

F. A. FELDKAMP.
SHADOWER OR INSULATOR.
APPLICATION FILED APR. 1, 1911.

1,011,179.

Patented Dec. 12, 1911

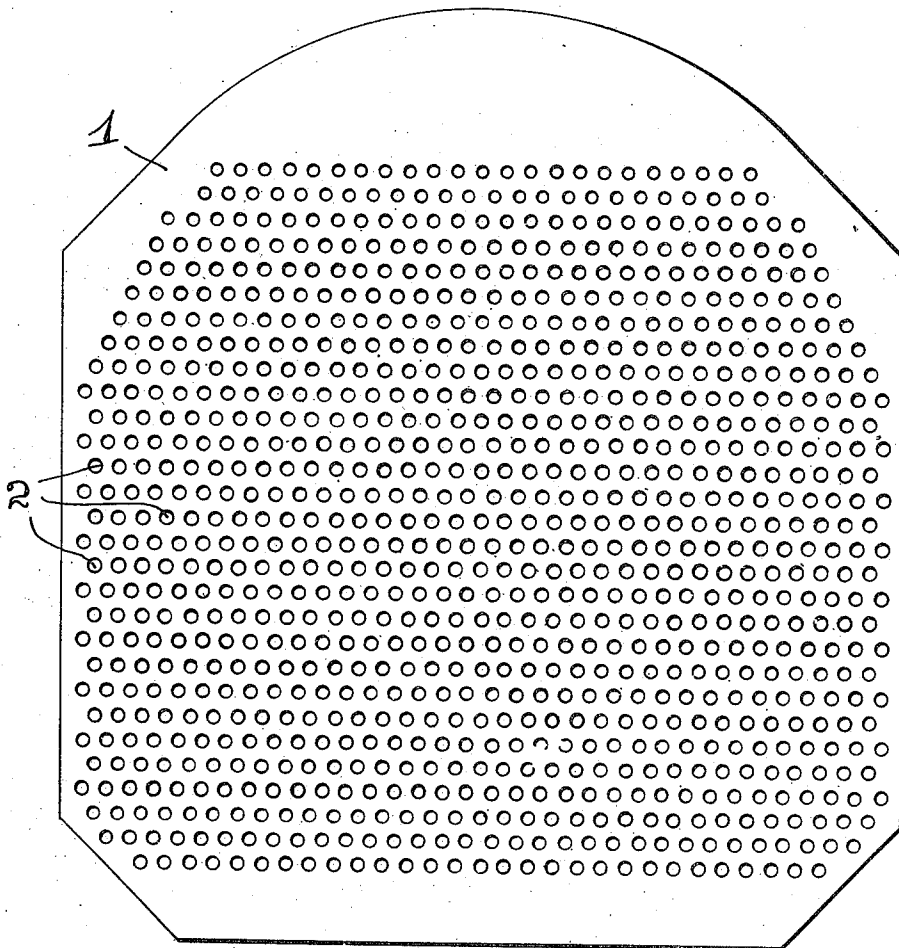
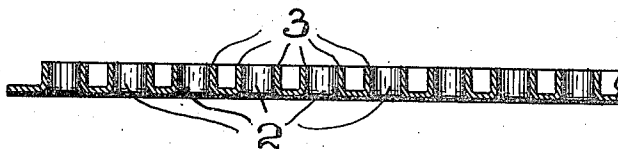


Fig. 1



WITNESSES:

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Fig. 2

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UNITED STATES PATENT OFFICE.

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SHADOWER OR INSULATOR.

1,011,179.

Specification of Letters Patent.

Patented Dec. 12, 1911.

Application filed April 1, 1911. Serial No. 618,357.

To all whom it may concern:

Be it known that I, FREDERICK A. FELDKAMP, a citizen of the United States, residing at Vailsburg, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Shadowers or Insulators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to characters of reference marked thereon, which form a part of this specification.

This invention has reference, generally, to insulating sheets or plates made of a non-metallic material, and preferably of a plastic material, such as celluloid, vulcanite, hard rubber, or the like, with a view of providing a shadower or insulator which is especially adapted for use in electroplating baths and which is not attacked by the action of the electrolyte.

The present invention has for its principal object to provide a shadower or insulator of the general character hereinafter more particularly set forth; and, more especially, a shadower or insulator in the form of a sheet or plate of a plastic material, the sheet or plate being provided with a multiplicity of holes, preferably of small size and closely located, although the sizes of the holes, as well as their number and their closely located positions may be departed from, each hole being bounded by a marginal shoulder or flange, preferably forced out of and forming an integral part of the sheet or plate of material of which the shadower or insulator is made.

Other objects of this invention not at this time more particularly enumerated will be clearly understood from the following detailed description of the present invention.

With the various objects of the present invention in view, the said invention consists, primarily, in the novel shadower or insulator hereinafter set forth; and, the invention consists, furthermore, in the novel arrangements and combinations of the parts comprising the shadower or insulator, as well as in the details of the construction of the same, all of which will be more fully described in the following specification, and then finally embodied in the clauses of the

claims which are appended to and which form an essential part of this specification.

The invention is clearly illustrated in the accompanying drawings, in which:—

Figure 1 is a front face view of a shadower or insulator made according to and embodying the principles of the present invention; and Fig. 2 is a transverse vertical section of a portion of the shadower or insulator, said section, however, being made on an enlarged scale.

Similar characters of reference are employed in the said above described views, to indicate corresponding parts.

Referring now to the said figures of the drawings, the reference-character 1 indicates a complete shadower or insulator, showing one embodiment of the principles of the present invention, the said shadower or insulator being made in the form of a sheet or plate of a thin plastic material, such as celluloid, vulcanite, hard-rubber, or the like, which is a non-conductor of electricity, such sheet or plate being of any size and any desired marginal configuration.

In Fig. 1 of the accompanying drawings, the said sheet or plate is made of the general shape of the front view or cross-section of an automobile radiator, the shadower or insulator in the form represented in said Fig. 1, being adapted for use more particularly in the production of radiator-sections made in an electro-plating bath by the process of electro-deposition. As shown, the said sheet or plate 1 is provided with a multiplicity of holes or openings, as 2, which are preferably very small, are very closely located, and may be of any suitable marginal configuration. Surrounding the said holes or openings 2, upon the one side or surface of the said sheet or plate 1 are marginal shoulders or flanges, as 3, which are preferably forced out of and form integral parts of the plastic material of which the sheet or plate 1 is made. The purpose of these holes or openings 2 and shoulders 3 is to provide a large number of ducts or passageways into and through which the electric current passes and tends to concentrate the electrolytic action upon points which are located directly back of or which are centrally located within said holes, so that the metallic deposition or plating is strongest at these points and continues with decreasing force in outward directions toward the marginal edges of the

said holes or openings. While it has been stated that the said holes or openings 2 may be very closely placed and may be of such small size that the sheet or plate 1 may be provided with an exceedingly large number of such holes or openings, still it must be understood that these holes or openings may be differently spaced and made much larger than the holes or openings shown in the accompanying drawings; or, if desired, these holes or openings may be made even smaller than those represented in said drawings.

In practice, when the shadower or insulator is used in an electro-plating bath for the production of electrolytically deposited radiator-sections for the radiators of automobiles, and the like, the said holes or openings are usually one-eighth of an inch scant in diameter, and the shoulders or flanges 3 are usually one-sixteenth of an inch in depth; but, if desired, the various dimensions, as has been stated, may be departed from and may be larger or smaller according to varying conditions.

I claim:

1. A shadower or insulator, in the form of a sheet or plate, said sheet or plate being provided with a multiplicity of holes, and each hole being surrounded by a marginal shoulder.

2. A shadower or insulator in the form of a sheet or plate, said sheet or plate being provided with a multiplicity of holes, and each hole being surrounded by a marginal shoulder, each shoulder being forced out of the material of which the said sheet or plate

is made and forming an integral part thereof.

3. A shadower or insulator in the form of a sheet or plate, the marginal configuration of said sheet or plate conforming to the general marginal configuration of the radiator-section of an automobile-radiator, said sheet or plate being provided with a multiplicity of holes, substantially as and for the purposes set forth.

4. A shadower or insulator in the form of a sheet or plate, the marginal configuration of said sheet or plate conforming to the general marginal configuration of the radiator-section of an automobile-radiator, said sheet or plate being provided with a multiplicity of holes, and each hole being surrounded by a marginal shoulder.

5. A shadower or insulator in the form of a sheet or plate, the marginal configuration of said sheet or plate conforming to the general marginal configuration of the radiator-section of an automobile-radiator, said sheet or plate being provided with a multiplicity of holes, and each hole being surrounded by a marginal shoulder, each shoulder being forced out of the material of which the said sheet or plate is made and forming an integral part thereof.

In testimony, that I claim the invention set forth above I have hereunto set my hand this 23rd day of March, 1911.

FREDERICK A. FELDKAMP.

Witnesses:

FREDK C. FRAENTZEL,

FREDK. H. W. FRAENTZEL.