

(No Model.)

D. W. DE FOREST.
Electric Condenser.

No. 239,371.

Patented March 29, 1881.

Fig. 1.

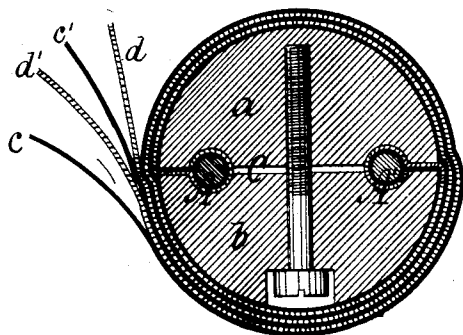


Fig. 2.

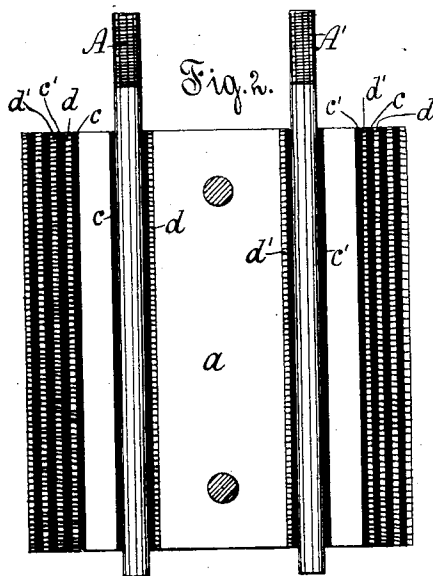
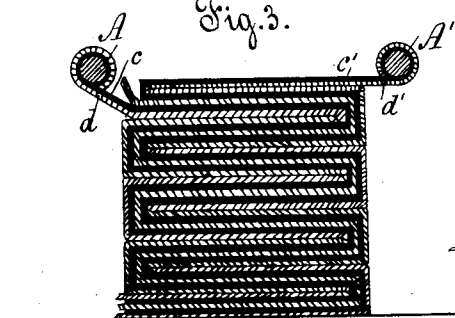


Fig. 3.



Witnesses:
B. W. Smith.
Chas R. Clarke.

Inventor:
David W. De Forest
by Theo. H. Hoston
his Atty.

UNITED STATES PATENT OFFICE.

DAVID W. DE FOREST, OF BROOKLYN, ASSIGNOR TO WILLIAM BUCHANAN,
OF NEW YORK, N. Y.

ELECTRIC CONDENSER.

SPECIFICATION forming part of Letters Patent No. 239,371, dated March 29, 1881.

Application filed November 17, 1880. (No model.)

To all whom it may concern:

Be it known that I, DAVID W. DE FOREST, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful
5 Improvement in Electric Condensers, of which the following is a specification.

My invention relates to electric condensers; and its object is to produce a cheap and reliable apparatus for the accumulation of positive
10 and negative electricity.

In the accompanying drawings, which form a part of this specification, Figure 1 is a horizontal sectional view. Fig. 2 is a vertical sectional view; and Fig. 3 illustrates a modification
15 of my invention, hereinafter more fully described.

Similar letters of reference indicate like parts throughout the several views.

A is a positive and A' is a negative pole of
20 electricity, both inclosed in a cylinder, C, of a non-conducting material, which is constructed in two halves, *a* and *b*, held together by means of screws or other device. Around the positive pole A is wound once or twice from an
25 endless roll a strip of sheet metal, *c*, generally tin-foil or other equally good conductor of electricity, and passed between the two halves *a* and *b* out to the periphery of the cylinder C. Then a strip of insulating material, *d*, preferably paraffine-paper or sheet-rubber, is wound
30 from an endless roll around the conducting material *c*, so as to cover its outside. Both *c* and *d* are now wound around the half *a* of the cylinder C. The same operation is performed on the negative pole A', where sheet
35 metal *c'* or other good conductor of electricity is wound from an endless roll once or twice around the pole A', and covered on its outside by an insulating material, *d'*, and both the conductor *c'* and the insulating material *d'* are
40 passed between the two halves *a* and *b* of the cylinder C to its periphery and wound around

the half *b* in the same direction as *c* and *d*. Now, it is evident that when the winding of the two materials *c* and *d* is continued the
45 conductor *c* will come to lie over the insulating material *d'*, and when the winding of *c'* and *d'* is continued the conductor *c'* from the negative pole A' comes to lie over the insulating material *d*. Continuing the winding of
50 all the strips of conducting and insulating materials simultaneously around the cylinder C, in the manner just described, until a desired diameter is reached, it will form a very reliable and cheap electric condenser. There is
55 always an insulating material between the positive and negative conductors, and the strips of conducting material do not need to be cut for each layer in pieces, and each fastened to the respective pole, as is done now in the construction of electric condensers. 60

In Fig. 3 I show an electric condenser composed of the alternate layers of a positive and a negative conducting material and the intervening insulating material, and in which the
65 several endless strips of the materials are not wound around a cylinder, but folded alternately upon each other. In constructing condensers in this manner I need one more strip of insulating material, so as to make a perfect
70 insulation of the positive and negative conductors.

What I claim is—

In an electric condenser, the cylinder C, composed of the two halves *a* and *b*, held together by means of set-screws or other similar device, in combination with the poles A and A', the conducting materials *c* and *c'*, and the insulating materials *d* and *d'*, as described, and for the purpose as specified. 75

DAVID W. DE FOREST.

Witnesses:

THEO. G. HOSTER,
CHAS. R. CLARKE.