

May 6, 1924.

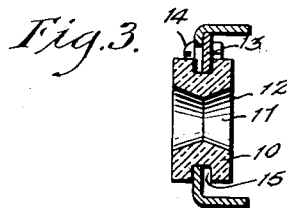
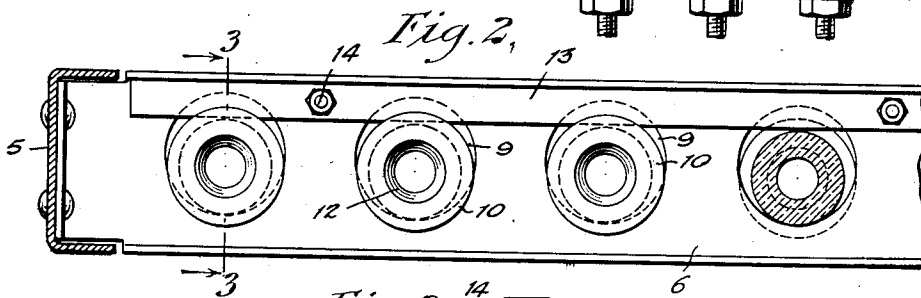
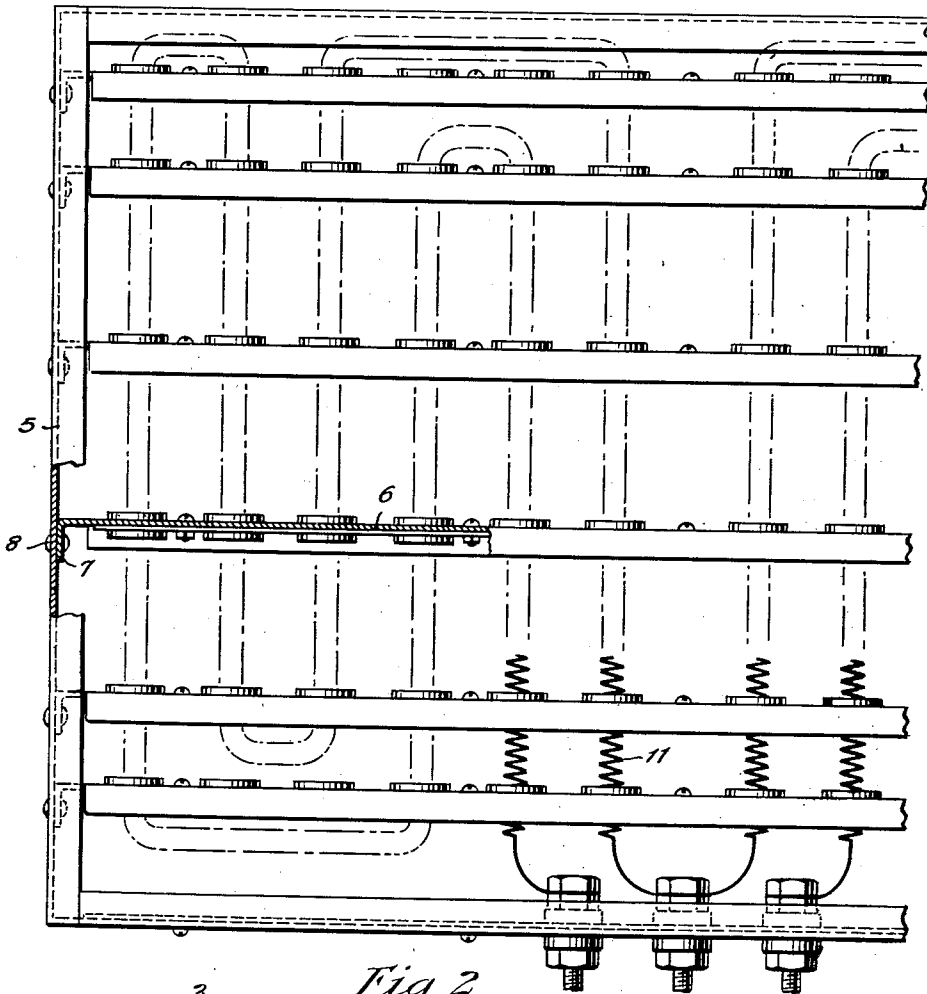
1,493,386

A. S. RICE

ELECTRIC GRID

Filed April 18, 1923

Fig. 1,



WITNESSES

Edw. Thorpe
P. A. Garrison

INVENTOR

Anson S. Rice
BY *Wm. H. Miles*
ATTORNEYS

UNITED STATES PATENT OFFICE.

ANSON S. RICE, OF NEW YORK, N. Y., ASSIGNOR TO DUPARQUET HUOT & MONEUSE CO.,
OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

ELECTRIC GRID.

Application filed April 18, 1923. Serial No. 633,008.

To all whom it may concern:

Be it known that I, ANSON S. RICE, a citizen of the United States, and a resident of the city, county, and State of New York, have invented a new and Improved Electric Grid, of which the following is a full, clear, and exact description.

The present invention relates to new and useful improvements in electrical appliances, and it pertains more particularly to an electric grid.

It is one of the objects of the invention to provide a new and improved means for securing the insulators in a structure of this type.

It is a further object of the invention to construct a device of this character so that the insulators may be readily removed for the purpose of renewal.

It is a still further object of the invention to construct the device in such a manner that the insulators may be removed without necessitating the knocking down of the device.

With the above and other objects in view, reference is had to the accompanying drawings in which—

Figure 1 is a plan view partly broken away and partly in section of a grid constructed in accordance with the present invention;

Fig. 2 is a view partly in elevation and partly in section of one of the cross members of the grid, showing the manner in which the insulators are secured in place;

Fig. 3 is a vertical sectional view taken on the line 3—3 of Fig. 2;

Referring more particularly to the drawings, the grid comprises a frame 5, preferably of rectangular shape, and connecting the side members of the frame 5 are transversely extending bars 6. These bars 6 preferably have their ends formed with right-angular extensions 7, by means of which they are secured to the grid frame by rivets 8. These transversely extending bars 6 are formed preferably of channel iron and are provided with a plurality of spaced openings 9.

Mounted in each of the spaced openings 9, is an insulator 10, and said insulators are adapted to support the resistance or heater wire 11, the insulators forming the means by which the wire 11 is insulated with respect to the frame and the cross members 6.

These insulators are preferably circular in form and have an opening therethrough, said opening being shown at 11'. As will be noted in Fig. 3, this opening is flared from the central point to its ends, as shown at 12, this form of opening providing for unobstructed circulation of the heated air immediately surrounding the resistance or heater wire 11 at this point, thus preventing excessive heating.

It will be noted from the drawings that the openings 9 in which the insulators 10 are mounted are of greater diameter than the diameter of the insulators, and to secure the insulators in position in their respective openings, a bar 13 is employed. These bars 13 are secured to their respective cross-piece 6 by means of bolts, or the like, 14.

It will be noted that each of the insulators is provided with an annular channel adapted to receive at one point the flange of its respective transversely-extending bar 6, and at a point diametrically opposite the point where it receives the flange of the bar 6, said channel receives its bar 13. By this means it is apparent that when the bars 13 are secured in place, the insulators 10 are prevented from accidental displacement within their respective openings 9. When, however, it is desired to renew or remove the insulators, it is only necessary to remove the bar 13 when any of the insulators may be removed from their respective openings, since, as heretofore stated, the openings 9 are of larger diameter than the diameter of the insulators.

Having thus described the invention, what I claim is:

1. An electric grid comprising a frame having cross bars secured thereto, said cross bars having openings therein, insulators mounted in said openings, and a locking bar carried by said cross bars, said locking bar being removably secured to said cross bars.

2. An electric grid comprising a frame, cross bars mounted in the frame, said cross bars having insulator-receiving openings, an insulator mounted in each of said openings, said insulator having an exterior annular channel, and a locking bar removably secured to each of said cross bars and engaging a portion of the annular channel of the insulators to secure the insulators in position.

3. An electric grid comprising a frame,

cross bars mounted in the frame, said cross bars having insulator-receiving openings of a larger diameter than the insulators to be received therein, and means for securing said insulators in said openings.

4. An electric grid comprising a frame, cross bars mounted in the frame, said cross bars having insulator-receiving openings of a larger diameter than the insulators to be received therein, and means for securing said insulators in said openings, said means comprising a removable bar extending longitudinally of each cross bar and obstructing a portion of the insulator-receiving openings.

5. An electric grid comprising a frame, cross bars mounted in the frame, said cross bars having insulator-receiving openings of a larger diameter than the insulators to be received therein, and means for securing said insulators in said openings, said means

comprising a removable bar extending longitudinally of each cross bar and obstructing a portion of the insulator-receiving openings, said bar engaging notches formed in the insulators.

6. In an article of the class set forth, an insulator supporting member, an insulator removably associated therewith, and a locking element associated with said insulator supporting member for securing the insulator thereto.

7. In a device of the character described, a supporting member formed to receive an insulator, an insulator so formed as to be received by said insulator supporting member, and a locking element adapted for engagement with the insulator to retain the same in position relatively to the insulator support.

ANSON S. RICE.