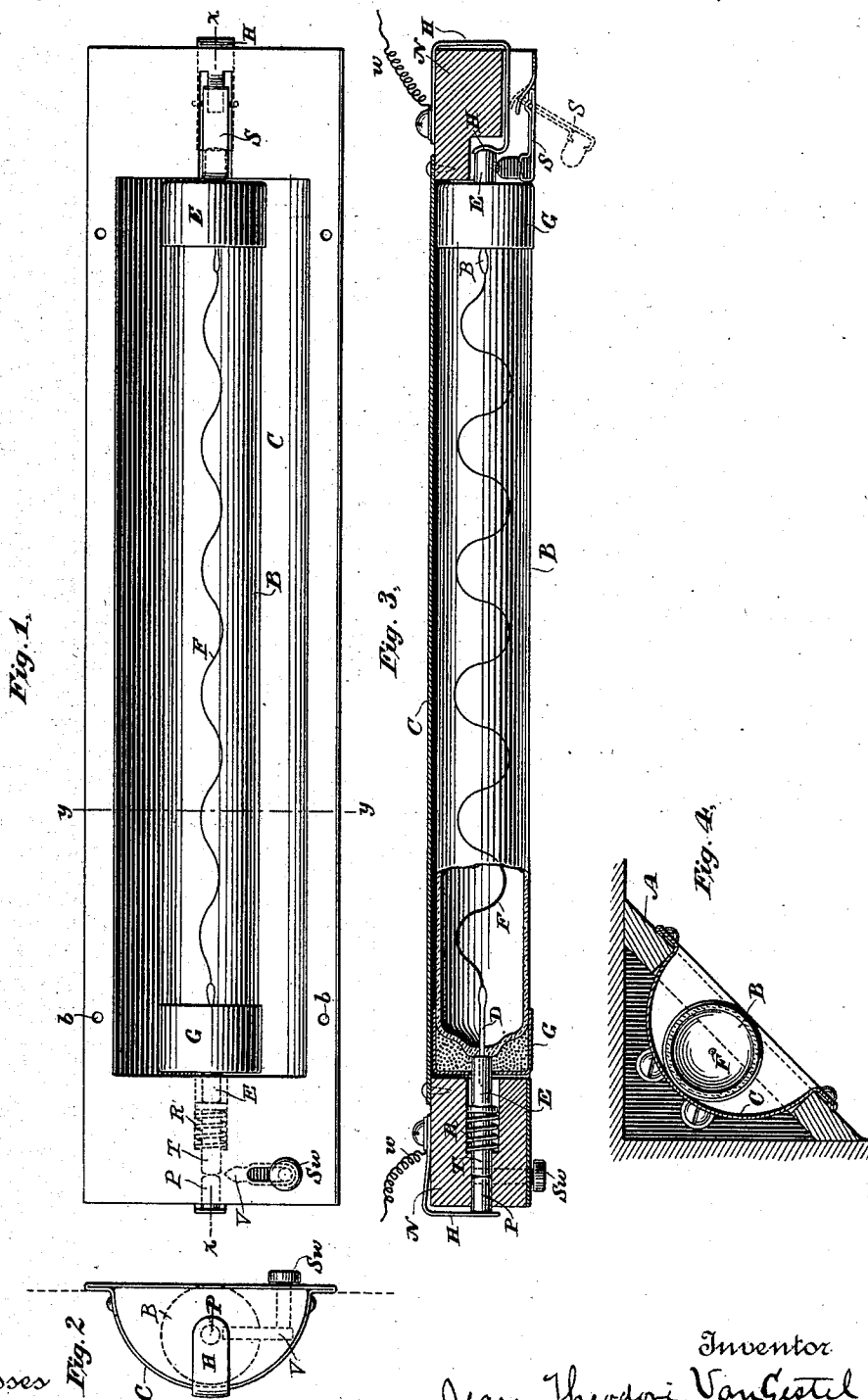


(No Model.)

J. T. VAN GESTEL.
ELECTRIC LAMP.

No. 413,636.

Patented Oct. 22, 1889.



Witnesses
Geo. W. Breech.
Carr E. Ashley.

Inventor
Jean Theodore Van Gestel
By his Attorneys
Wiedersheim & Kintner

UNITED STATES PATENT OFFICE.

JEAN THEODORE VAN GESTEL, OF NEW YORK, N. Y., ASSIGNOR TO THE
VAN GESTEL ELECTRIC STREET CAR COMPANY, OF SAME PLACE.

ELECTRIC LAMP.

SPECIFICATION forming part of Letters Patent No. 413,636, dated October 22, 1889.

Application filed August 17, 1888. Serial No. 283,002. (No model.)

To all whom it may concern:

Be it known that I, JEAN THEODORE VAN GESTEL, a subject of the King of The Netherlands, and a resident of New York, county of New York, and State of New York, have made a new and useful invention in Electric Lamps and Attachments, of which the following, taken in connection with the accompanying drawings, constitutes a full and exact specification.

My invention relates particularly to an incandescent lamp of a novel type and attachments therewith, and its objects are, first, to provide a lamp for use in railway-cars, steamers, or analogous conveyances, which shall overcome objectionable features found in the use of existing forms of electric lamps, as I will explain later on; second, to so devise simple, cheap, and effective connections for the lamp which shall permit of its insertion and withdrawal with a minimum amount of trouble, and be at the same time secure and sure of action; third, to so dispose or arrange the lamp as to give a maximum amount of light and radiate the same in planes parallel with the sides of the apartment it is desired to illuminate. To accomplish these objects I have devised the lamp and connections hereinafter described, and particularly pointed out in the claims which follow this specification.

I have discovered that with existing types of incandescent lamps hung from the ceiling of a railway-coach or from beneath the deck of a steamer or pendent chandeliers and in other well-known ways there results a large percentage of breakage, due to drafts upon the unequally-heated portions of the lamp-globes and their glass neck-supports. This objectionable feature is in no sense an inherent fault of existing forms of lamp, but due rather to their exposed location and to the fact that the exposed portions are unequally heated. It is also a noticeable fact that with lamps so hung much of the light is radiated into the upper portion of the room or space to be illuminated, and therefore to all intentional purposes wasted or lost.

My novel lamp and its connections are of such construction and are so arranged as to overcome in a very large measure all of these

objections. These features will be better understood by referring to the accompanying drawings, taken in connection with the specification which follows, the same being a full and exact disclosure of the invention.

Figure 1 is a side elevation illustrating my improvement entire, portions being shown in dotted lines on the left. Fig. 2 is an end view of Fig. 1, as seen looking from left to right. Fig. 3 is a longitudinal sectional view taken on line *xx*, Fig. 1, one end of the lamp-globe being broken away. Fig. 4 is a cross-sectional view of Fig. 1, taken on line *yy*.

I construct a lamp B of a tubular piece of glass of the desired length, using leading-in wires of platinum D D and a corrugated or zigzag filament F of any preferred type, and I seal the ends off in the well-known manner, exhausting and sealing the lamp, the leading-in wires D D being attached to trunnions E E at their ends, as shown. These trunnions are surrounded by plaster-of-paris or other filling and covered with metallic cups or bands G G.

C is a retaining-bracket of curvilinear cross-section, highly polished on its inner surface, so as to act as a reflector when the lamp B is in position as shown. This retaining-bracket is made, preferably, of metal with the curvilinear portion pressed or struck up, as shown in Figs. 1 and 4, and insulating retaining-heads N N are attached to it by screws for retaining the lamp in place. These heads have metallic contact-springs H H, connected directly by wires *ww* with the mains, (not shown,) but preferably located beneath the cornice or molding of the car or room to be lighted in such a manner as to be out of sight. The left-hand spring H has a pin P with a rounded inner head adapted to abut against a loose spring-seated pin T, which is provided with a coiled seating-spring R. This pin T abuts in turn against the trunnion E when the lamp B is sprung in place. The inner end of the right-hand spring H is curved, as shown, so as to form a seat for the other trunnion E.

S is a spring-jack retaining-catch adapted to hold the right-hand trunnion firmly in position when the lamp is once seated, as shown in Fig. 3 in full lines, the dotted lines show-

ing said catch in position for removal of the lamp.

Sw is a hand-switch for turning the light off or on, as desired. It consists of a button having attached thereto an insulated arm *V*, beveled at its upper end, so as to admit of its insertion, when raised, between the pins *P* and *T*, thereby breaking the circuit at this point.

In Fig. 4 the lamp is shown in position in the upper portion of a car or room, the curved bracket *C* being embedded in the molding *A*, the lamp *B* being so located as to throw the light all down and in a plane parallel with the sides of the room.

In cars or steamboats these lamps will be located, preferably, along the sides thereof, and hence entirely out of all drafts. They will be beneath the bracket-surface on a level with the wall-surface, and hence not liable to be broken by contact with any object which is carried by.

The operation is obvious without further explanation.

I find that my improved form of lamp is cheaply and easily made, and by reason of its symmetry presents the same radiating and heating surface, thereby avoiding undue breakage. Such lamps can be securely and safely packed for transportation, and should they break near the ends the tubes can be used again for lamps of shorter pattern, thereby creating a saving of great importance. This form of lamp, also, is especially adapted for the illumination of show-windows, art-galleries and theaters, and in many places which will at once suggest themselves.

I do not desire to be limited to a horizontal location of the lamp, as other positions are obvious.

What I do claim, and desire to secure by Letters Patent of the United States, is—

1. A wall-bracket for an incandescent lamp, consisting of an oblong sustaining-frame having a depression or groove, in combination with a tubular incandescent lamp held in place in said groove, substantially as described.

2. A wall-bracket for an incandescent lamp, consisting of an oblong support or frame having spring-contacts for making electrical contact with the poles of the lamp, the whole being located below the face of the bracket, substantially as described.

3. The combination of a wall-bracket having a depressed or grooved space for holding an incandescent lamp with spring-seated contacts and a catch for holding the lamp in place, substantially as described.

4. In an incandescent-lamp fixture, the combination of a tubular lamp located in an oblong depression with spring-seated contacts and a retaining-catch, substantially as described.

5. The combination of a tubular lamp with a grooved bracket, composing a reflector and electrical connections, as described.

6. The combination of the following elements: the grooved reflecting-bracket *C*, the tubular lamp *B*, having trunnions *E E*, the spring-seats *H H*, pin *T*, switch *Sw*, and retaining-catch *S*, substantially as described.

JEAN THEODORE VAN GESTEL.

Witnesses:

JAMES A. SIMMONS,
B. C. HOWELL.