No. 742,309. PATENTED OCT. 27, 1903.

J. H. GOEHST.

ELECTRICALLY ILLUMINATED SIGN.

APPLICATION FILED MAY 12, 1902.

NO MODEL. 2 SHEETS—SHEET 1.

Fig 1

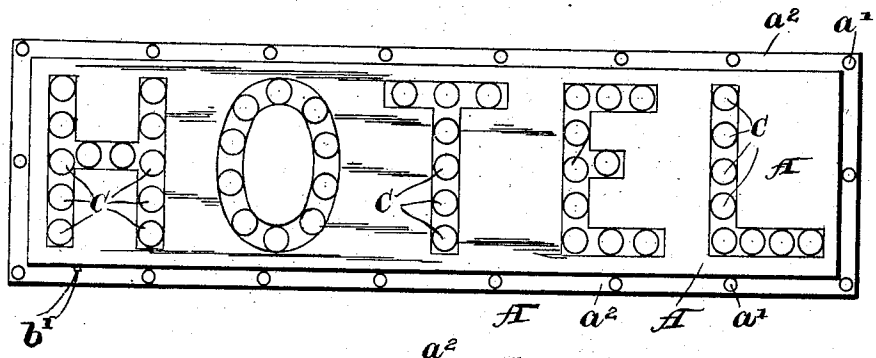


Fig 2

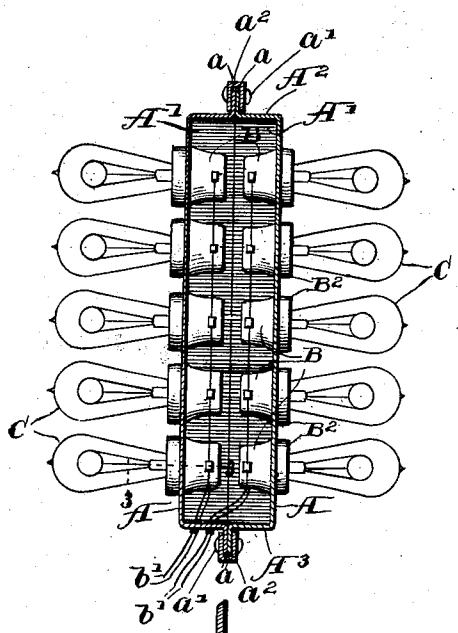
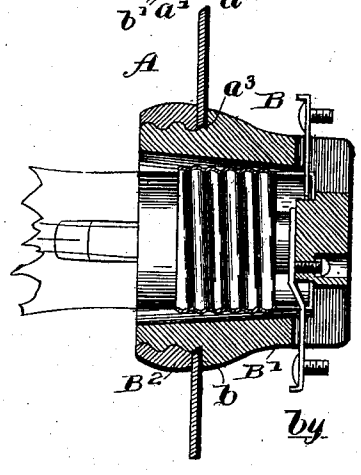


Fig 3



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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NO MODEL. 2 SHEETS—SHEET 2.

Fig 4

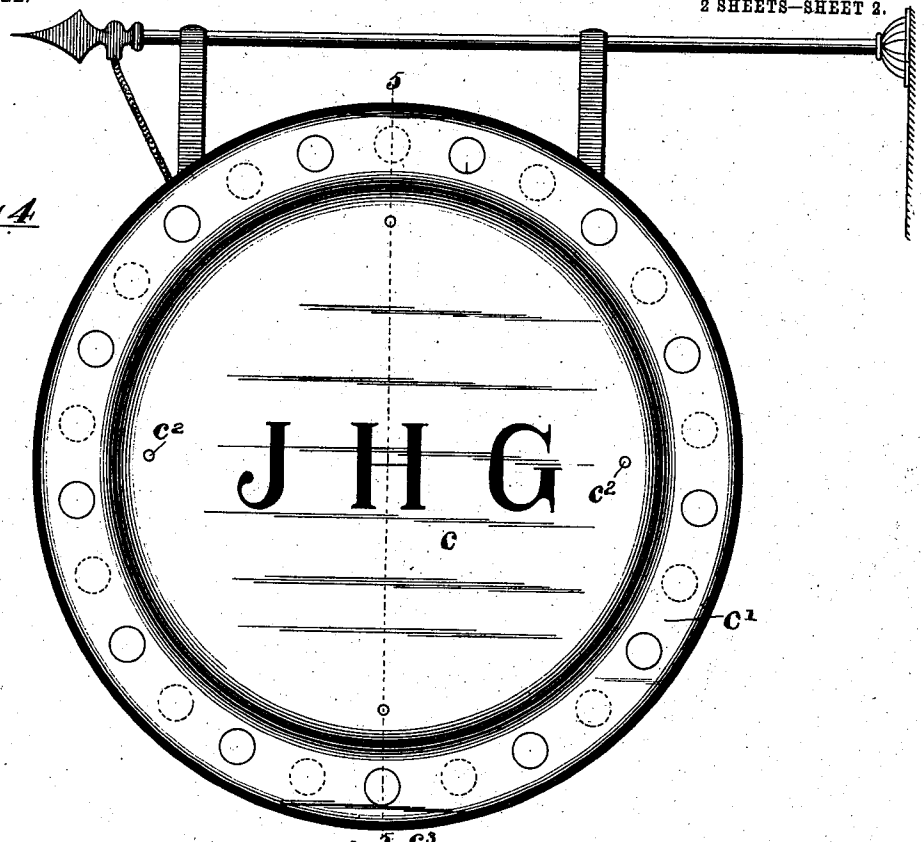
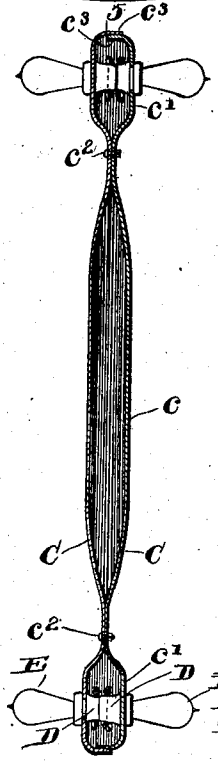


Fig 5



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 742,309. Patented October 27, 1903.

UNITED STATES PATENT OFFICE.

JOHN H. GOEHST, OF CHICAGO, ILLINOIS, ASSIGNOR TO FEDERAL ELECTRIC COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

ELECTRICALLY-ILLUMINATED SIGN.

SPECIFICATION forming part of Letters Patent No. 742,309, dated October 27, 1903.

Application filed May 12, 1902. Serial No. 107,012. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. GOEHST, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Electrically-Illuminated Signs; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in electrically-illuminated signs; and the invention consists in the matters hereinafter set forth, and more particularly pointed out in the appended claims.

Among the objects of the invention are to simplify the construction of electrically-illuminated signs, to make the same more compact and light, and to lessen the cost of producing the same.

As shown in the drawings, Figure 1 is a front elevation of a sign embodying my improvements. Fig. 2 is a transverse vertical section thereof. Fig. 3 is a detail section taken on line 3 3 of Fig. 2. Fig. 4 is a face view of a modified form of sign. Fig. 5 is a central section thereof, taken on line 5 5 of Fig. 4.

The form of sign herein illustrated in Figs. 1, 2, and 3 as embodying my invention consists of a suitable sign-body, preferably sheet metal, which is perforated to form outlines of letters or characters which are to appear on the sign, and a plurality of electric-light sockets, one extending through each perforation and detachably connected with and supported on said body, said sockets opening outwardly from the body, so as to receive the electric lamps which complete the sign. If the sign is a single-faced sign, or one which is read from one direction only, the inner ends of the sockets are protected in any suitable manner, as by an inclosure built around the same and attached to or formed on the body. If, however, the sign is a double-faced sign, or one which is read from two opposite directions, the sign consists of two parallel plates or sign-bodies, perforated and provided with sockets in the manner before described and connected by top, bottom, and end walls to form an inclosure for the inner ends of the sockets and to receive the wiring for the sockets. I have shown in said Figs. 1, 2, and 3 a sign of the latter class, or one which is read from two opposite directions. As shown in said figures, A A designate the two sign-bodies which constitute the side walls of an inclosure, the completed inclosure comprising end walls A′ A′ and top and bottom walls A^2 A^3, respectively. Said sign-bodies and the end and side walls are preferably made of sheet metal, which are united in a manner to exclude rain and snow therefrom. The entire inclosure may be made of two similar sides or parts, each stamped to constitute one of the side walls and one-half of each the top, bottom, and end walls and provided with marginal flanges a a, which meet at the centers of the end, top, and bottom walls in overlapping relation, as indicated in Figs. 1 and 2, and are joined by bolts a', extending through the overlapping flanges. Said overlapping margins are preferably covered by a metallic weather-strip a^2 of U shape in cross-section, the bolts a' passing through said strip.

Each side plate A of the sign is perforated to form the outlines of the letters or figures which are to appear on the sign. Said side plates or sign-bodies are preferably made of porcelain-enameled sheet-steel, which is of a character that gives great durability and lasting qualities to the sign, and desirably the outline of the letters and figures which are traced by the socket-apertures a^3 are inclosed within figure or letter outlines of a contrasting color printed or otherwise impressed on the outer surface of the sign-bodies or plates, whereby the sign may be easily read when not illuminated.

B B designate the lamp-sockets, which extend through the socket-openings a^3 and are supported on said sign-bodies, and C C the lamps, which are supported in said sockets. Said sockets, as before stated, are supported entirely on the sheet-metal sign-bodies or plates and are not, therefore, attached to base-supports located within the inclosure in accordance with the present practice of making electrically-illuminated signs. Said sockets are shown as made like the sockets shown and described in my copending application

for United States Letters Patent filed by me of even date herewith, Serial No. 107,013. Each socket consists of an outwardly-opening main hollow body or receptacle B', which is provided at its outer end with a reduced screw-threaded portion which extends through one of the socket-openings a^3 in the sign-body, and an interiorly-threaded nut or ring B^2, which has screw-threaded engagement with the outer reduced end of the socket and between which and an outwardly-facing shoulder b on the enlarged part of the socket the sign-body is clamped, whereby said socket is locked rigidly to the sign-body. Said clamping nut or ring B^2 may be located either upon the outside or inside of the sign-body, as shown in my said copending application, and in either construction the sockets are assembled in the sign-bodies before said sign-bodies are joined. The circuit-wires b' are connected with the metal terminals of the sockets in the manner shown in Fig. 2, and the wires are carried out of the inclosure through insulating-bushings shown in said Fig. 2. When constructing a single-faced sign or one which is read from one side only, the inclosure at the back of the sign-body for covering the inner ends of the sockets may be attached to the sign-body in any preferred manner.

It will be observed by reference to Figs. 2 and 3 of the drawings that each of the sockets is supported solely on the associated sign body or plate A, whereby is avoided the necessity of providing inside the inclosure socket supports or brackets, to which the bases of the sockets are attached. With my invention I am enabled not only to greatly reduce the cost of the sign as a whole, but am also enabled to facilitate the assemblage of the parts and to considerably lighten the sign and make it more compact and attractive than those heretofore constructed. An important advantage of the construction wherein the base-supports for the sockets are omitted and the sockets supported directly on the sign-body is that the sockets are thereby made self-centering and no extra labor is required to bring the sockets in centering relation to the openings in the sign-body. In the prior constructions a great deal of time and labor is required to center the socket-supports with respect to the lamp-openings, thereby complicating and making very expensive the work of assembling the parts of the sign.

While my invention is herein shown as embodied in a sign wherein the characters constituting the sign are outlined by the electric lamps, it is obvious that it is also applicable to and possesses the same advantages when used with an illuminated sign wherein the sign proper is printed or otherwise impressed on a solid sign-body, as a metal plate, and illuminated by lamps mounted in sockets contained within a tubular socket-frame inclosing the sign-body, as shown in my prior United States Letters Patent, No. 690,649, granted January 7, 1902.

In Figs. 4 and 5 I have shown a sign of the latter type. Said sign is shown in said figures as made circular, but may be made of other shape. The sign-body and the tubular socket-supporting frame are in this instance made of two similar sheet-metal plates C C, the central portions of which constitute the sign-bodies c, upon which the subject-matter of the sign is displayed, and the margins of which are formed to constitute when assembled the tubular socket-frame c'. The plates C are brought together between the sign-body and socket-frame and are joined or attached together in any suitable manner, as by means of bolts c^2, extending through alined apertures in said plates. The margins c^3 of said plates are turned inwardly toward each other, as shown in Fig. 5, and one of the plates is made of less diameter than the other, whereby the turned-in margin of the smaller plate fits within the margin of the larger plate in overlapping relation. Said margins fit closely one upon the other, thereby constituting a close joint between the plates, which excludes rain and snow, as well as dirt and other like foreign substances. The plates of the sign-body are shown as curved outwardly away from each other to afford added strength to the sign, though, if desired, said plates may fit closely throughout one against the other. The sockets D, which support the lamps E, are made like the sockets B shown in the other figures and have clamping engagement with the walls of the socket-supporting frame c' in the same manner as before described. Said plates C of the sign are preferably made of porcelain-enameled sheet-steel, and the letters and characters constituting the subject-matter of the sign are printed or impressed on the sign-bodies in any suitable manner.

The making of the sign of two sheet-metal parts, which are joined by bolts or rivets in the manner shown, is of considerable practical importance, as it greatly simplifies the construction and assemblage of the sign, thereby not only saving in the cost of the material, but also in the time required for assembling the parts of the sign.

It may be furthermore observed that the invention may be applied to signs of widely-varying forms—for instance, hollow individual letters or other characters may be made in accordance with my invention and the sockets for the illuminating-lamps supported in the thin or sheet-metal walls thereof in the same manner as are the sockets supported in the sign-bodies hereinabove described.

I claim as my invention—

1. An electrically-illuminated sign comprising a sheet-material sign-body provided with openings arranged to outline a letter or character and a plurality of lamp-sockets seated in said openings, each of said sockets embracing a main body made of insulating ma-

terial and provided with a tubular part which protrudes through the opening in the sign-body, and means for clamping the socket to the sign-body.

2. An electrically-illuminated sign comprising a sheet-material sign-body provided with openings arranged to outline a letter or character and a plurality of electric-lamp sockets seated in said openings, each of said sockets embracing a main body made of insulating material and located with its main part in rear of the sign-body, the front end of said socket-body protruding forwardly through an opening in, and beyond the front face of, the sign-body, and means for clamping the socket to the sign-body embracing a part on the protruding end of the socket and a part on the socket in rear of the sign-body.

3. An electrically-illuminated sign comprising a sheet-material sign-body provided with openings arranged to outline a letter or character, and a plurality of electric-lamp sockets seated in said openings, each of said sockets embracing a main body made of insulating material and provided with a part which extends forwardly through the sign-body and with a shoulder which bears against one side of said sign-body, the principal part of the socket being located in rear of the sign-body, and a retaining-ring engaging the part of the socket on the side of the sign-body remote from and opposing said shoulder for fastening the socket on said support.

4. An electrically-illuminated sign comprising a sheet-material sign-body provided with openings arranged to outline a letter or character and a plurality of electric-lamp sockets seated in said openings, each of said sockets embracing a main body made of insulating material and having a screw-threaded part which extends forwardly through the sign-body and projecting a short distance from the face of said sign-body, and provided also with a shoulder which bears against one side of the sign-body, and a screw-threaded ring engaging the screw-threaded part of said socket on the side of the sign-body remote from and opposing said shoulder for clamping said socket on said support.

5. An electrically-illuminated sign comprising an inclosure provided on its opposite side walls with openings, and outwardly-opening lamp-sockets, supported on said side walls and extending through said openings, the sockets on the opposite side walls opening in opposite directions.

6. An electrically-illuminated sign embracing two sheet-material plates which are joined to form an inclosure and are provided with openings and electric-lamp sockets which extend through said openings and have clamping engagement with the plates.

7. An electrically-illuminated sign embracing two joined sheet-material plates the central portions of which constitute the sign-bodies and the outer parts a hollow inclosing, lamp-socket-supporting frame and lamp-sockets in said frame which open in opposite directions.

8. An electrically-illuminated sign embracing two sheet-material plates, means for joining said plates, the outer margins of the plates being formed to provide a hollow lamp-socket-supporting frame, and lamp-sockets having clamping engagement with the walls of said frame, the central portions of the plates constituting the sign-bodies.

9. An electrically-illuminated sign comprising two sheet-material plates which are formed at their margins to constitute a hollow inclosing, lamp-socket-supporting frame, and the inner parts the sign-bodies, means for attaching together said plates between the socket-frame and the sign-bodies, and lamp-sockets supported in said frame.

10. An electrically-illuminated sign embracing two joined sheet-material plates the central portions of which constitute the sign-bodies and the outer parts a hollow inclosing, lamp-socket-supporting frame and lamp-sockets in said frame which open in opposite directions, the margins of said plates being turned toward each other to form flanges and the flange of one plate fitting within the other in overlapping relation.

In testimony that I claim the foregoing as my invention I affix my signature, in presence of two witnesses, this 11th day of April, A. D. 1902.

JOHN H. GOEHST.

Witnesses:
WILLIAM L. HALL,
GERTRUDE BRYCE.