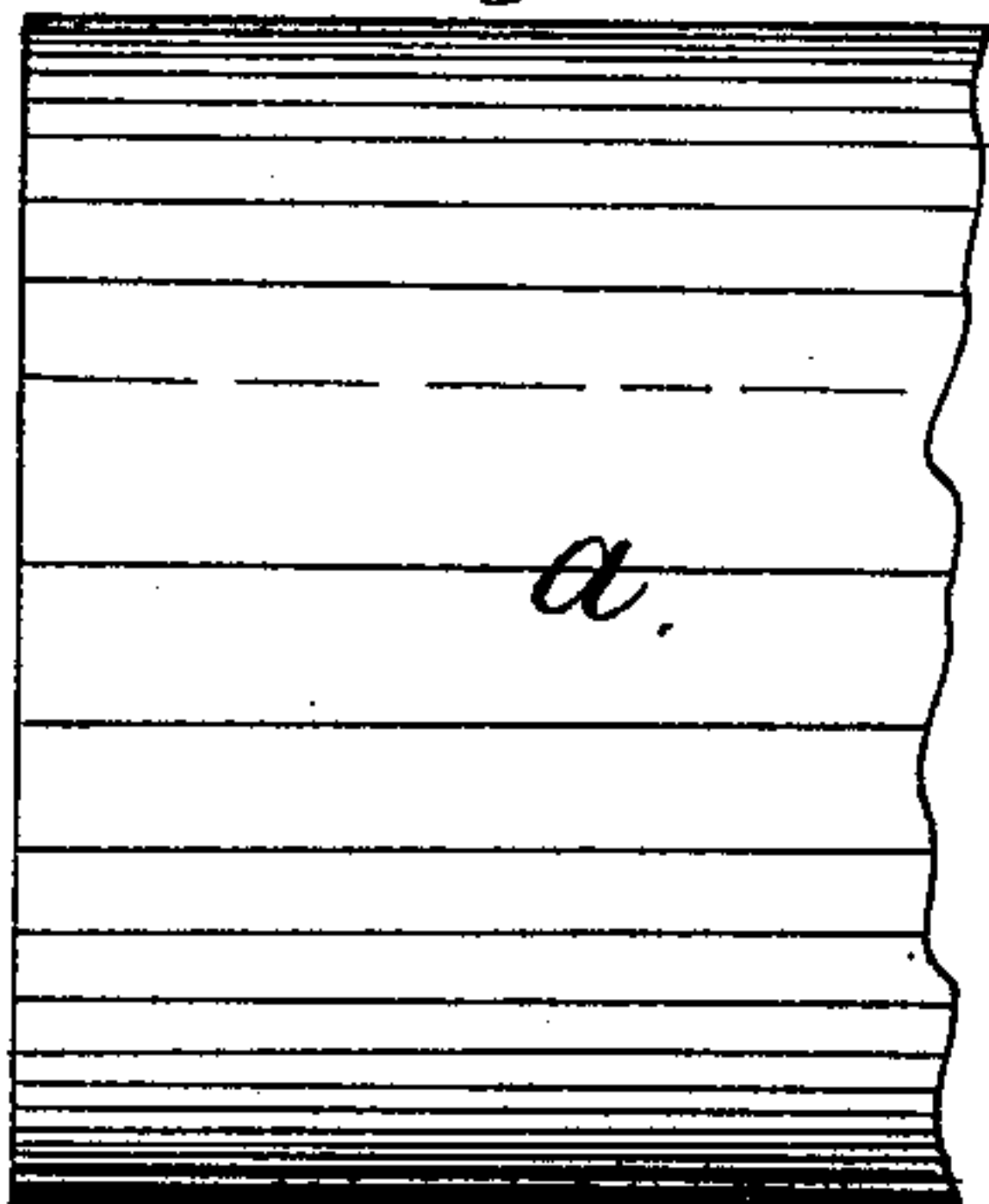


Fig. 5.

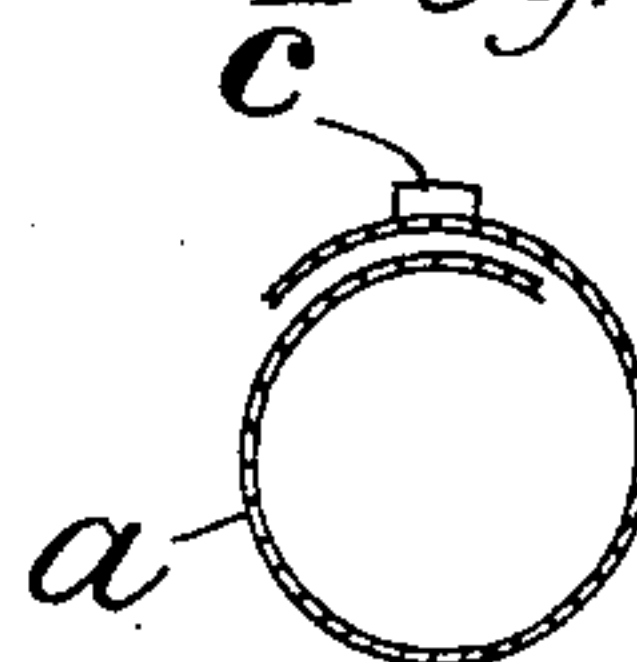
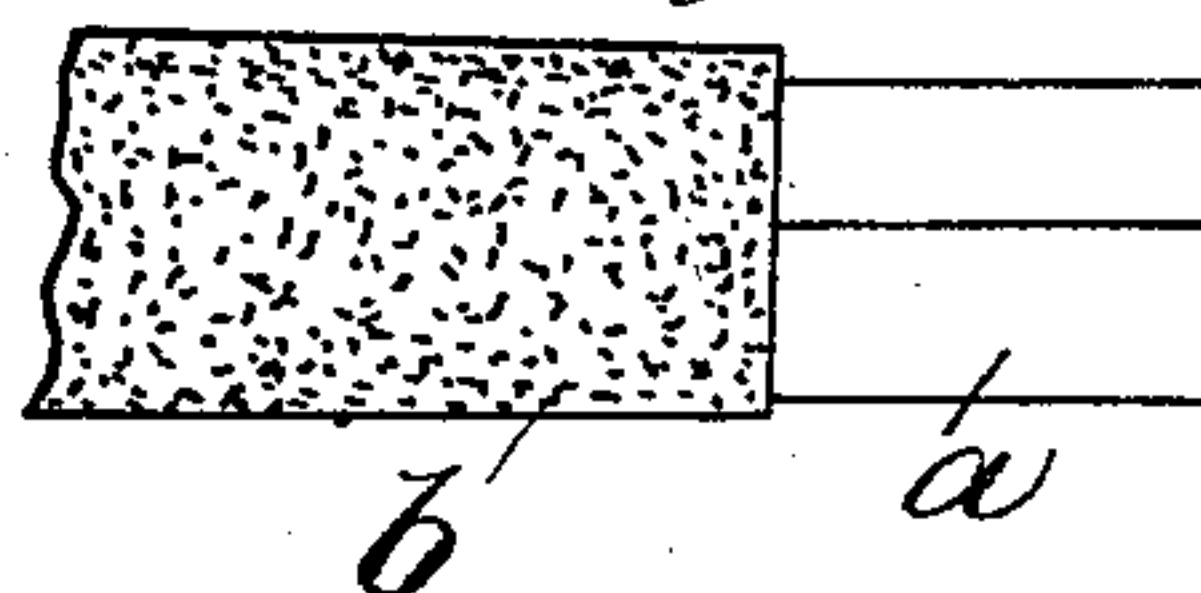


Fig. 6.



Witnesses.

Steve Lewis

WR Edelen

Inventor

Inventor
Ernest A. Georges, called Charles, Street
by Follard Duvernoy.
his attorney.

UNITED STATES PATENT OFFICE.

ERNEST AUGUSTE GEORGES, CALLED CHARLES STREET, OF PARIS, FRANCE,
ASSIGNOR TO THE ELECTRO-METALLURGICAL COMPANY, LIMITED, OF
LONDON, ENGLAND.

CATHODE FOR ELECTROLYSIS.

SPECIFICATION forming part of Letters Patent No. 583,255, dated May 25, 1897.

Application filed June 13, 1896. Serial No. 595,488. (No model.)

To all whom it may concern:

Be it known that I, ERNEST AUGUSTE GEORGES, called CHARLES STREET, a citizen of the Republic of France, and a resident of Paris, (Seine,) France, have invented certain new and useful Improvements in Cathodes for the Electrolysis of Bodies Producing a Solid Deposit on the Negative Electrode, of which the following is a full, clear, and exact description.

In the electrolysis of bodies which yield solid deposits at the negative electrodes, and particularly in the electrolysis of the salts of the different metals, use is generally made to form the cathodes of metallic plates or rods. It often happens, according to the nature of the electrolyzed substances, that the deposit, especially when it envelops the cathode completely, is so adherent to the plate or rod as to be detachable only with great difficulty. I overcome this inconvenience by the use of a cathode which can be contracted in dimensions when the deposit has formed thereon. The deposit being in the form of a coating on the cathode is readily removed or peeled off upon the contraction of the dimensions of the latter, as above stated.

In the accompanying drawings, which form part of this specification, Figures 1, 2, and 3 are views in horizontal section of cathodes of different forms, but each in accordance with the invention. Fig. 4 is a side elevation of part of the cathode shown in Fig. 3. Fig. 5 is an end view of a cathode having a projection thereon for facilitating its separation from the deposit, and Fig. 6 is a side elevation showing part of the tube covered with a deposit.

Thus, as shown, the cathode *a* is formed by a thin sheet, preferably of metal, rolled once or oftener upon itself. This rolling up may be performed by hand or mechanically upon

any appropriate mandrel. When the deposit forms, it suffices in order to separate it from the cathode to grip the inner end of the latter with a suitable tool and turn it in a direction to roll the cathode tighter in order to contract its diameter. This has the effect of loosening the cathode from the interior wall of the deposit *b*, (see Fig. 6,) permitting its easy removal, after which it again expands to its normal dimensions.

In case the pressure on the free end of the cathode should not suffice to detach the deposit, a projection *c* may be provided on the exterior of the tube *a*, (which constitutes the cathode,) so as to be acted upon by an appropriate tool for effecting the winding. Such an arrangement is shown in Figs. 5 and 6.

It will be understood that the contractible cathodes can be given various forms and dimensions.

I claim as my invention or discovery—

A cathode for the electrolysis of bodies which produce solid deposits on the negative electrodes, characterized by a contractibility in dimensions when the deposit has formed thereon, so that said deposit may peel off and be removed with the greatest facility; the said cathode being constituted for this purpose by a thin sheet, preferably of metal, wound once or oftener upon itself; and the contraction in the dimensions being obtained after the formation of the deposit; substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ERNEST AUGUSTE GEORGES,
CALLED CHARLES STREET.

Witnesses:

CLYDE SHROPSHIRE,
EDOUARD BARBARY.