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LIQUID TIGHT JOINT FOR PREVENTING LEAKAGE BETWEEN THE TERMINAL RODS AND COVERS OF
ELECTRIC ACCUMULATORS.
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1,379,854.

Patented May 31, 1921.

FIG. 1.

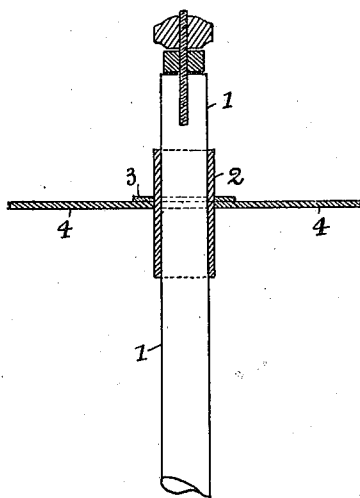
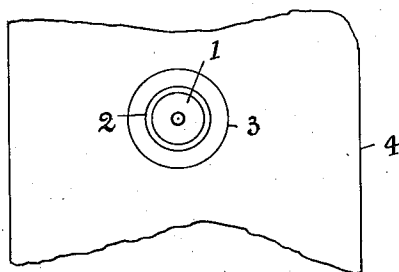


FIG. 2.

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LIQUID-TIGHT JOINT FOR PREVENTING LEAKAGE BETWEEN THE TERMINAL RODS
AND COVERS OF ELECTRIC ACCUMULATORS.

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Specification of Letters Patent.

Patented May 31, 1921.

Application filed September 4, 1918. Serial No. 252,669.

To all whom it may concern:

Be it known that I, ALFRED DININ, a citizen of the French Republic, whose post-office address is 18 Route de Cherbourg à Nanterre, Seine, France, have invented certain new and useful Improvements in Liquid-Tight Joints for Preventing Leakage Between the Terminal Rods and Covers of Electric Accumulators, of which the following is a specification.

This invention provides an improved liquid-tight joint for preventing leakage of liquid between the terminal rods and the covers of electric accumulators especially those having celluloid containers.

In order that the liquid of electric accumulators may not leak or creep at the terminal rods it is necessary that absolutely impermeable joints be provided at the points where the rods go through the cover of the container. The joint generally adopted for this purpose consists of a thick hollow plug of India rubber which surrounds the terminal rod and is pressed into an aperture on the cover thus forming an impermeable joint. This method is more or less satisfactory from the point of view of impermeability, but in addition to the India-rubber being expensive it quickly deteriorates and becomes hard and brittle. The joint then becomes ineffective and leakages occur. This device is moreover rather cumbersome and difficult to carry out on very small elements.

The present invention is intended to obviate these disadvantages by effecting a satisfactory permanent impermeability with a simple and inexpensive joint. According to this invention the terminal rods are provided at the point where they pass through the cover of the container with a closely fitting celluloid tube combined with a collar of the same material which is adhesively attached to the cover in such a manner as to close the passage opening completely.

The annexed drawing given by way of example illustrates a practical form of this invention.

Figure 1 is a sectional elevation of a ter-

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minal rod and of the cover of an accumulator container jointed together in accordance with this invention.

Fig. 2 is a plan view of the same.

On the terminal rod 1 of the accumulator element a celluloid tube or sleeve 2 is 55 closely fitted. The external diameter of the tube 2 is slightly less than the diameter of the aperture formed in the cover of the celluloid container. The internal diameter of the tube 2 when cold is slightly less than the 60 diameter of the rod 1 so that by heating the tube 2 it may be expanded and forced on to the rod 1, the subsequent contraction on cooling bringing about an adhesion as intimate as possible. The rod 1 and tube 2 are 65 then passed through the aperture on the celluloid cover of the container and the small interstice that remains between the tube 2 and the edge of the aperture in the cover is closed by means of a small celluloid collar 70 3 which is adhesively attached by the ordinary means to the cover 4 and to the tube 2. Thus an impermeable joint is produced preventing any leakage of liquid. The joint 75 also is permanent.

It is obvious that other forms of construction might be adopted and the details of manufacture be varied without departing from the spirit of my invention.

I claim:

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A liquid tight joint for preventing leakage between the terminal rods and covers of electric accumulators consisting of a celluloid sleeve having an internal diameter which is less than the diameter of the 85 terminal rod and is adapted to be expanded by heat and to be passed over the terminal rod in a heated condition so that in cooling it shall shrink tightly on the rod, and a celluloid collar adhesively attached to the said 90 sleeve and to the cover to complete the closure of the joint.

In testimony whereof I have affixed my signature, in presence of two witnesses.

ALFRED DININ.

Witnesses:

JOHN F. SIMONS,
LE ROY LAYTON.