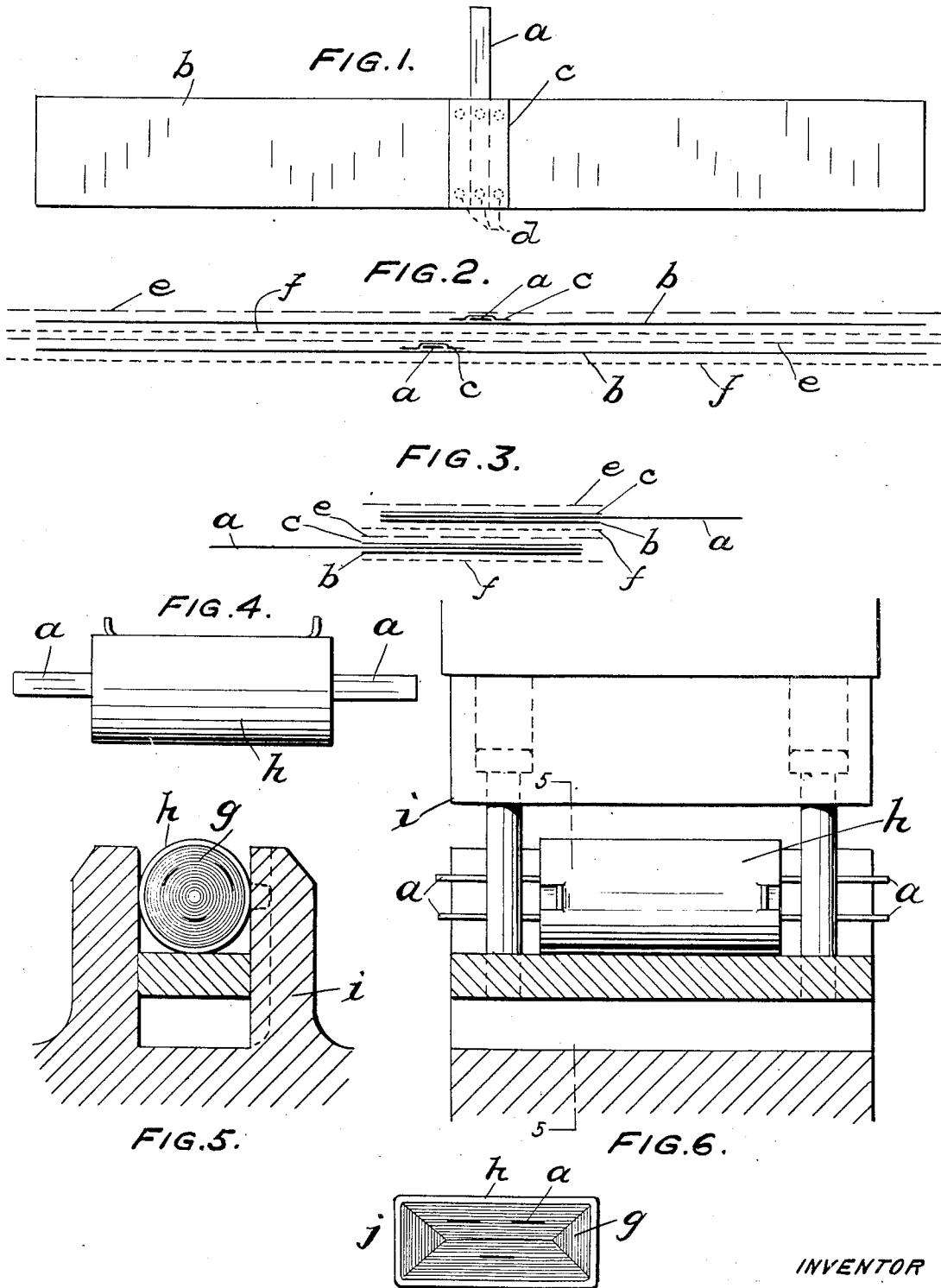


1,337,505.

Patented Apr. 20, 1920.



WITNESS:

Robt. R. Kitchel.

FIG. 7.

INVENTOR

William C. Brinton, Jr.

BY

Frank D. Bussor

ATTORNEY.

UNITED STATES PATENT OFFICE.

WILLIAM C. BRINTON, JR., OF KENNETT SQUARE, PENNSYLVANIA, ASSIGNOR TO
PHILIPS-BRINTON COMPANY, OF KENNETT SQUARE, PENNSYLVANIA, A COR-
PORATION OF PENNSYLVANIA.

ELECTRICAL CONDENSER.

1,337,505.

Specification of Letters Patent.

Patented Apr. 20, 1920.

Application filed December 13, 1917. Serial No. 206,900.

To all whom it may concern:

Be it known that I, WILLIAM C. BRINTON, Jr., a citizen of the United States, residing at Kennett Square, county of Chester, and State of Pennsylvania, have invented a new and useful Improvement in Electrical Condensers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

The object of my invention is to provide a condenser, preferably of the type of that disclosed in my Patent No. 1,237,015, dated August 14, 1917, which will obviate certain difficulties incident to the compression of the leads between layers of conducting and dielectric material. It has been observed that a certain proportion of compressed condensers are impaired and occasionally ruined by the displacement of the leads in the compressing operation, causing them to cut through the dielectric material.

My invention consists in covering the lead, where it contacts with the conducting material, with a strip of varnished paper, which acts to maintain the lead in place and to prevent it acting to cut the dielectric material.

A preferred embodiment of my invention is shown in the accompanying drawings, in which:—

Figure 1 is a plan view of a partly manufactured condenser with a lead attached.

Fig. 2 is an edge view of the same, two layers of conducting material and one complete double-ply layer of dielectric material being shown.

Fig. 3 is a cross sectional view of the same.

Fig. 4 is a plan view of the condenser before being pressed into final shape.

Fig. 5 is a section on line 5—5 of Fig. 6.

Fig. 6 is a sectional view of a press, with my condenser in place for pressing to final form.

Fig. 7 is a cross-sectional view of the completed condenser.

In the preferred way of constructing my improved condenser, I arrange alternate layers of dielectric and conducting material in a pile of long strips. The conducting material may be aluminum or other conducting foil, while each layer of dielectric

material is composed of two layers or plies of paper of different degrees of hardness.

In building up the condenser, I connect the leads *a* to the conducting foil *b* by first fixing the lead to the foil with shellac and then covering the lead with a piece of varnished paper *c*, which I tack to the conducting material with shellac, as at the points *d*.

Upon each strip of foil *b* I lay a strip of relatively hard and non-compressible paper *e* and upon it a strip of relatively soft and compressible paper *f*. I then lay another layer of foil, and then two strips of paper, one relatively hard and the other relatively soft, and so on until the desired thickness is attained.

When sufficient material has been laid down, I wind the strips on a mandrel, withdraw the cylindrical condenser body *g* and insert it in a cylindrical metal case *h*. I then submit the whole to pressure in the hydraulic press *i*, applying sufficient pressure to give the complete condenser *j* a rectangular shape.

I then impregnate the condenser with wax; for example, by the method described in my application for patent Serial No. 181,735, filed July 20, 1917.

I do not herein claim any inventive features herein disclosed except the means for holding the leads in position and preventing them from cutting the dielectric material, other inventive features being claimed in a divisional application filed October 8, 1918, Serial No. 257,419.

Having now fully described my invention, what I claim and desire to protect by Letters Patent is:

1. A condenser comprising layers of dielectric material and layers of conducting material, a lead of conducting material separate from the layers of conducting material and extending within the body of the condenser and contacting with a layer of conducting material, and a protecting and retaining cover overlying the lead.

2. A condenser comprising layers of dielectric material and layers of conducting material, a lead of conducting material extending within the body of the condenser and contacting with a layer of conducting material, and a cover interposed between contiguous layers of conducting material

and dielectric material and overlapping the lead.

3. A condenser comprising layers of dielectric material and layers of conducting material, a lead of conducting material extending within the body of the condenser and contacting with a layer of conducting material, and a cover of varnished paper overlapping the lead and confined between the lead and conducting material and the contiguous layer of dielectric material.

4. A condenser comprising layers of dielectric material and layers of conducting material, a lead contacting with a layer of conducting material and a cover overlying the lead and confined between the lead and conducting material and the contiguous layer of dielectric material.

In testimony of which invention I have hereunto set my hand, at Philadelphia, Penna., on this 10th day of December, 1917.

WM. C. BRINTON, JR.