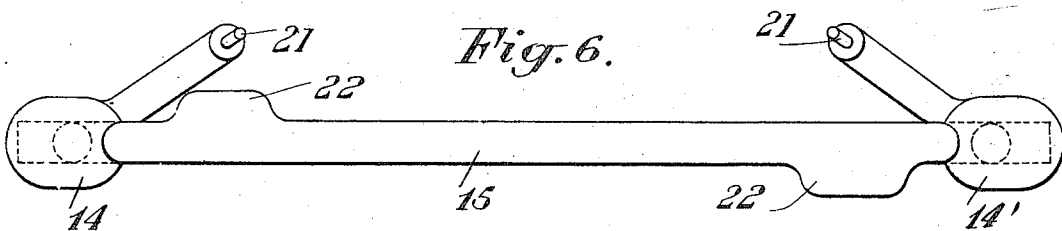
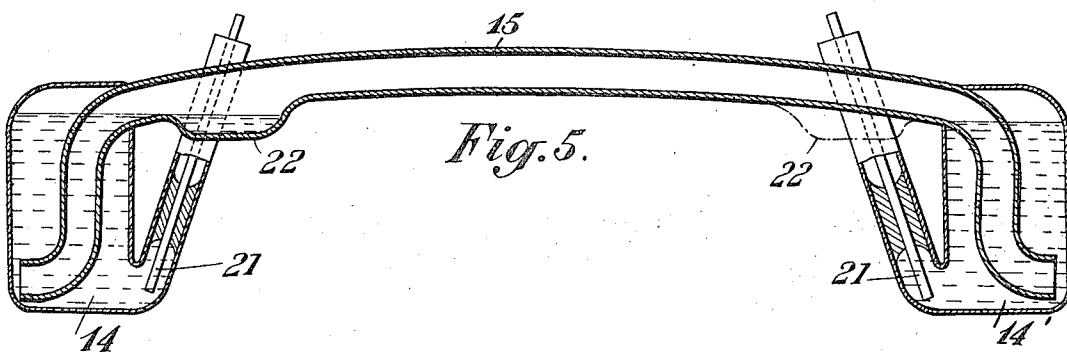
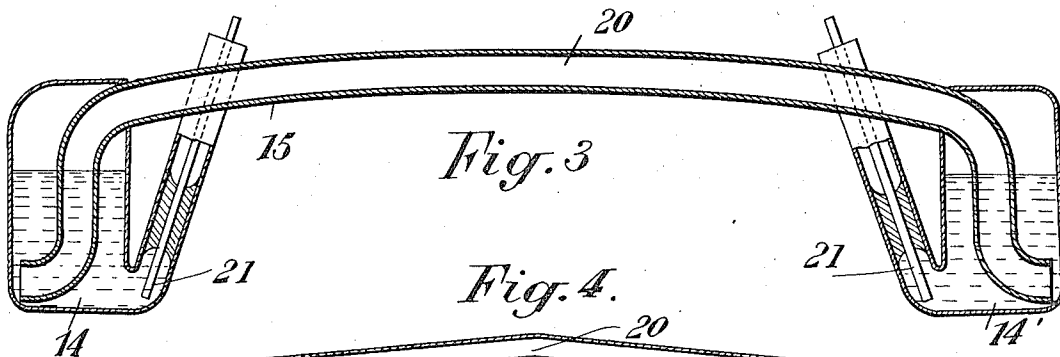
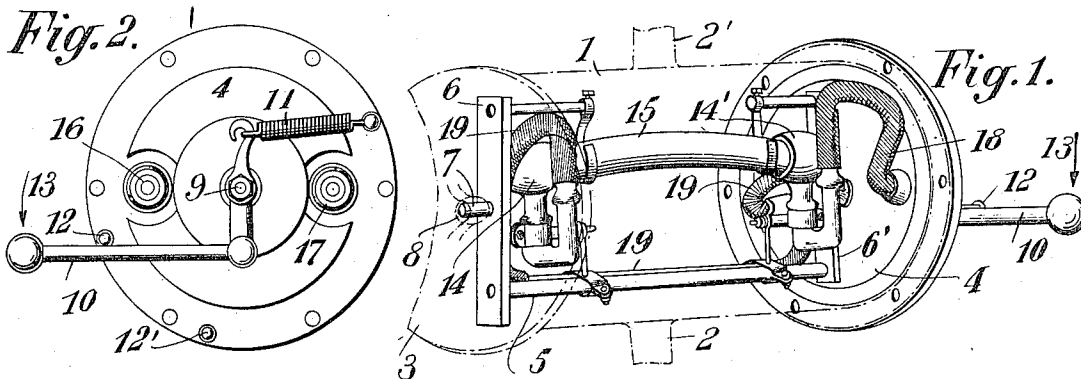


P. G. TRIQUET.
PROCESS AND DEVICE FOR LIGHTING SUBMERGED ULTRA VIOLET RAY STERILIZING LAMPS.
APPLICATION FILED MAY 9, 1912.

1,059,786.

Patented Apr. 22, 1913.



Witnesses:

Miriam Stern
Jos. A. Ryan

Fig. 7.

Inventor:

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UNITED STATES PATENT OFFICE.

PAUL GABRIEL TRIQUET, OF PARIS, FRANCE.

PROCESS AND DEVICE FOR LIGHTING SUBMERGED ULTRA-VIOLET-RAY STERILIZING-LAMPS.

1,059,786.

Specification of Letters Patent.

Patented Apr. 22, 1913.

Application filed May 9, 1912. Serial No. 896,274.

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 Processes and Devices for Lighting Submerged Ultra-Violet-Ray Sterilizing-Lamps, of which the following is a specification.

This invention relates to a process and a device for lighting submerged ultra-violet ray sterilizing lamps.

The novelty consists in that the lamps are lighted by a rapid angular motion around their longitudinal axis crossing the mercury mass of the end chambers or around an axis which is parallel to the first named one.

The new method of lighting enables of the number of lamps in the large plant devices to be increased without any limit as hence-forward no objectionable tilting of the device itself is necessary for priming the lamps. The new method of lighting also reduces to a minimum the danger of mercury blows which are difficult to prevent during the tilting motion. With the tilting motion one also has less control over the lighting motion because the momentum of the mass in motion is much greater whereby ruptures are more likely to occur. Another important advantage of the angular lighting must also be seen in that the mercury is never allowed to flow away from the electrodes.

In the accompanying drawings given by way of example: Figure 1 shows a perspective view of a lamp sterilizing device, the receptacle being shown in dot and dash lines. Fig. 2 is the front elevation view of the device from the side of the lighting handle. Fig. 3 shows the diagrammatic longitudinal section of the lamp itself, at an enlarged scale. Fig. 4 shows a somewhat modified form of the lamp tube. Fig. 5 shows the diagrammatic longitudinal section of the lamp with a mercury pocket provided on the radiating tube. Fig. 6 is a diagrammatic top plan view of the pocket lamp. Fig. 7 shows the section through a pocket.

The device comprises a receptacle 1 provided with an admission opening 2 and an exhaust opening 2', a bottom 3 and a cover 4.

The lamp is carried by a stirrup shaped holder 5 the vertical branches 6 and 6' of which are provided with pivots in their

center. The pivot 7 of the branch 6, positioned near the bottom, is rotatably engaged into a sleeve 8 provided at the bottom. The pivot 9 of the branch 6' positioned near the cover however passes outside in a tight manner through the cover and is provided outside the receptacle with a handle (the lighting handle) 10 which when in its position of rest, that is to say when the lamp occupies its position of working, is held by a spring 11 against an abutment 12. An abutment 12' limits the lighting angle toward the bottom. Now, when it is desired to light the lamp, the lighting handle 10 is suddenly pressed downward in the direction of the arrow 13 (Figs. 1 and 2) whereby the lamp is caused to perform a rapid angular motion which throws the upper part of the mercury from each of the mercury chambers 14, 14' upward in the radiating tube 15 thus closing the electric circuit by the meeting of the mercury veins and producing the lighting of the lamp. Immediately after the lighting handle 10 has been pushed down it is again released and allowed to go back freely and to strike the abutment 12 under the influence of its spring 11 so that the lighted lamp instantaneously assumes again its working position.

16 and 17 are the plug contacts for connecting the lamp conductors 18 and 19 which naturally are supple ones, to a suitable current supply.

The lighting tube 15 is preferably constructed in such a manner that it is curved toward its central portion at 20 (Figs. 3 and 4) or rises in this part so as to form an obtuse angle. The object of this shape is to considerably favorize the approach of the mercury veins which have been thrown upward. Thus a greater certainty of lighting and an increase of the speed of the mercury veins which is important for the angular lighting, are obtained as well as, besides, a saving of the material of the tube, the wall of which is no longer struck at right angles but under an incline whereby the shock is not only attenuated but is automatically converted into a movement toward the center of the lamp.

That in the present construction the electrodes 21 can never remain uncovered outside the mercury which may have for instance flown away or been thrown away,

follows directly from the fact that that part of mercury which has been injected into the radiating tube 15 is positioned in the chambers 14, 14' above the throwing axis (*i. e.* in the present instance the axis of the stirrup pivots 8 and 9) while the mercury which is in contact with the electrodes 21 is to be found under the said throwing axis.

In order to still more improve and render still more secure the lighting, one or more additional chambers or pockets 22 may be provided on the side of the lighting tube 15 (Figs. 5 and 6) which, when the angular movement is carried out, pour their mercury directly into the lighting tube 15 itself. In this case, in order to ascertain the automatic refilling of the mercury pockets 22 it is recommendable to make the lamp arrangement in such a manner that, when the lamp is not lighted and assumes its position of rest, the level of the mercury be the same in the chamber 14 as in the pocket.

Having now fully described my said invention, what I claim and desire to secure by Letters Patent, is:

1. In an electric vapor lamp, a longitudinal fluid container, mercury pockets at the ends of said fluid container, the ends of the latter terminating near the bottom of the pockets, electrodes fitting in the pockets, a pivotally mounted stirrup for supporting the mercury container, the latter being mounted in the stirrup to one side of the pivotal points thereof, a handle for rotating the stirrup, a spring for returning the stirrup in normal position, and stops for limiting the movement of the handle.

2. In an electric vapor lamp, a pivotally mounted stirrup, mercury pockets supported at opposite ends of the stirrup, each pocket having an extension, an electrode located in each extension and engaging the mercury therein, a longitudinal fluid tube having extensions, the ends of which project into the mercury pockets and terminate near the bottom of the latter, the main body portion of the fluid tube being to one side the axis

of the stirrup, a handle connected with the stirrup to partially rotate the same, means for automatically returning the stirrup to normal position after operation of the handle, and stops for limiting the movement of the stirrup.

3. In an electric vapor lamp, a pivotally mounted stirrup, a mercury pocket located at each end of the stirrup, an electrode extending into each mercury pocket, a longitudinal fluid tube having its ends extended into the mercury pockets, the said mercury tube having lateral angularly disposed auxiliary mercury pockets which with the main body portion of the tube are located to one side of the axis of the stirrup, means for manually partially rotating the stirrup in one direction, and means for automatically partially rotating the stirrup in the opposite direction.

4. In an electric vapor lamp, a fluid tube provided with mercury receptacles at its ends, and which communicate therewith, said tube having a lateral angularly disposed mercury pocket on its under side adjacent each of the receptacles, said pockets communicating with the body portion of the tube and serving to counter-balance the movement of the tube and to afford an additional supply of mercury, and means for rotatively mounting the tube and the receptacles.

5. In an electric vapor lamp, a fluid tube provided at its ends with mercury receptacles which communicate with said tube, lateral pockets in the tube which communicate therewith, each pocket being located near the end of the tube and containing mercury, the level of the latter being level with the mercury in the adjacent receptacle, and means for rotatively mounting the tube and the receptacle.

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

PAUL GABRIEL TRIQUET.

Witnesses:

A. CLACAIN,

H. C. COXE.