No. 673,277. Patented Apr. 30, 1901.

J. E. DE MARCAY.

INCANDESCENT ELECTRIC LAMP.

(Application filed Nov. 8, 1898.)

(No Model.) 3 Sheets—Sheet 1.

Fig. 4.

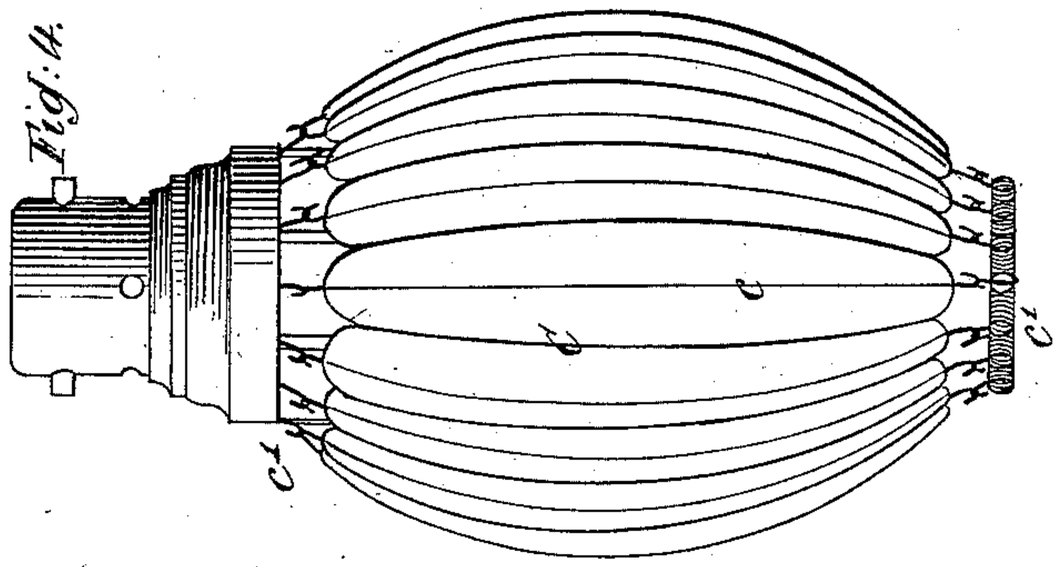


Fig. 5.

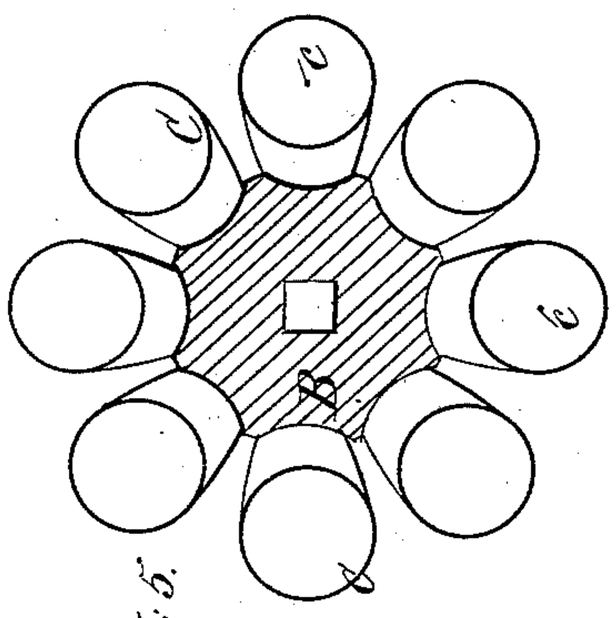


Fig. 3.

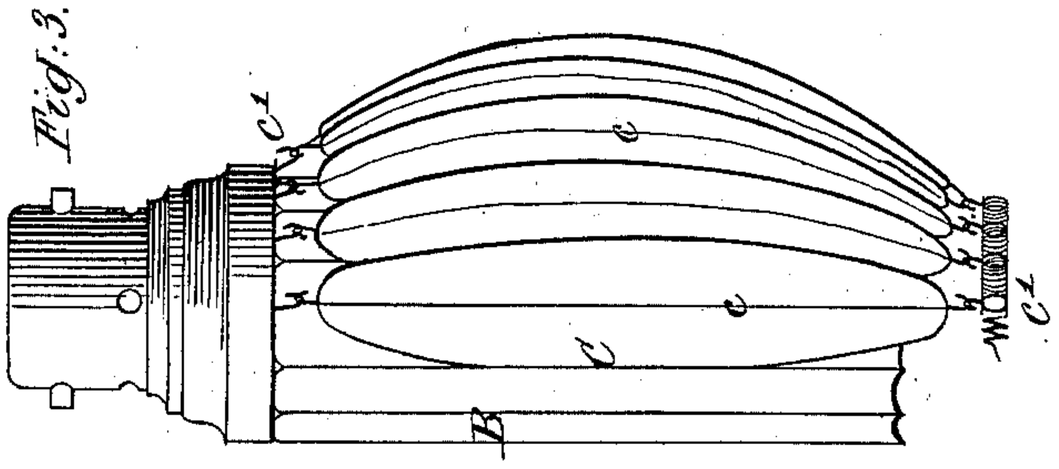


Fig. 2.

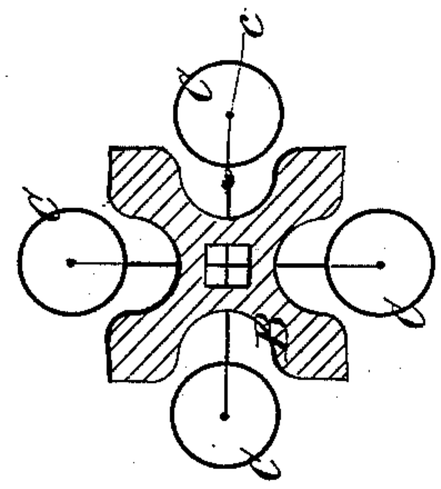
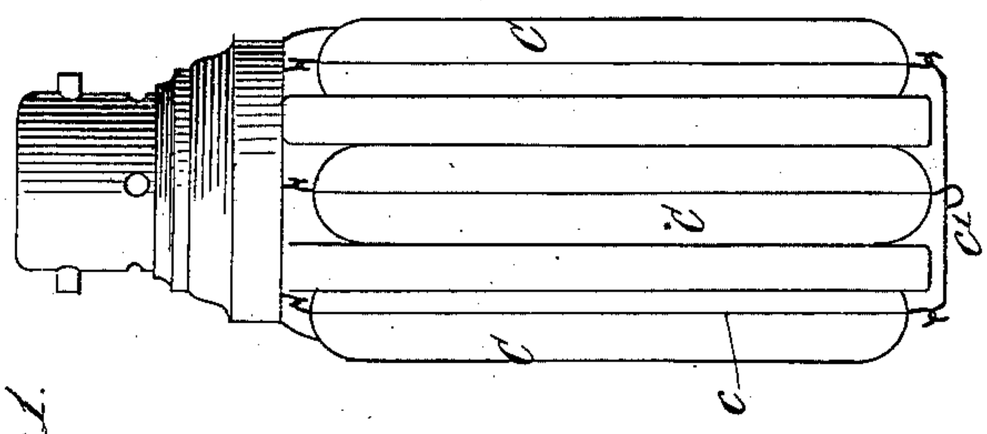


Fig. 1.



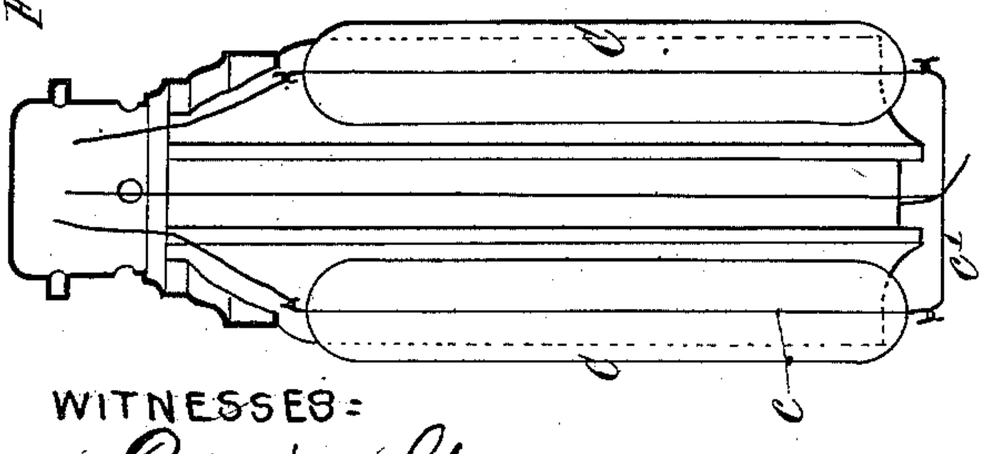


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Fig: 6.

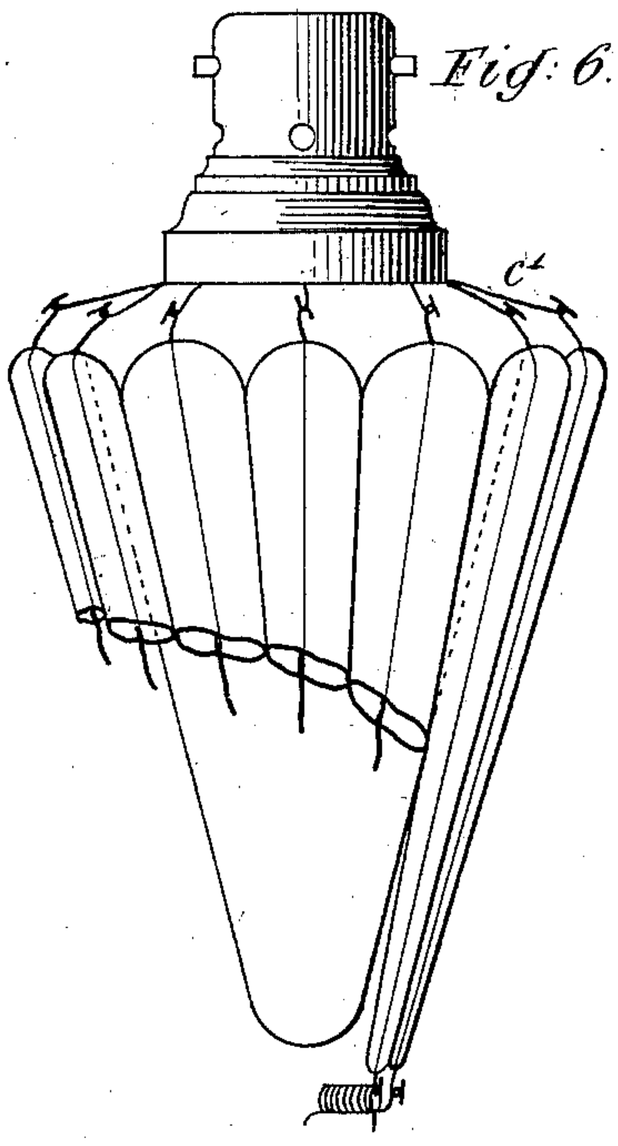


Fig: 7.

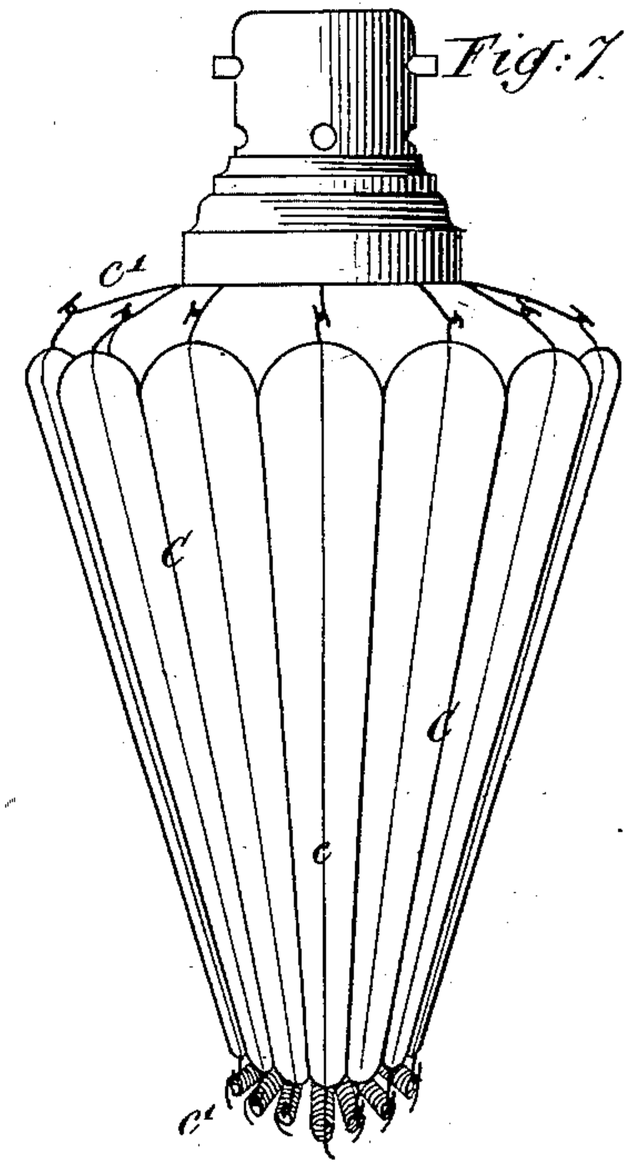


Fig: 8.

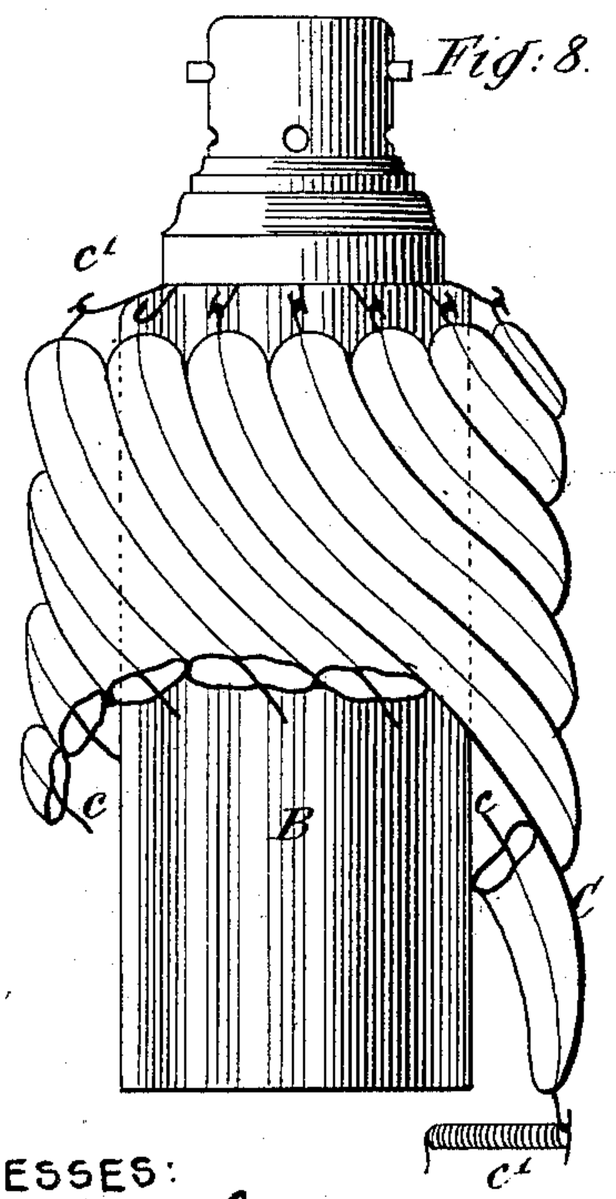
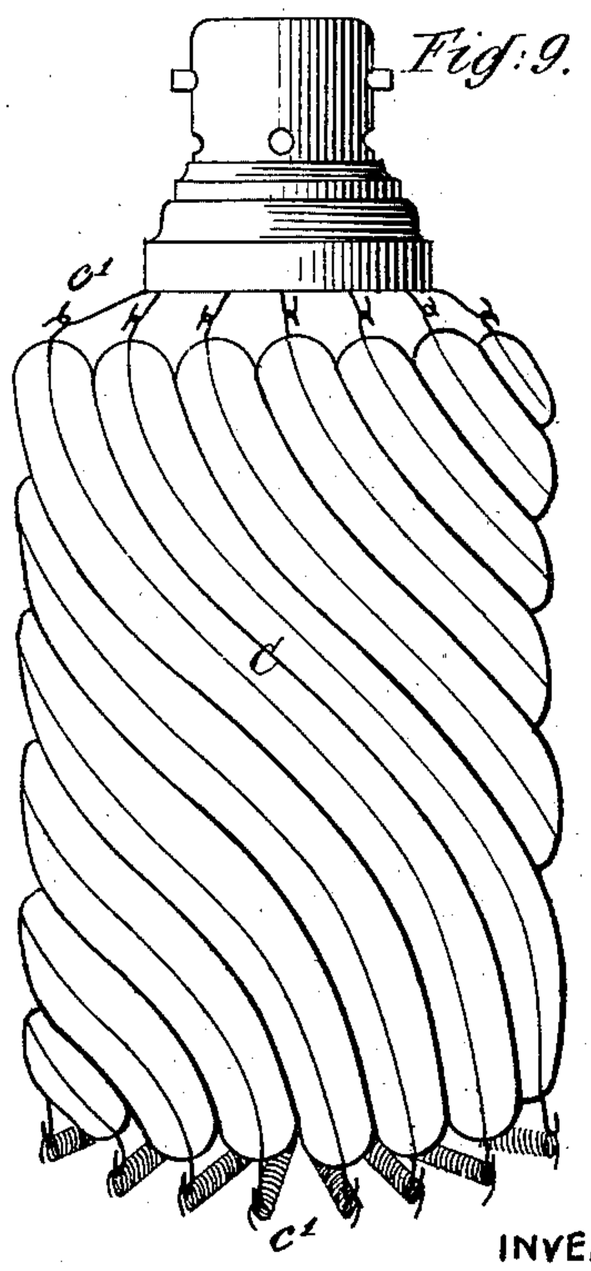


Fig: 9.



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No. 673,277. Patented Apr. 30, 1901.

J. E. DE MARÇAY.

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Fig. 10.

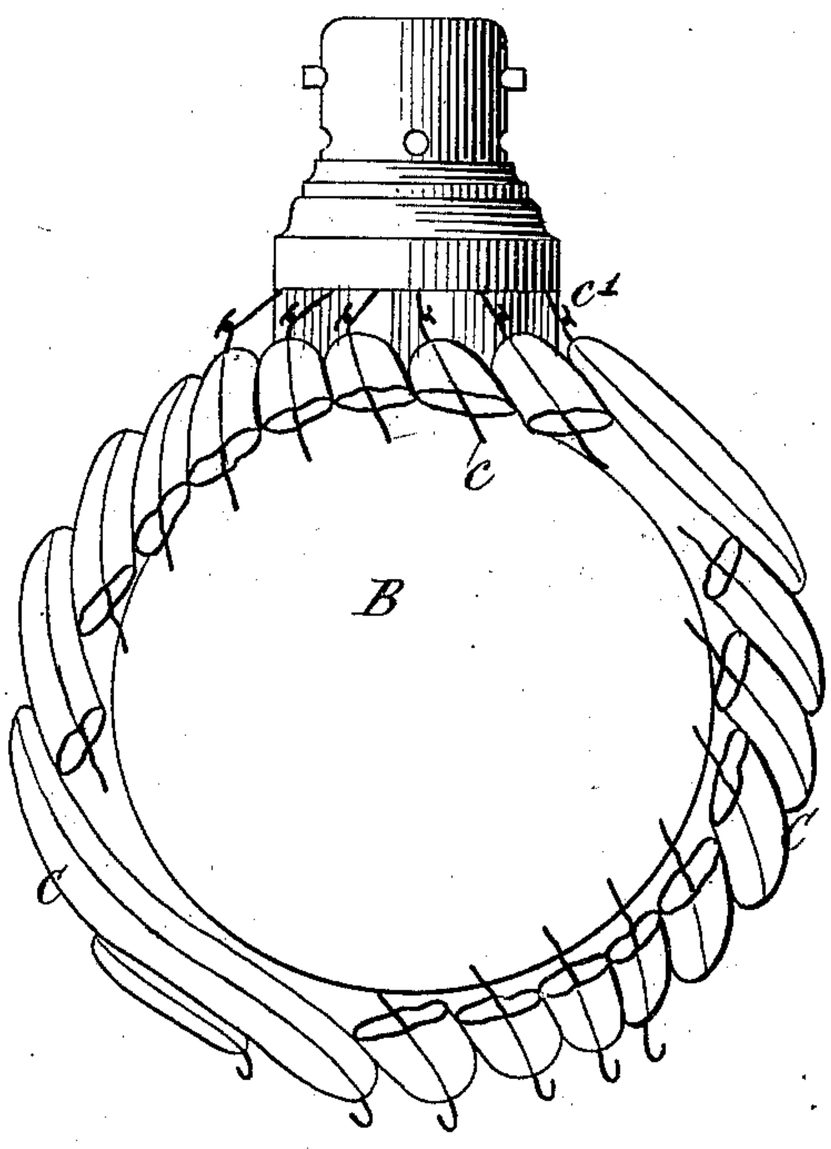


Fig. 12.

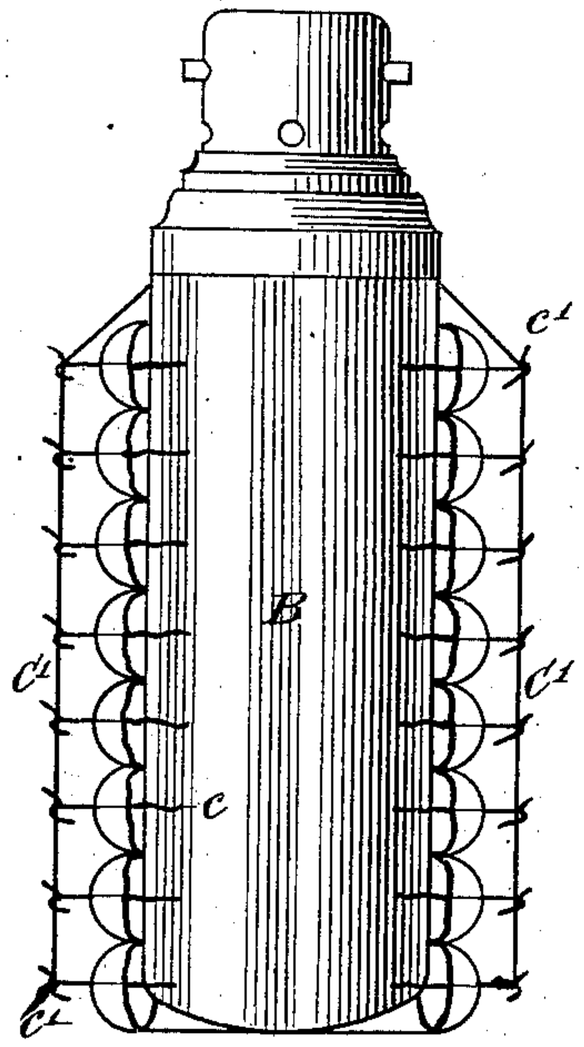


Fig. 11.

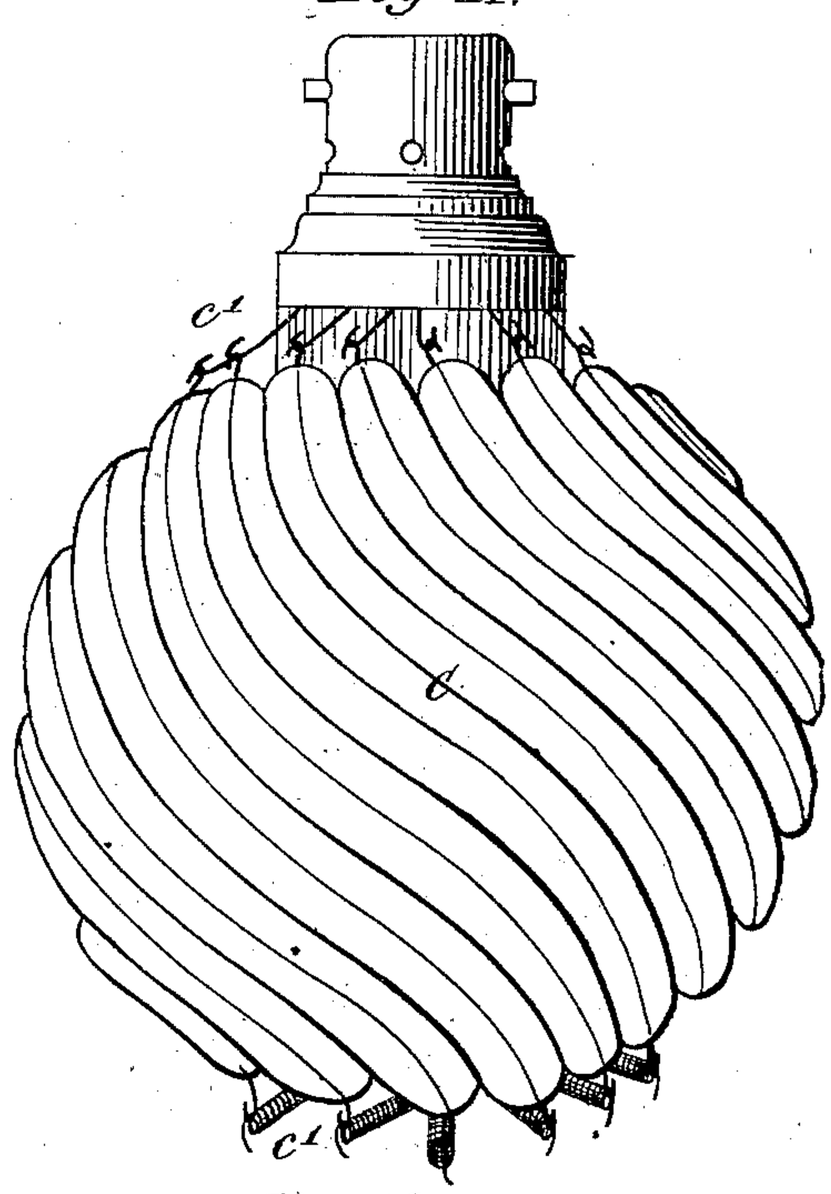
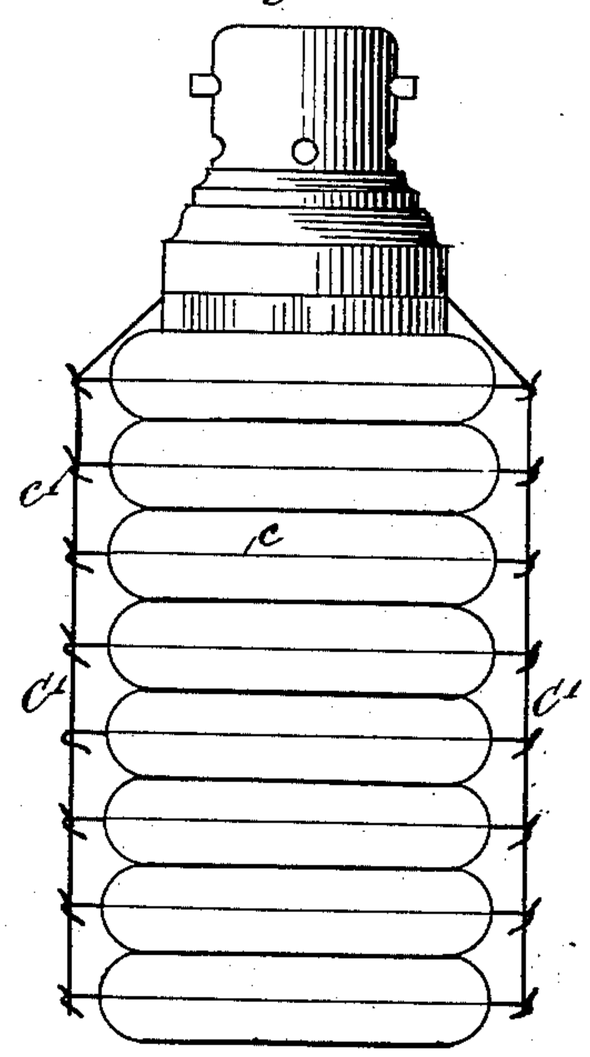


Fig. 13.



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UNITED STATES PATENT OFFICE.

JULES EDGARD DE MARÇAY, OF PARIS, FRANCE.

INCANDESCENT ELECTRIC LAMP.

SPECIFICATION forming part of Letters Patent No. 673,277, dated April 30, 1901.

Application filed November 8, 1898. Serial No. 695,836. (No model.)

To all whom it may concern:

Be it known that I, JULES EDGARD DE MARÇAY, a citizen of the Republic of France, and a resident of Paris, France, have invented certain Improvements in Incandescent Electric Lamps, of which the following is a description.

This invention relates to a novel incandescent electric lamp. This novel lamp instead of comprising only a single globe or bulb, as is the case with those hitherto employed, is characterized by a certain number of elements or bulbs of different forms, each of which is provided with its own filament, which elements are connected either in parallel, in series, or in a combination of the two methods, according to circumstances, and are grouped around a reflecting-body formed from any suitable substance and of any desired form, said bulbs and reflecting-body forming a detachable individual lamp adapted to be placed in and removed from a socket in substantially the same manner as are those incandescent lamps now in general use. Briefly, instead of arranging in a single bulb one filament or, as is sometimes done, several filaments I distribute the said filament among a certain number of independent and interchangeable elements.

By means of my invention I am able to obtain with the same volume as the bulb ordinarily employed a considerable illuminating power owing to this combination of multiple elements, each of which emits the light proper to it, such elements being readily replaceable in case of breakage, (and this at a very small cost,) and owing also to the reflecting-body around which the elements or tubes are grouped. In addition to this when the elements constituting these lamps are arranged in series this invention enables them to be inserted in circuits having high voltages, which forms an appreciable advantage.

A further and essential advantage consists in the fact that these lamps by reason of their centrally-arranged reflector (more especially when this latter is white) give with filaments of predetermined illuminating power a much greater luminous intensity than that supplied by ordinary lamps, and consequently effect an important economy when required to emit the same amount of light only.

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

Figure 1 represents, in side elevation and partly sectional, one form of my invention; Fig. 2, a transverse section thereof. Figs. 3 and 4 are side elevations and modifications; Fig. 5, a transverse sectional view thereof; and Figs. 6 and 7, 8 and 9, 10 and 11, and 12 and 13, other modifications hereinafter referred to.

In the type represented in Fig. 1 the lamp-base A, which is of a construction adapted to be fitted to an ordinary incandescent-lamp socket, is fixed to a reflector B, the cruciform section of which, Fig. 2, is provided with four recesses. Within these latter are arranged four lamp elements C, each of which is constituted by a rectilinear tubular bulb provided with a filament *c*. These elements are maintained and connected one with the other by connecting wires and hooks *c'*, grouping them in the desired manner. In the type in question they are arranged in pairs in series, the two groups being in parallel; but the method of mounting is of course capable of modification, and the four elements might be arranged either in series or in parallel, for example. This forms one of the advantages of my invention, which enables lamps having very different voltages to be constituted with a single model of elementary bulb.

The type represented in Figs. 3, 4, and 5 comprises a reflector B, which is a rigid extension from the base A, having the form of an octagonal prism, the faces of which are slightly concave. Around this prism are arranged elemental bulbs C of a curved form, as shown in the drawings. The reflecting-prism being thus surrounded by bulbs, as above described, the whole presents an ovoid form. The lamp elements are maintained at their two extremities by hooks *c'* suitably placed, which serve to effect the connections.

In the type illustrated in Figs. 6 and 7 the reflector is conical and is surrounded by rectilinear and slightly-conical elements.

In the form represented in Figs. 8 and 9 the cylindrical reflector is surrounded by tubular

elements, each of which has the shape of a fraction of a spiral, thereby imparting to the whole the peculiar aspect of a luminous twisted fringe.

The lamp illustrated in Figs. 10 and 11 is analogous to that just described; but in this case the reflector is of spherical or ovoid form.

Figs. 12 and 13 represent a type of lamp in which the elements are of tubular form and surround a cylinder which constitutes the reflector. In the arrangement illustrated these elements are mounted in parallel upon the two lateral wires C′, which serve to maintain them.

There is no necessity to give a more detailed description of these arrangements, which will be readily understood by simple inspection of the drawings. My invention is obviously applicable to a great number of combinations, some of the principal types of which have alone been illustrated.

The elements are capable of furnishing a large number of modifications. They may be straight, curved, annular, cylindrical, conical, &c.

In the same way the central reflector may be formed of any substance producing an effect of reflection. It may be cylindrical, spherical, ovoid, prismatic, star-shaped, or the like.

What I claim is—

1. As a new article of manufacture, an individual detachable incandescent electric lamp comprising a base and having a rigid extension, said base being adapted to be fitted to a socket and a number of tubes arranged around said extension and containing filaments connected to said base, substantially as described.

2. As a new article of manufacture, an individual detachable incandescent electric lamp comprising a base adapted to be fitted to a socket, a central reflecting-piece carried by said base, and a number of tubes containing filaments arranged about said reflecting-piece, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JULES EDGARD DE MARÇAY.

Witnesses:

I. ALLISON BOWEN,

GUSTAVE DUMONT.