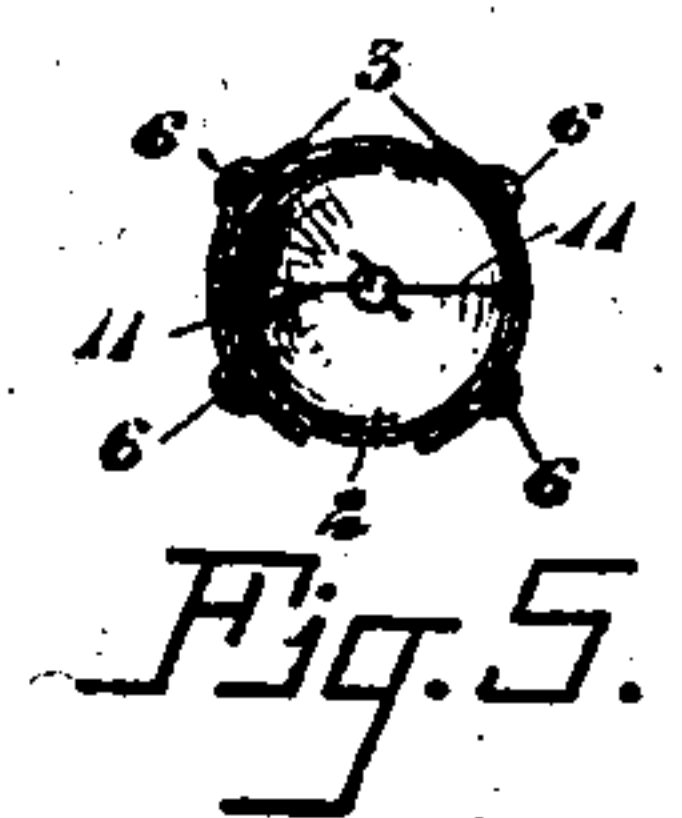
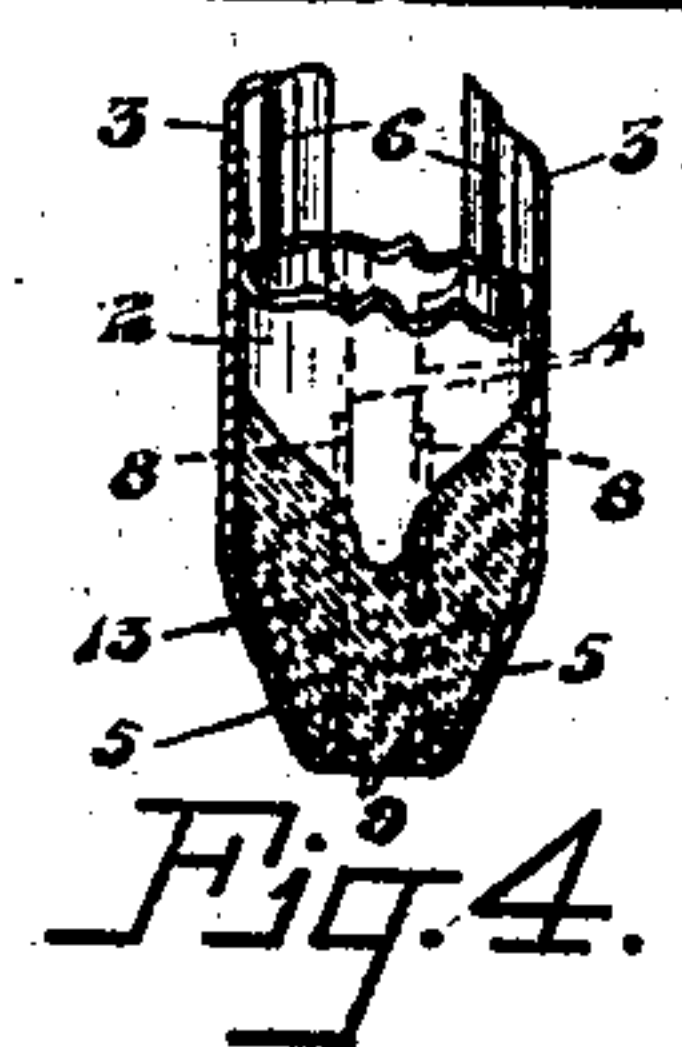
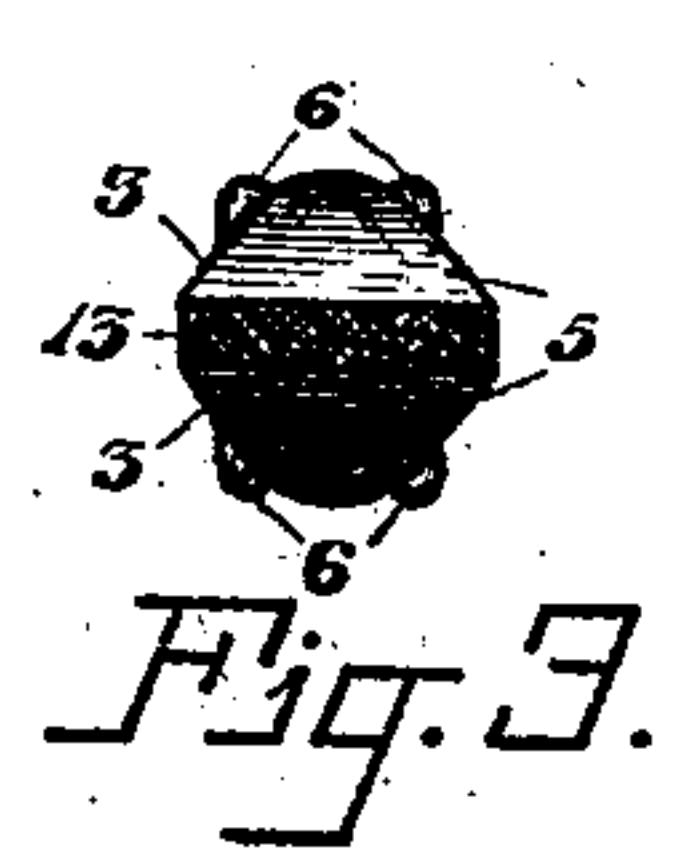
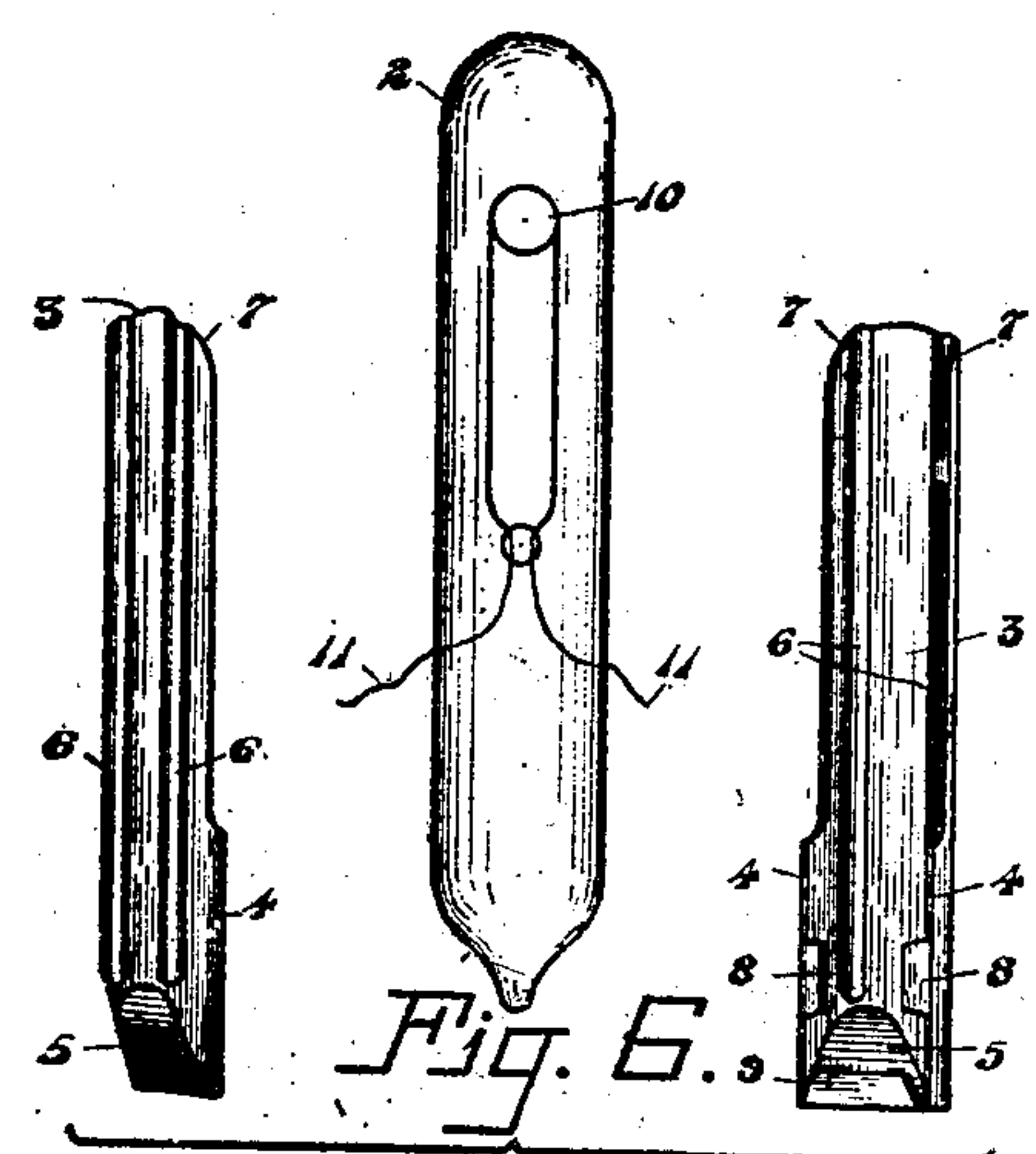
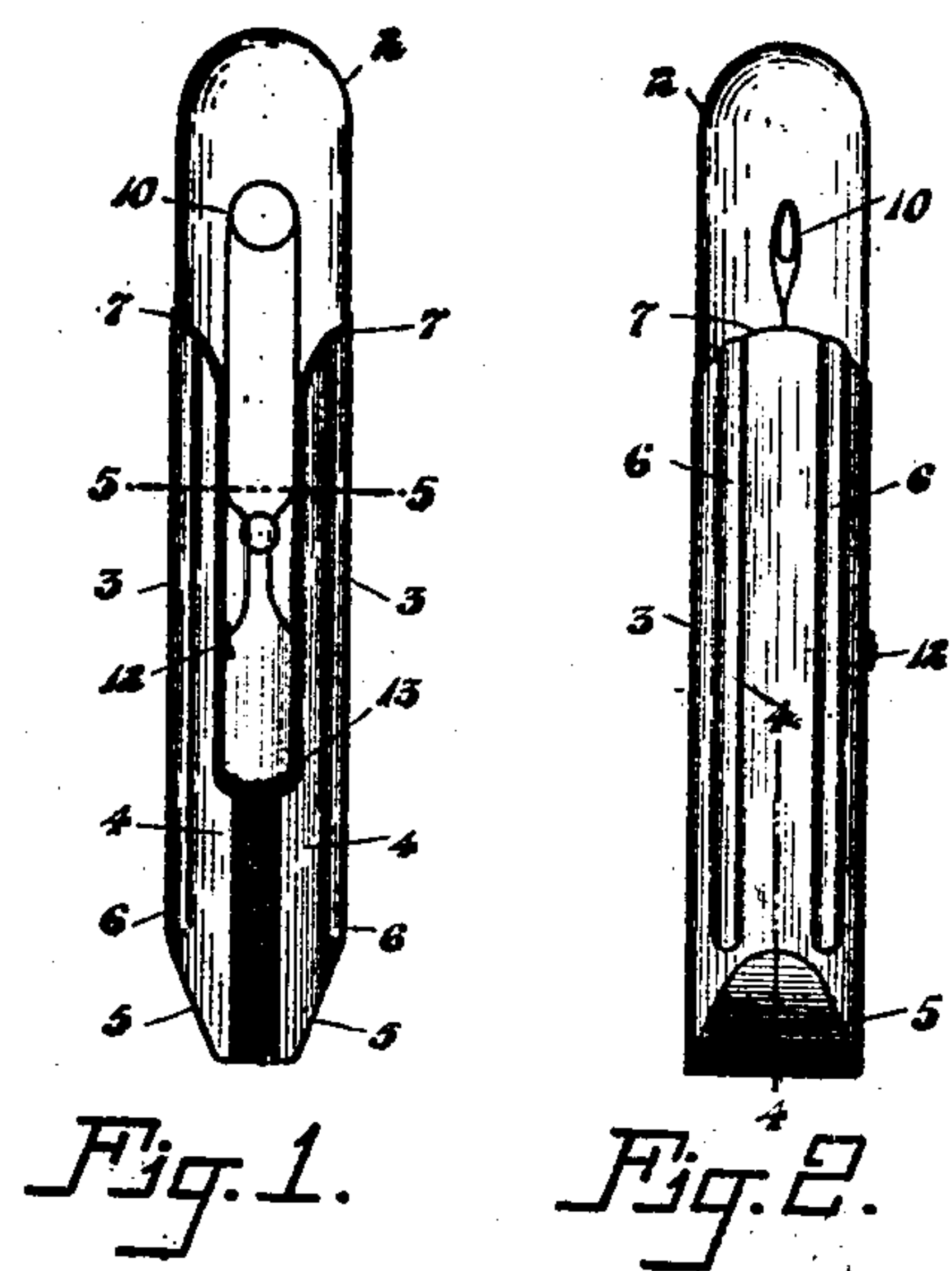


No. 894,193.

PATENTED JULY 28, 1908.

W. W. DEAN.
INCANDESCENT LAMP.
APPLICATION FILED AUG. 9, 1902.



Witnesses.
R. H. Burfield
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UNITED STATES PATENT OFFICE.

WILLIAM W. DEAN, OF CHICAGO, ILLINOIS, ASSIGNOR TO KELLOGG SWITCHBOARD AND SUPPLY COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

INCANDESCENT LAMP.

No. 894,193.

Specification of Letters Patent.

Patented July 28, 1908.

Application filed August 9, 1902. Serial No. 118,990.

To all whom it may concern:

Be it known that I, WILLIAM W. DEAN, a citizen of the United States of America, and resident of Chicago, county of Cook, and State of Illinois, have invented a new and useful Improvement in Incandescent Lamps, of which the following is a specification.

My invention relates to improvements in small incandescent lamps of the type used as signals in and about telephone switchboards, and has for its object the simplification of the construction of the lamp and its manufacture whereby a cheaper and more satisfactory article is produced.

The invention further comprises the novel details of construction, parts and combinations of parts hereafter described and particularly pointed out in the appended claims, reference being had to the accompanying drawing forming a part hereof in which the same reference characters designate like parts throughout the several views and in which;

Figure 1 is a side elevation of the lamp. Fig. 2 is an elevational view of the side of the lamp at right angles to that of Fig. 1. Fig. 3 is a bottom plan view thereof. Fig. 4 is a sectional view of the line 4—4 of Fig. 2. Fig. 5 is a sectional view on the line 5—5 of Fig. 1, and Fig. 6 is a view of the bulb and terminals before assembling.

In these figures 2 designates the cylindrical glass bulb and 3, 3 the terminals which extend along the sides of the bulb as shown, and are preferably cemented thereto. These terminals comprise stampings of thin sheet metal preferably brass which are curved transversely so as to fit the curvature of the bulb and are of such length as to project beyond the end of the bulb. These ends are extended slightly at the edges 4, 4 so that the opposed edges 4, 4 of the terminals when in place form substantially an inclosing cylinder and are slanted or beveled off at 5 to provide a wedging surface so that the end of the lamp is wedge shaped as shown in the drawings, to enable it to be readily inserted between the lamp holding springs of the lamp spring jack. Longitudinal ridges 6, 6 are formed in the terminals 3 with which the springs of the lamp jack engage to insure the position of the lamp in the jack and at the same time provide additional electrical contact therewith. The upper ends of the terminals have rounded corners 7, which serve

to guide the spring jaws of the lamp removing tool into the space between the terminals and thus prevent the same from catching on the terminals and tearing them away from the bulb. The edges 4, 4 of the terminals are provided with inwardly turned lips or projections 8, 8 and with the upturned lip 9 at its extreme lower end. The filament 10 has its leading in wires soldered to the terminals 3, as at 12 or at any other convenient location.

When the parts of the lamp shown in Fig. 6 are assembled, the insulating material 13 of the base which preferably consists of an insulating cement such as plaster of paris is caused to fill in the space between the terminals and the end of the bulb. The cement being in a plastic or semi liquid condition, thus fills in around the lips or lugs, 8, 8 and 9, 9 whereby when it solidifies the said terminals are firmly supported and secured together and to the bulb, the cement adhering to the surface of both bulb and terminals. By this means a lamp base is provided that is extremely simple and inexpensive to manufacture and in which there is no opportunity to catch and tear off the terminals when the lamps are inserted in the spring jacks. Another advantage of this type of lamp is in the fact that the inaccuracies of the glass tubing of which the bulbs are made do not render the manufacture of the lamp difficult and do not affect the completed article, since the terminals are merely cemented to the side of the bulb and the projecting ends filled in with cement so that slight variations in size or shape are not noticed. Of course, any suitable cement may be used and even any insulating material may be substituted therefor, but not with the same advantageous results as with an insulating cement that is adapted to be forced into the said space in a liquid or plastic condition so as to completely fill in around all parts and every crevice and which upon solidifying adheres to the said parts and at the same time becomes solid so as to withstand compression.

It is obvious that other changes may be made in my invention and I do not therefore wish to be limited in all respects to the precise details shown and described.

Having thus described my invention, what I claim is;

1. In a small incandescent lamp, the combination with a cylindrical bulb, of a pair of

terminal strips mounted upon the sides of said bulb, said terminals continuing beyond the end of the bulb to the end of the base and forming a portion of its outer surface, said strips having longitudinal ridges formed therein to form an engaging surface for the jack springs, substantially as described.

2. In a small incandescent lamp, the combination with a cylindrical bulb, of a pair of opposed terminal strips cemented to the sides thereof, said terminals continuing beyond the end of the bulb to the end of the base and being beveled inwardly at their ends and forming a portion of the outer surface of the base, longitudinal ribs formed in said terminals upon each side of the center line thereof to provide engaging surfaces for the jack springs, and an insulating and supporting filling between said terminal ends, substantially as described.

3. In a small incandescent lamp, the combination with a cylindrical bulb, of stamped thin sheet metal terminals cemented to the opposite sides thereof and extending beyond the end of the same, said extending ends having inwardly turned edges forming nearly an inclosed cylinder and each having a beveled outer surface at its end to together form a wedge shaped end of the base, said inclosed

cylinder being filled with an insulating cement, substantially as described.

4. In a telephone lamp, the combination with a cylindrical bulb, of terminal strips extending along the sides of the bulb and beyond the end thereof, and having parallel portions formed with ridges extending beyond the end of the bulb, a beveled portion, and a cement within said beveled portion engaging the terminal strips to hold them in position, substantially as described.

5. In an incandescent lamp, the combination with a cylindrical bulb, of terminal strips extending along the sides and beyond the end thereof, the extended ends of said strips having a beveled portion formed therein, whereby contacts of the lamp socket will be spread apart when the lamp is inserted therein, extensions at the ends of said beveled portions, and a cement within said beveled portion engaging said extensions to maintain the terminal strips in position, substantially as described.

Signed by me at Chicago, county of Cook, State of Illinois, this 12th day of June, 1902.

WILLIAM W. DEAN

Witnesses:

ROBERT LEWIS AMES,
M. HENDEE.