

(No Model.)

E. MOREAU.
INCANDESCENT GAS BURNER.

No. 387,099.

Patented July 31, 1888

Fig. 1.

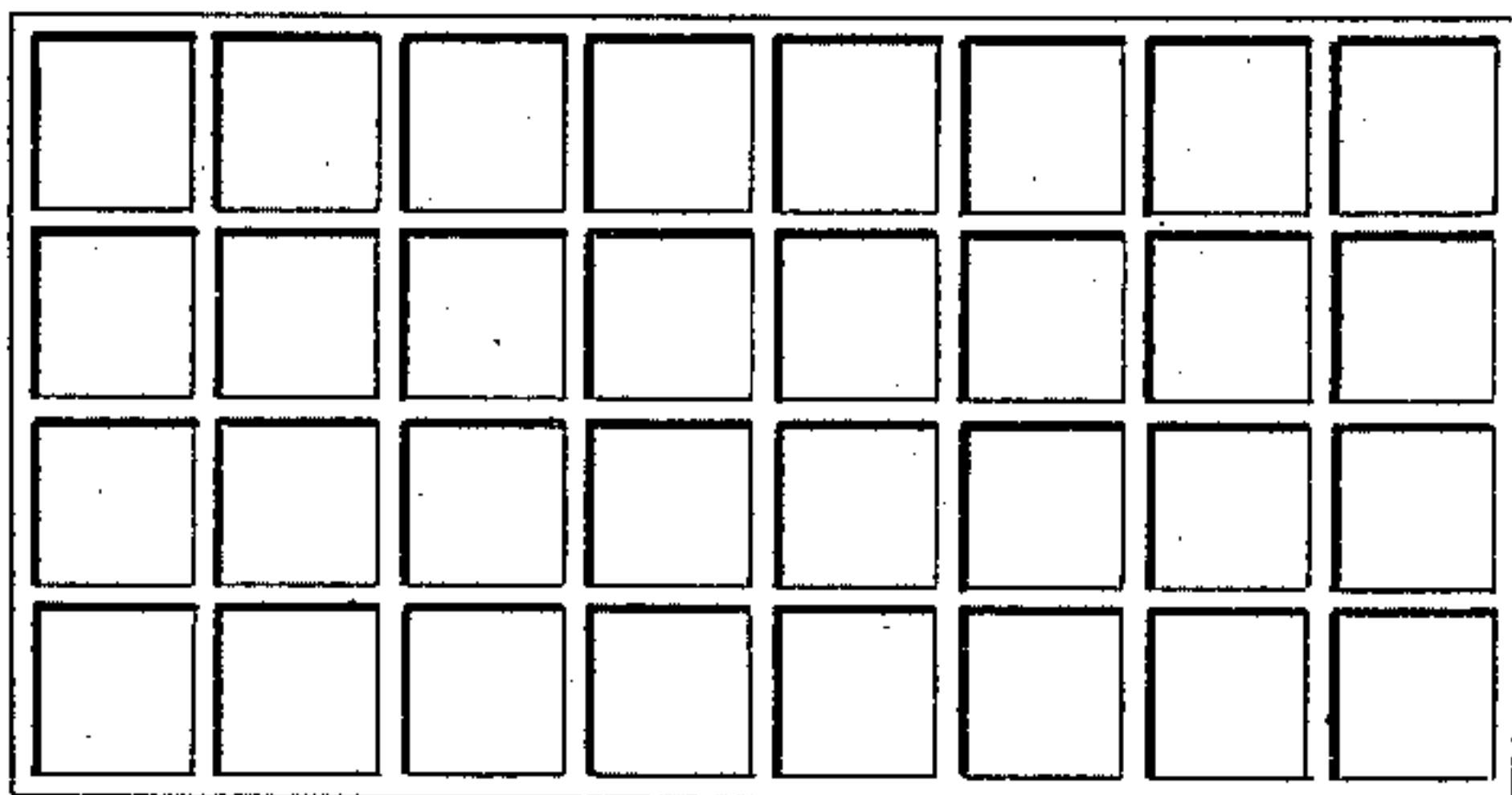


Fig. 2.

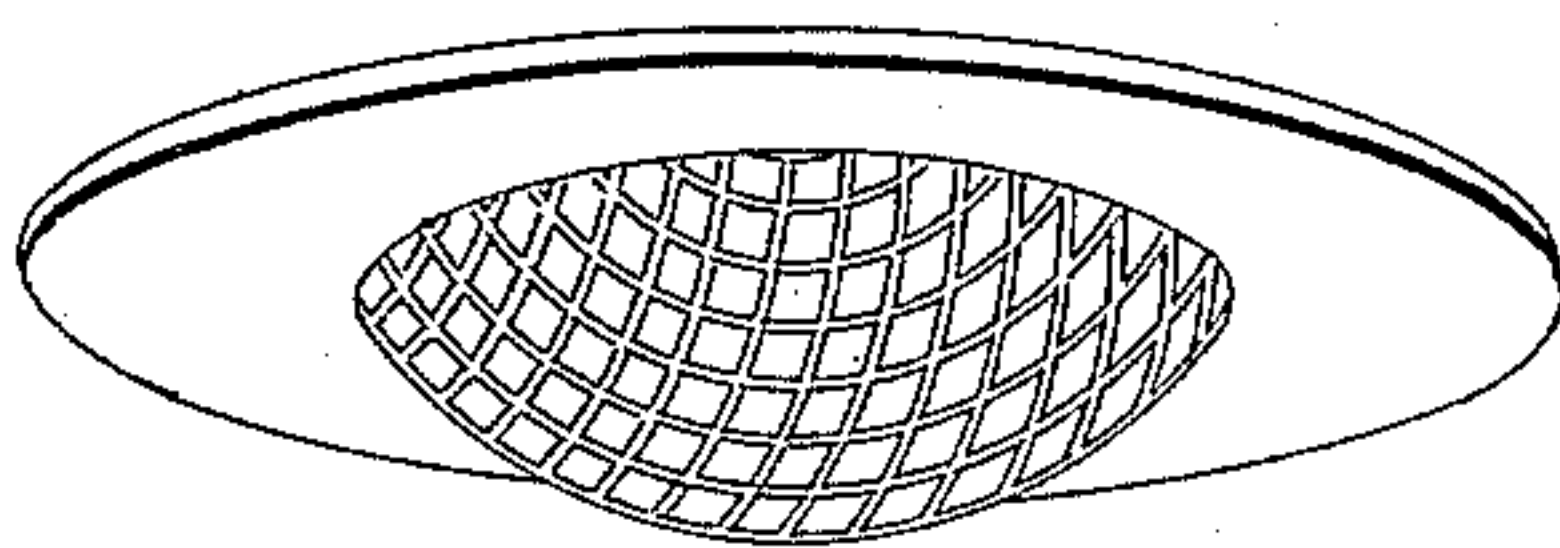
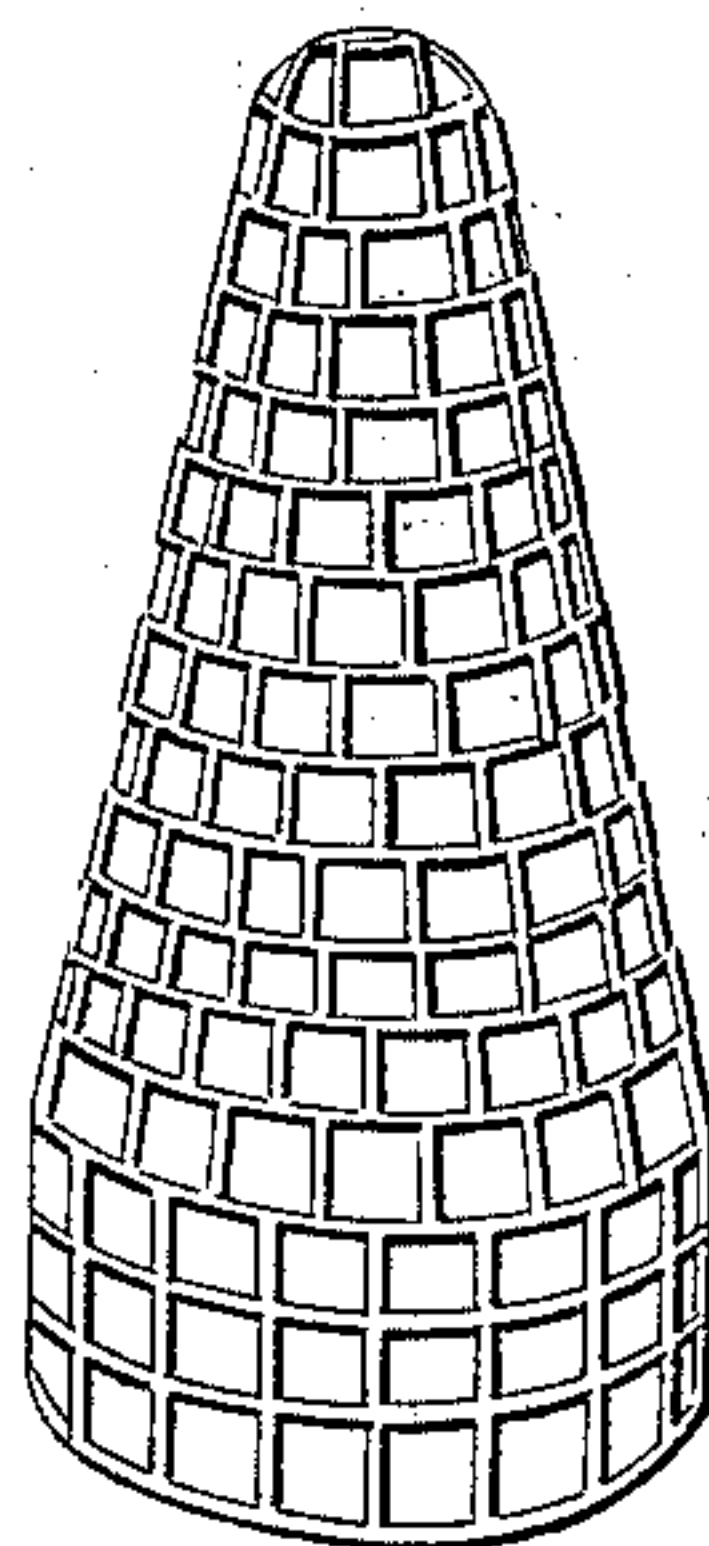


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

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INCANDESCENT GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 387,099, dated July 31, 1888.

Application filed February 20, 1888. Serial No. 264,567. (No model.)

To all whom it may concern:

Be it known that I, EUGÈNE MOREAU, a citizen of the Republic of France, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Incandescent Gas-Burners; 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.

This invention relates to incandescents.

The object is to produce an incandescent which shall be of great effectiveness and durability in use.

With this object in view the invention consists in an incandescent in the form of a diaphragm hood, cone, or object of other desirable shape, made of metal or other suitable hard substance, punched in such manner that practically uniform portions of the remaining web will be left between the perforations, the entire incandescent being then in a single piece.

In the accompanying drawings, forming part of this specification, I have shown three forms of product serving to illustrate my invention.

Figure 1 is a view of a flat piece of metal embodying my invention. Fig. 2 is a view of a piece of metal in the form of a hood or segment, also embodying my invention; and Fig. 3 is a view of a piece of metal in the form of a cone, also embodying my invention, this cone particularly being shown in a single piece.

In the employment of incandescents great difficulty has been experienced from their rapid destruction under subjection to heat. While it is desirable to have incandescents last for several hundred hours, in many instances, as at present constructed, they will last but a short time, some breaking down in a few hours. The usual construction of these incandescents is of platinum wire woven into a metallic net or gauze, or an intended equivalent thereof has been made by simply perforating a sheet of metal, and providing it with numerous holes; but where a reticulated metal fabric has been made by weaving wire the strands are not fastened, and, owing to the uneven thickness of such fabric, (it being, of course, thicker where the wires cross or are doubled than where they are single,) it is al-

ways unevenly heated in use, the difference in temperature between the parts setting up motion, which strains the structure and, causing the wires to move one upon the other, soon destroys it for actual use, while, when the metal has been perforated to take the place of woven fabric, as the perforations have been circular, or without definite arrangement, the product has failed to be of uniform construction—that is, of uniform web—and again, uneven heat of the incandescent has caused its destruction, or has made it fail in requisite luminosity.

The rapid destruction of the woven-wire incandescent has been sought to be overcome by providing the same with strengthening-ribs; but, owing to this additional violation of the laws of expansion and contraction, the provision of the ribs has only increased the rapidity of destruction.

I have found that the difficulty may be obviated and an incandescent be caused to last in use and with greatly increased luminous effect very much beyond the present duration by making the web left between the openings of practically uniform size. To do this, I take a sheet of suitable metal—such as platinum or other substance, suitable for an incandescent—and punch the same in such manner as to leave a web of uniform connected filaments in integral structure. The web is thus produced by punching in a particular manner in contradistinction to weaving and in contradistinction to mere perforation, and the result is an incandescent, of metal or of other substance, suitable for an incandescent made integral—that is, of a single piece or solid body with a connected web of practically uniform portions between the perforations—whereby all the portions will be heated alike and there will be no strain between them.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

An incandescent mantle formed of a single piece of sheet metal, perforated to present a practically uniform web, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

EUGÈNE MOREAU.

Witnesses:

R. G. DYRENFORTH,
W. W. MORTIMER.