

O. J. MARSHICK.
 ADAPTER FOR ELECTRODE HOLDERS.
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1,348,434.

Patented Aug. 3, 1920.

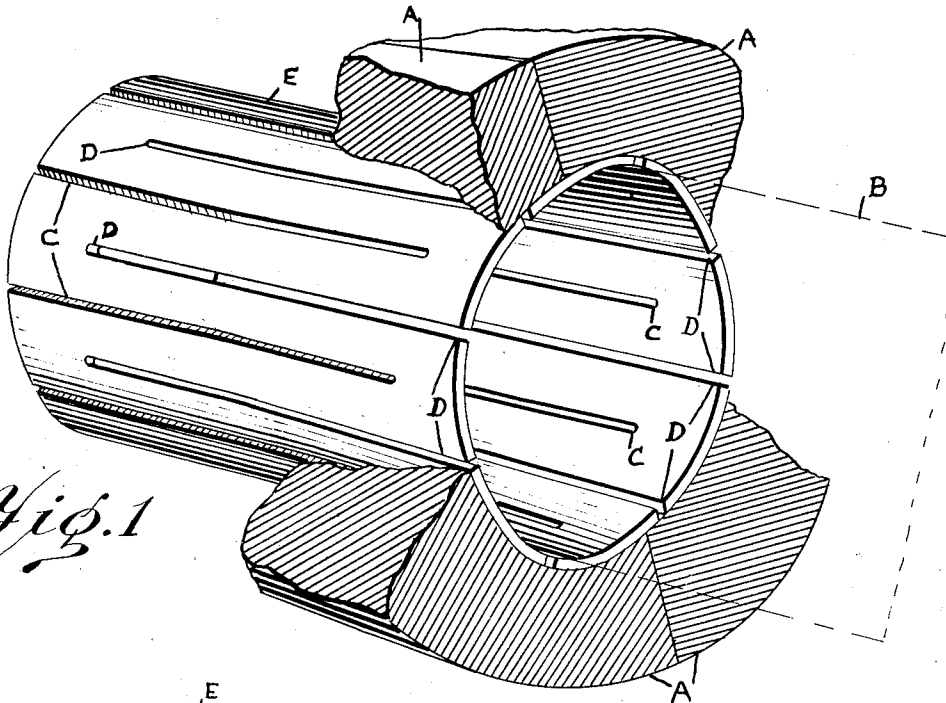


Fig. 1

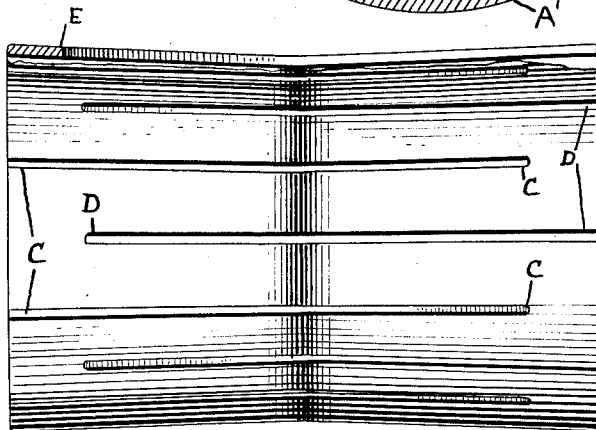


Fig. 2

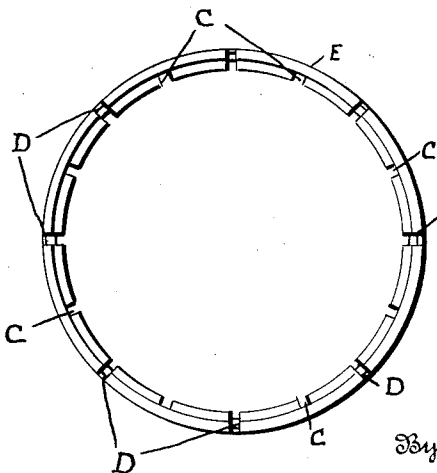


Fig. 3

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ADAPTER FOR ELECTRODE-HOLDERS.

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Specification of Letters Patent.

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Application filed October 31, 1919. Serial No. 334,648.

To all whom it may concern:

Be it known that I, OLIVER J. MARSHICK, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Adapters for Electrode-Holders, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to linings for the holders of electrodes, particularly as used in electric furnaces, and has for its object an improved metallic holder or wrapping for the carbon stem which will insure a more perfect contact between it and the inclosing clamp portion of the electrode carriage. Carbons, as furnished commercially, often vary so much, both as regards diameter and cross-sectional contour, that if one is inserted in a necessarily rigid clamp, only a part of its surface is firmly enough engaged by the surrounding metal to permit the proper passage of current therethrough, and the resultant arcing causes undue heating of the carbon electrode and its premature disintegration. My improved construction herein disclosed can be made in quantities comparatively cheaply, can be quickly and easily put in place, and answers the most exacting requirements along the lines above mentioned.

In the drawings:

Figure 1 is a perspective of my device in position about a dotted-in representation of the carbon electrode, and partly surrounded by a fragmentary representation of the inclosing clamp or holder.

Fig. 2 is a sectional elevational view of a severed half of one of my lining members.

Fig. 3 is an end elevational view, designed to bring out further the alternating character of the lengthwise kerfs.

A represents the cooperating halves of the clamp or holder, which is designed to hold the electrode B in place in its lengthwise bore, in position for the engagement of its end within one of the terminal apertures in the refractory wall of an electric furnace drum. My metal lining or wrapping E, designed to take the place of the frequently used metallic fabric layers,

which quickly burn out because of the intense heat developed in the carbon, consists of a tube or roll of metal of appropriate gage, lengthwise of which are cut two series of parallel kerfs C and D, preferably arranged alternately as shown, so that the open end of each kerf, at its end of the tube as a whole, lies between the nearby blind or inner ends of the adjacent kerfs of the other series, whose open ends are at the other end of the tube. I do not, however, confine myself to the specific alternating arrangement of kerfs illustrated; for example, two kerfs of the same series, as C, might be located alongside of one another without noticeable difference in the functioning of the device, and without departure from the spirit of my invention. The cutting away of this much of the metal enables the wrapping when compressed within the parts of the holder A to be forced into a smaller compass, even at its edges than would be the case if the wrapping were a plain tube or sheet. More particularly, however, it enables the compressing action of the electrode clamp to force the individual tongues or sections of metal between the kerfs slightly in one circumferential direction or the other, to fill in the slightly variant space that may occur at one point or another about the carbon electrode, due either to its irregular shape or to its slightly different diameter at one point as compared with another. The contact of the metal wrapping through which the current passes with the various parts of the electrode's surface is thus rendered so uniform that uneven heating thereof due to arcing of the current is reduced to a minimum.

What I claim is:

1. A metallic electrode wrapping, consisting of a tube of metal provided with a plurality of series of incomplete lengthwise kerfs arranged alternately in suitably spaced relation, those of one series having their open ends at one end of the tube, and those of the other series having their open ends at the other end of the tube, between the blind ends of those of the first named series on either side.

2. An electrode wrapping, consisting of a tube of metal in which a plurality of series of lengthwise kerfs have been alternately cut, none of said kerfs extending the entire length of the tube, and the kerfs

of one series having their open ends at the opposite end of the tube from those of the other series.

3. A metallic electrode wrapping, consisting of a tube of metal provided with a plurality of longitudinally extending kerfs of lesser length than that of the tube as a whole, certain of said kerfs extending to one end of the tube, and certain others of the kerfs being similarly disposed relatively to the other end of the tube.

4. As a new article of manufacture, a

lining for an electrode holder, consisting of a wrapping of metal provided with a plurality of kerfs extending only a portion of the length of the wrapping as a whole, each of said kerfs extending to one end or the other of the wrapping.

In testimony whereof I sign this specification in the presence of two witnesses.

OLIVER J. MARSHICK.

Witnesses:

WILLIAM M. OWEN,

JEFFERSON G. THURBER.