No. 867,319. PATENTED OCT. 1, 1907.

J. W. STUBBS.

ELECTRODE.

APPLICATION FILED APR. 9, 1907.

FIG. 1.

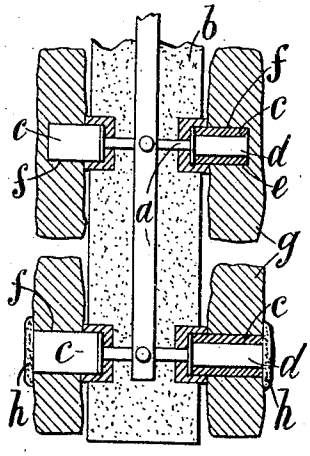
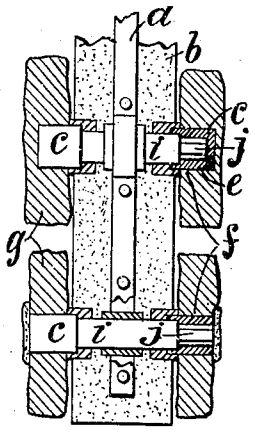


FIG. 2.



WITNESSES

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JOHN WILLIAM STUBBS, OF MIDDLEWICH, ENGLAND, ASSIGNOR TO THE GENERAL ELECTROLYTIC PARENT COMPANY LIMITED, A JOINT STOCK COMPANY, OF GREAT BRITAIN.

ELECTRODE.

No. 867,319. Specification of Letters Patent. Patented Oct. 1, 1907.

Application filed April 9, 1907. Serial No. 367,276.

To all whom it may concern:

Be it known that I, JOHN WILLIAM STUBBS, a subject of the King of Great Britain, residing at Middlewich, in the county of Chester, England, have invented a new and useful Improvement in Electrodes, of which the following is a specification.

This invention relates to electrodes having conductors partly protected from the electrolyte, and carbon blocks connected to the conductors and exposed to the electrolyte, and the object is to provide a composition of high conductivity which may be readily molded round the ends of the conductors to protect them while the surface of the mass of com ition may be finished of a form which can be readily fitted into the usual external carbon blocks, so as to render renewal of the latter easy.

In carrying out the invention we mix together powdered carbon or graphite, resin, and tetrachlorid of carbon, the resin and tetrachlorid being in sufficient proportion to make a soft or plastic mass which can be easily molded or poured round the end of the conductor and between any projections thereon without leaving any spaces, and it is then allowed to dry, or it may be heated to drive off the tetrachlorid of carbon.

The invention is illustrated in the accompanying drawings in which,

Figure 1 is a sectional view of one form and Fig. 2 is a like view of another form.

In Fig. 1. *a* is a metal conductor covered for the greater part with Portland cement *b*. *c* is a mixture of graphite, resin, and tetrachlorid of carbon, molded round the end *d* of the conductor, the outer surface *e* of the mass being formed to fit into an opening *f* in the usual carbon block *g*. The end *d* of the conductor is thus efficiently protected from chlorin or other corrosive agents in the electrolyte and at the same time the electrical resistance of the junction is reduced, while when the block *g* is worn it can readily be removed and a new one put on. *h* is cement for protecting the outer end of the conductor when the opening *f* is made completely through the block *g*.

Fig. 2. is similar to Fig. 1. except that the conductor *a* instead of being all metallic is provided with carbon pins *i* to connect with the outer blocks *g*. When these pins become worn away at the ends, which happens after long use and causes loss of efficiency, the pins are repaired by reducing the ends at *j* preferably to a hexagonal shape, and then molding round such ends the mixture of carbon or graphite resin, and tetrachlorid of carbon, as before described. The invention is similarly applicable to other forms of conductor.

I claim.

In the construction of an electrode the combination with the end of an electrical conductor of a mass of a mixture of powdered carbon, resin, and tetrachlorid of carbon, substantially as described.

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

JOHN WILLIAM STUBBS.

Witnesses:

W. B. JOHNSON,

JAMES BARRON.