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Bialobrzeski

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[54] **ELECTRICAL GRID**

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[58] **Field of Search** 43/112

[56] **References Cited**

UNITED STATES PATENTS

2,117,767 5/1938 Lindsley 43/112
2,030,310 2/1936 McWilliams et al. 43/112

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[57] **ABSTRACT**

An electrical grid used as an insect electrocutor wherein two identical grid assemblies are mounted in essentially parallel, interdigitated relationship in two identical spaced apart insulating members.

3 Claims, 3 Drawing Figures

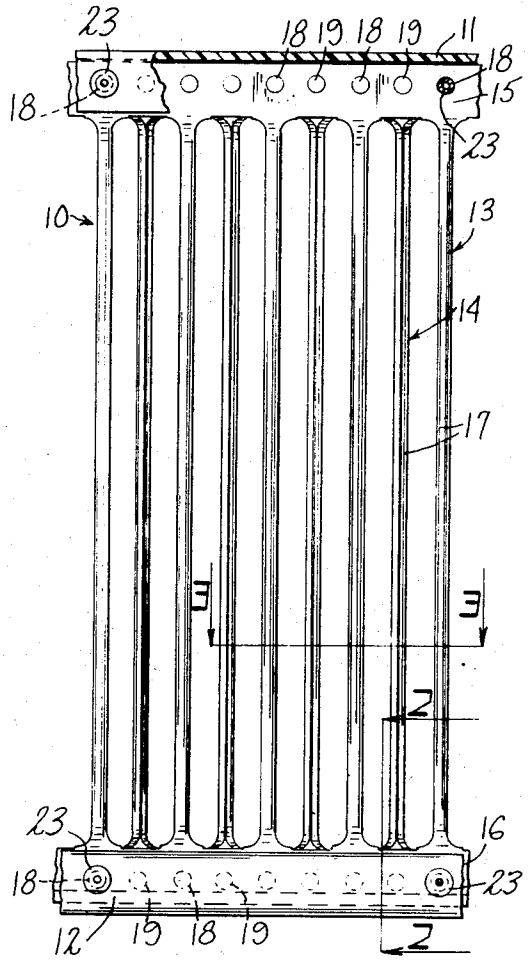


Fig. 1.

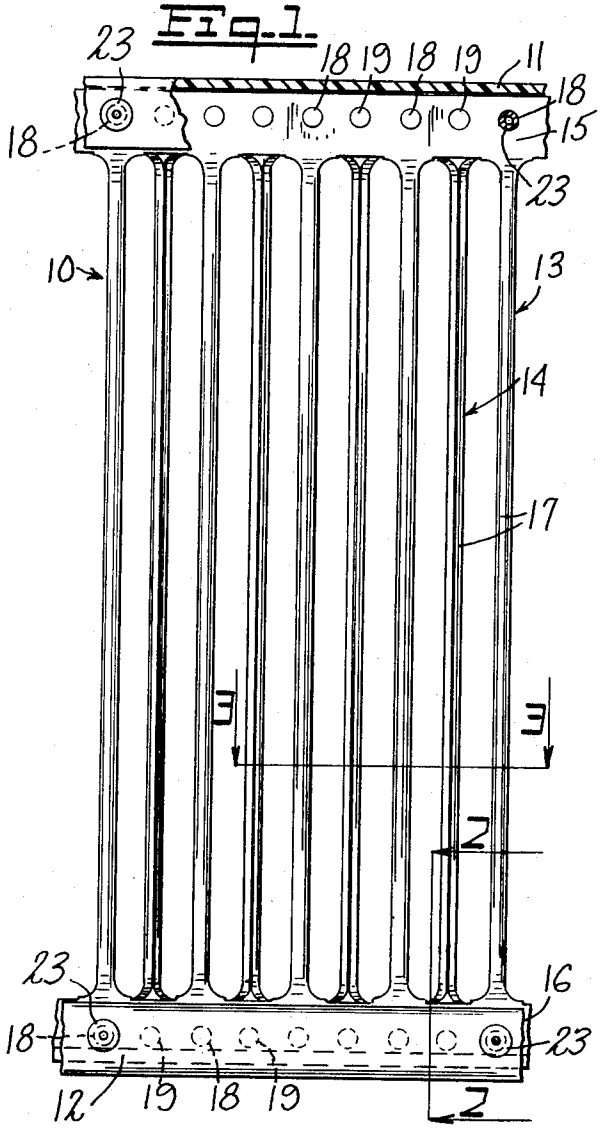


Fig. 2.

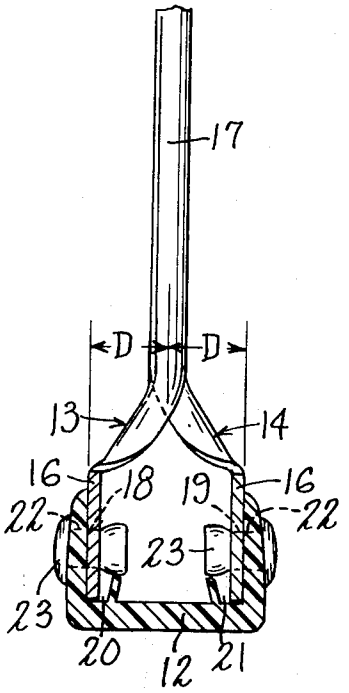
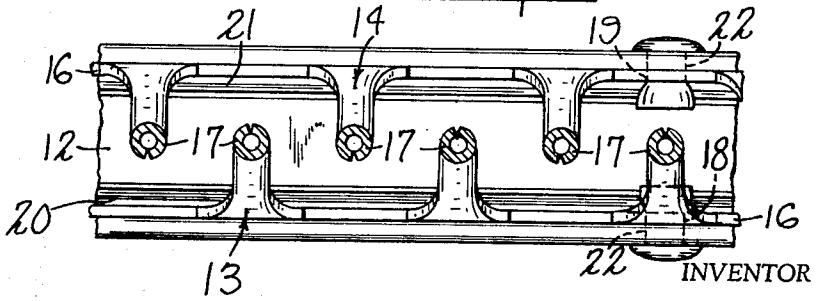


Fig. 3.



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ELECTRICAL GRID

This invention relates to electrical grids for electrocuting insects.

The present invention is directed to a new, improved and more economical construction of electrical grids for electrocuting insects which utilizes a minimum of parts and is easily fabricated from only two different parts.

An object of this invention is to provide a new, improved an more economical construction for insect electrocuting grids.

Another object of this invention is to provide a grid of the type described which utilizes only a small number of different parts and which may be readily assembled.

Briefly stated, the invention in one form thereof comprises two opposed insulators having tracks for receiving grid assemblies on either side thereof. The grid assemblies are identically made with conductors extending between spaced apart buses and integral therewith. The buses are provided with fastener-receiving apertures at each conductor and also such apertures between each pair of conductors. The conductors are also offset from the buses a predetermined distance so that when the grid assemblies are mounted in the insulators the conductors of each grid assembly are in essentially the same plane and are interdigitated with each other. The apertures for receiving fasteners are then aligned and the device may be readily assembled.

The features of the invention which are believed to be novel are particularly pointed out and distinctly claimed in the concluding portion of this specification. The invention, however, both as to its organization and operation, together with further objects and advantages thereof may best be appreciated by reference to the following detailed description taken in conjunction with the drawings, wherein:

FIG. 1 is an elevation of a length of grid embodying the invention with a portion of one insulator cut away;

FIG. 2 is a view seen in the plane of lines 2—2 of FIG. 1; and

FIG. 3 is a view seen in the plane of lines 3—3 of FIG. 1.

As shown, a grid assembly **10** embodying the invention comprises identical upper and lower insulating channels **11** and **12**, and formed grid assemblies **13** and **14**. Each of the grid assemblies comprises upper and lower bus or common electrical supply members **15** and **16** which are formed to the same dimensions and a plurality of conductors **17** extending therebetween. Preferably, but not essentially, the conductors **17** are integral with the buses **15** and **16**.

In practice, one continuous strip of the grid may be formed from flat conductive stock such as aluminum in a progressive die which will, through a stamping operation, define the conductors and then progressively form the conductors **17** into a generally tubular configuration. As shown, the conductors **17** are formed in a plane offset from the plane of the buses **15** and **16** by a predetermined dimension shown as D. The grid assemblies are further formed with apertures in the buses which occur in line with each conductor as indicated at **18** and in FIG. **2**. Defined between each conductor intermediate the apertures **18** is another aperture **19** which is equally spaced between the conductors **17** and apertures **18**.

In assembly, a strip of a grid assembly may be cut in half to provide the two assemblies **13** and **14**. Then, the one section is turned over to face the other section and placed in parallel relation thereto and both are inserted into the spaced apart channels **20** and **21** of one of the insulating members **12**. Next, the other insulating member **11** is positioned on top of the two buses **15** to receive the buses **15** in similar channels **20** and **21**. The grid assemblies **13** and **14** are positioned with respect to each other so that the conductors **17** of one are interdigitated with respect to the conductors **17** of the other and the conductors being offset from the buses by the dimension D will reside generally in the same plane as illustrated in FIG. **3**.

The insulating members have defined in the side walls thereof apertures **22** which are spaced apart a multiple of the dimension between the apertures **18**. Therefore, when one aperture **18** is spaced to match one of the apertures **22** all of the apertures **22** will be aligned with an aperture **18**. The apertures **22** on the other side of the insulator are also in alignment with the apertures **19** when the other grid assembly is positioned intermediate the conductors of the first grid assembly.

Grid assemblies may then be fastened into one self-supporting structure by placing a fastener **23** through the apertures **22**. Preferably a rivet is inserted from one side of the channel and expanded on the other side to thus provide a simplified self-supporting electrical grid assembly. Connection to a source of potential may then be made by applying an appropriate terminal connector (not shown) to each grid assembly at a bus thereof.

It may thus be seen that the objects of the invention set forth as well as those made apparent from the foregoing description are efficiently attained. While preferred embodiments of the invention have been set forth for purposes of disclosure, modification to the disclosed embodiments of the invention as well as other embodiments thereof may occur to those skilled in the art. Accordingly, the appended claims are intended to cover all embodiments of the invention and modifications to the disclosed embodiments which do not depart from the spirit and scope of the invention.

What is claimed is:

1. An electrical grid assembly comprising first and second grid members, each of said grid members comprising parallel bus portions residing in the same plane and a plurality of uniformly spaced conductors extending therebetween, said conductors being offset from the plane of said bus portions, apertures defined in each bus portion in line with each conductor and intermediate each conductor in equally spaced relation, a pair of insulating members having facing spaced apart continuous walls with apertures therein spaced a multiple of the dimension between said in line apertures in said bus portions, each of said insulators receiving a bus portion of each grid member against one of said facing walls in such position that the apertures in one wall align with said in line apertures and the sidewall apertures in the other wall align with the intermediate apertures, and fastening means extending through the aligned apertures of each bus portion and its adjacent wall to secure each of said grid members to each of said insulators.

2. The grid assembly of claim **1** wherein said insulators are generally U-shape in cross-section and include means upstanding from the bottom thereof between said walls to define with said walls channels for said bus portions adjacent either wall.

3. The grid assembly of claim **1** wherein said conductors of said first and second grid assemblies reside in essentially the same plane.

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