P. G. TRIQUET.

IMPLEMENT FOR MANIPULATING AND MOUNTING FILAMENTS OF ELECTRIC INCANDESCENT LAMPS.

APPLICATION FILED JUNE 17, 1908.

989,735. Patented Apr. 18, 1911.

Fig. 1.

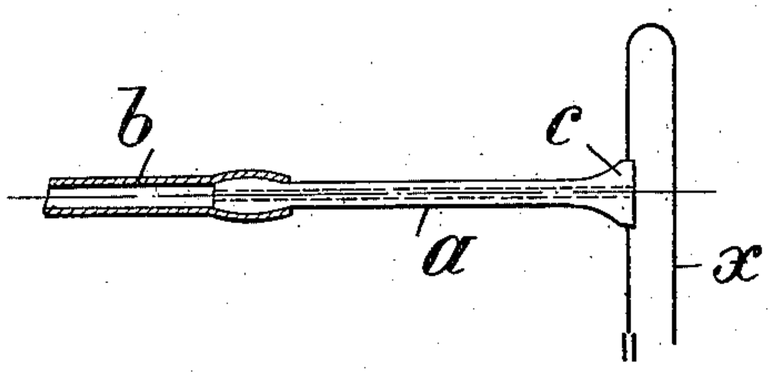


Fig. 2.

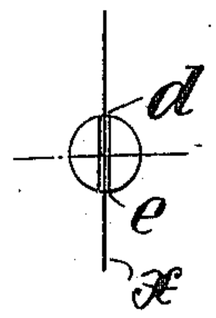


Fig. 3.

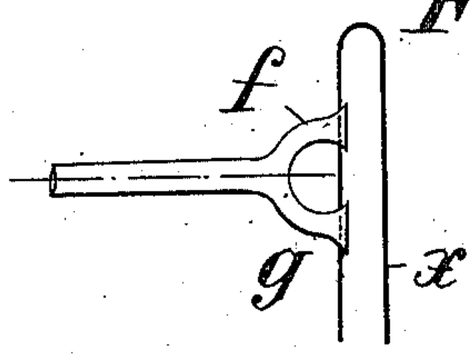


Fig. 4.

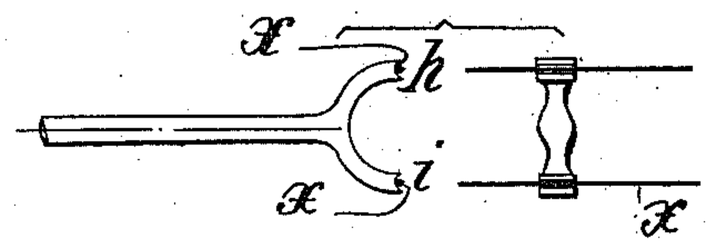


Fig. 5.

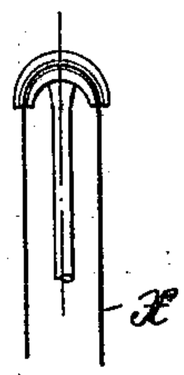
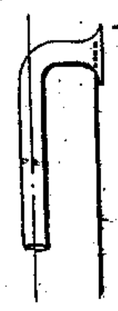


Fig. 6.



Witnesses:
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UNITED STATES PATENT OFFICE.

PAUL GABRIEL TRIQUET, OF PARIS, FRANCE, ASSIGNOR TO SOCIETE ANONYME DES PERFECTIONNEMENTS AUX LAMPES ELECTRIQUES À FILAMENTS METALLIQUES, OF BRUSSELS, BELGIUM.

IMPLEMENT FOR MANIPULATING AND MOUNTING FILAMENTS OF ELECTRIC INCANDESCENT LAMPS.

989,735. Specification of Letters Patent. Patented Apr. 18, 1911.

Application filed June 17, 1908. Serial No. 439,067.

To all whom it may concern:

Be it known that I, PAUL GABRIEL TRIQUET, a citizen of the French Republic, and resident of Paris, France, have invented certain new and useful Improvements in Implements for Manipulating and Mounting Filaments of Electric Incandescent Lamps, of which the following is a specification.

This invention relates to devices or implements for handling the filaments of incandescent electric lamps.

For performing the operation of mounting the carbon filaments of electric incandescent lamps upon the metallic filament carriers, special pincers are used or one takes hold of the filaments by means of the fingers. In securing metallic filaments to the filament carriers this operation is especially delicate, owing to the fragility of these filaments, which possess but little flexibility. The number of filaments which have to be mounted in the lamp, which number often amounts to six and eight, renders the operation therefore very troublesome. Another drawback incident to this method of operation results from the contact of the fingers with the filaments, as traces of moisture or deposits of impurities are produced upon the filaments which have a tendency to oxidize the filaments and to injure them.

The present invention relates to implements which allow of mounting easily the most delicate filaments and of placing or introducing them (as this is often required for electric soldering) into the smallest openings and this without the filaments coming into contact with the fingers.

According to my invention, the filament may be held in contact with the implement by the action of a vacuum. The characteristic feature of the invention consists of a sucking implement of any suitable form, arrangement or construction which permits of taking the filament placed upon a table, of holding it with the greatest possible security in the desired position and of securing it to its carrier.

As will be readily understood, any device including a suction tube, having one of its ends adapted to grasp and hold a filament, may give good results in practice: however by way of example I have shown in the annexed drawing several forms of implement which I have found to be very satisfactory in practice.

In the drawings:—Figure 1 shows a side elevation, partially in section, of a suction implement; Fig. 2 is a front elevation of the head of same, Fig. 3 shows a side elevation of a somewhat modified form of suction implement provided with a head having several openings. Figs. 4–6 show two modified forms of the suction head of my implement.

Referring more especially to Fig. 1, my suction implement comprises a tube *a* which may be connected by a flexible rubber tube *b*, or by any other flexible duct, with a vacuum apparatus. The suction implement *a* has at its front end an enlarged head *c* of any suitable form provided along *d e* (Fig. 2) with a slot through which the action of the vacuum takes place and against which one of the branches of the filaments will be applied and held, as best shown by Fig. 1.

The filament being held, as above explained, the user brings, by manipulating the tube *a* in a suitable manner, one of the ends of the filament in front of the small and narrow opening into which it may be desired to introduce it. Now, if during this operation, the operator misses the opening and strikes with the end of the filament a rigid part of the carrier, the filament, in spite of its delicate structure, will not be broken, but simply will slide along the slot provided in the head *c* of the suction tube *a*. The operator will thus be able to repeat the operation until he succeeds in performing it perfectly well.

It will be readily understood that the head *c* having the opening *d e* may have any suitable form or shape; for instance, as shown by Fig. 3 it may be bifurcated and each branch may have separate openings which are arranged in alinement so as to grasp and hold the filament at two points *f* and *g* on the same branch.

In another form of my invention, the suction tube *a* may be terminated by a bifurcated head provided with two slotted openings *h* and *i* which, as shown in Fig. 4, are arranged parallel to each other so as to grasp and hold both branches of the filament. In other words, the openings *f*, *g* of the head shown in Fig. 3 are arranged in the

same vertical plane one above the other, while the openings *h* and *i* of the head according to Fig. 4 are in the same horizontal plane one at the side of the other, the filament being supposed to occupy a vertical position.

The suction opening of the head of the implement may have a U-shaped form as indicated in Figs. 5 and 6 so as to be able to grasp and hold a filament at its bend.

The implement which has been described as particularly suitable for the purposes of the manipulation and the mounting of filaments may be applied not only to the special use described, but also during the various phases of the manufacture of the filaments themselves.

I claim:

1. An implement for the purpose described, comprising a suitable tube, a flexible duct connected to one end of said tube and adapted to connect with an air exhaust source, and a head at the opposite end of said tube provided with a slot extending entirely across the face of said head, substantially as described.

2. An implement for the purpose described, comprising a suitable tube, a flexible duct connected to one end of said tube and adapted to connect with an air exhaust source, and said tube being provided at its opposite end with an enlarged head, said head having a slot extending entirely across the face of said head, substantially as described.

3. An implement for the purpose described, comprising a suitable tube, a flexible duct connected to one end of said tube and adapted to connect with an air exhaust source, said tube having at its opposite end bifurcations or branches, each of said bifurcations or branches being provided with a slot extending entirely across the end face thereof, substantially as described.

4. An implement for the purpose described, comprising a suitable tube, a flexible duct connected to one end of said tube and adapted to connect with an air exhaust source, said tube having at its opposite end two bifurcations or branches, each of said bifurcations or branches being provided at its end with a slotted opening the said slotted openings being arranged in substantially parallel relation with each other, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two witnesses.

PAUL GABRIEL TRIQUET.

Witnesses:

ADOLPHE STURM,

DEAN B. MASON.
