

No. 744,331.

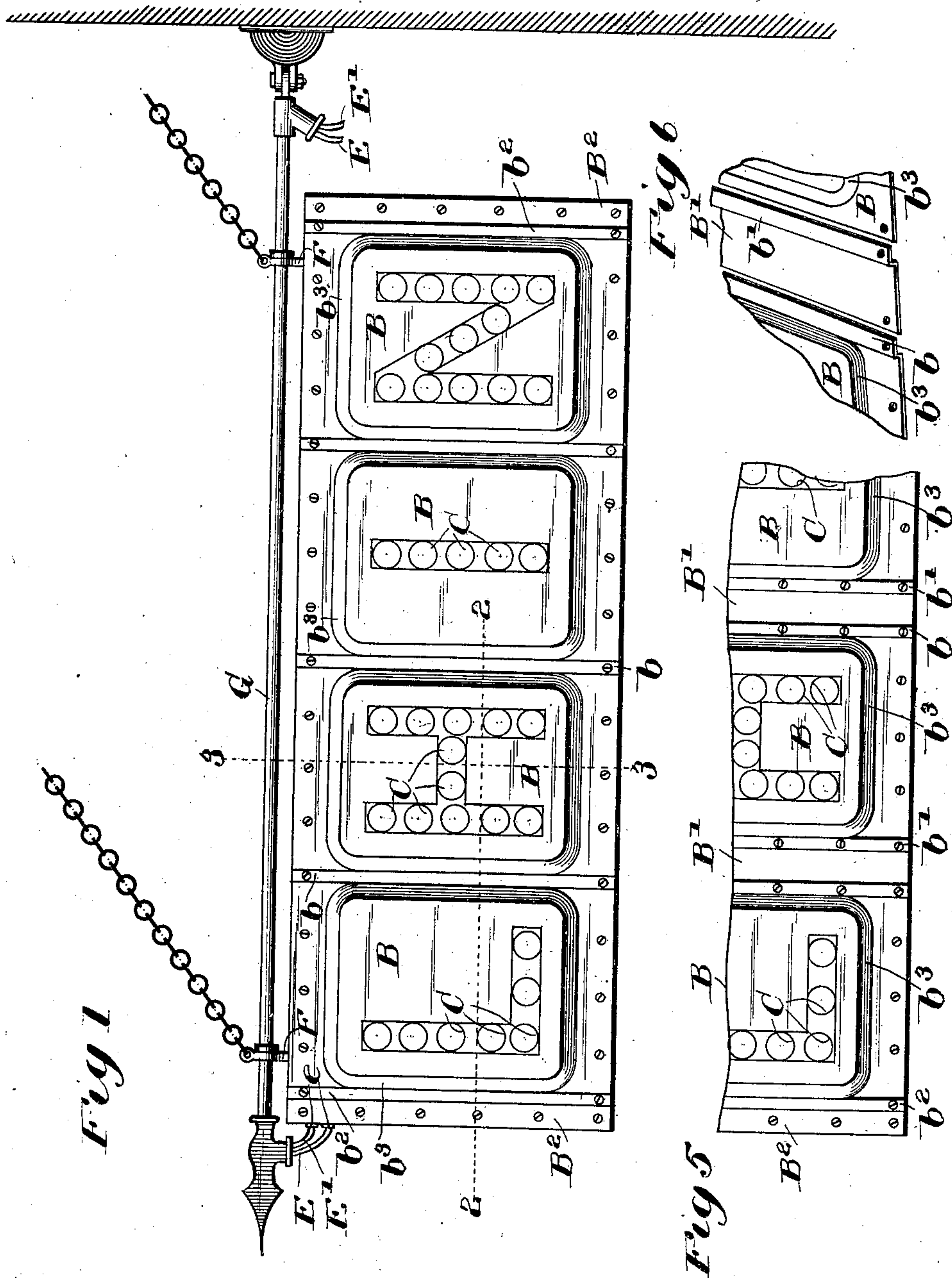
PATENTED NOV. 17, 1903.

J. H. GOEHST.
ELECTRICALLY ILLUMINATED SIGN.

APPLICATION FILED MAR. 19, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:-
Carl H. Crawford
B. C. White

Inventor:-
John H. Goehst
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his Attorneys

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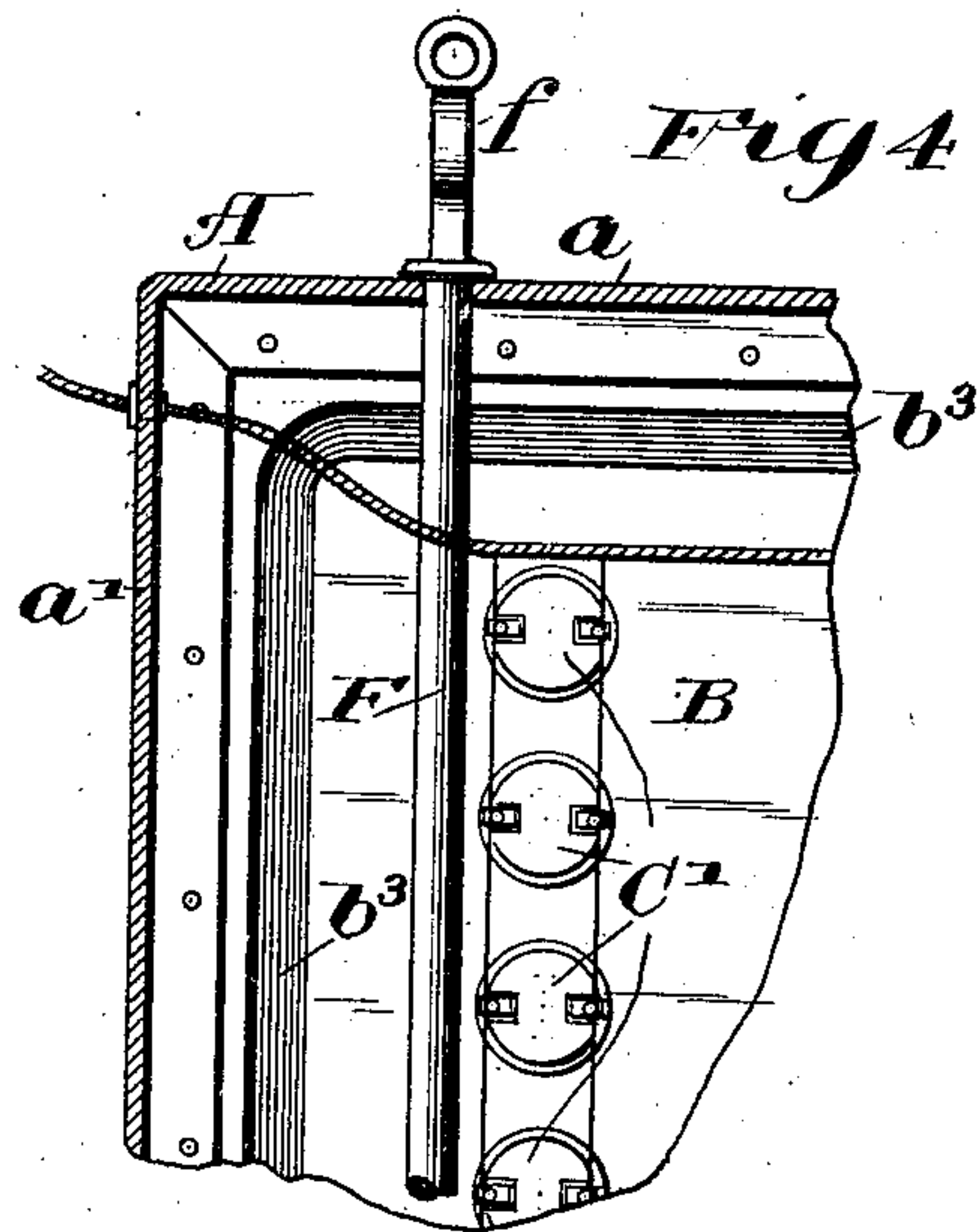
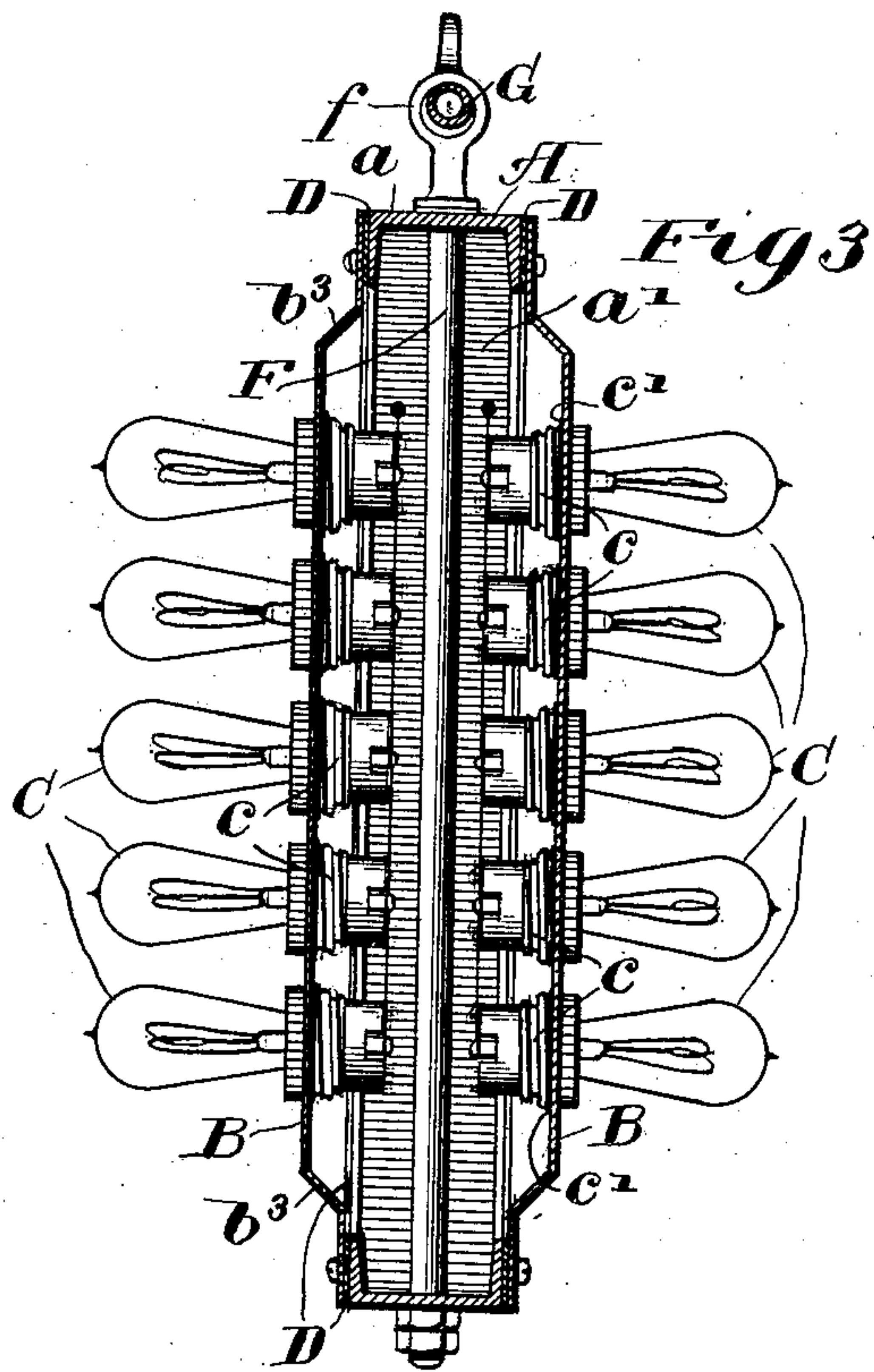
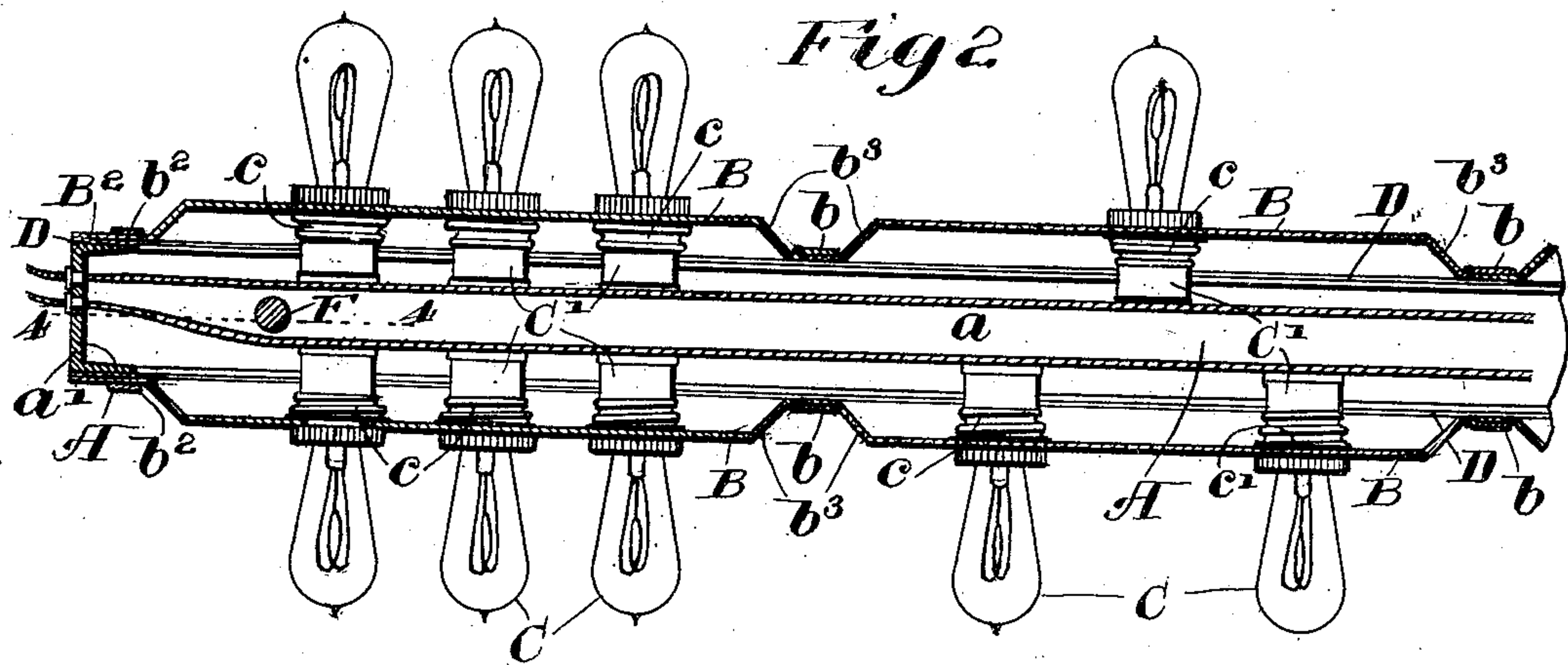
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UNITED STATES PATENT OFFICE.

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. 744,331, dated November 17, 1903.

Application filed March 19, 1903. Serial No. 148,541. (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 of that class in which the face of the sign is made of metal and serves to support incandescent lamps by which the sign is illuminated.

The invention consists in the matters hereinafter described, and pointed out in the appended claims.

In the accompanying drawings, illustrating my invention, Figure 1 is a view in side elevation of a sign embodying my invention, together with means for supporting or hanging the same. Fig. 2 is a horizontal section thereof, taken on line 2 2 of Fig. 1. Fig. 3 is a detail section taken on line 3 3 of Fig. 1. Fig. 4 is a detail section taken on line 4 4 of Fig. 2. Fig. 5 is a fragmentary face view of a sign, showing spacing-plates between the lamp-supporting panels of the sign. Fig. 6 is a detail perspective view showing the construction of the overlapping edges of two adjacent panels and an intermediate spacing-plate.

In its general construction the sign illustrated as embodying my invention consists of a frame A and a plurality of metal plates or panels B B, which are attached at their ends to the opposite side faces of two parallel members of the frame and form the opposite side faces of the sign, the said plates or panels constituting side walls, which form, with the marginal frame A, a box-like or hollow structure. The said frame corresponds in form with the margin of the sign and may be made in any manner adapted to give suitable strength or rigidity thereto. As herein shown, said frame A consists of parallel top and bottom members *a a* and upright end members *a' a'*, which are made of metal and consist of bars of channel shape in cross-section ar-

ranged with their marginal flanges directed inwardly. As illustrated and preferably constructed, the frame consists of a single channel-bar, which is bent into the form of an open frame, the flanges on the channel-bar forming opposite flat faces on the side edges of the frame, to which the panels B B are secured. The said panels B B serve to support the incandescent electric lamps C C, the sockets C' C' of which are secured to said panels. Each panel is provided with lamps adapted to form a letter, figure, or character, and the sign is provided with as many of such panels as there are letters or figures on the sign, together with such plates or blank panels as may be necessary to form the spaces between words or figures. The lamp-sockets extend through holes formed in the plates or panels and are secured thereto by means of screw-rings *c*, engaging screw-threads on the inner ends of the sockets, which project inside of the plates or panels, rubber packing-rings or gaskets *c'* being applied between the sockets and the plates or panels in the manner set forth in a separate application for Letters Patent, Serial No. 107,103, filed by me May 12, 1902.

Each plate or panel will be made of proper width to contain a single letter, number, or character, and the panels will be secured to the frame A side by side, the top and bottom edges of the panels being attached to the top and bottom or horizontal members *a a* of said frame. If the letters are to be spaced in the usual manner or at the usual distance apart, the panels will meet at their side edges and will overlap each other, so as to afford close joints, as seen in Fig. 1; but if wider spaces are required between the letters intermediate narrower spacing-plates B' will be interposed between the panels B B, said plates B' being made of the same height as the panels and arranged to meet the same at their side edges, as seen in Fig. 5. At the ends of the sign like spacing-plates B² may be used to cover or fill the spaces between the end panels and the ends of the frame, it being usually desirable that the spaces between the end letters and the end margins of the sign should be at least as wide as the spaces between the letters and the upper and lower margins of the sign, so

that there will be a continuous border around the sign, between the letters and the outer edges of the sign.

Any suitable attaching means may be employed for securing to the frame the edges of the plates B, B', and B², the means for this purpose herein shown consisting of screws inserted through the plates and into the frame members, to which they are attached.

In order to insure tight joints between the margins of the plates and the frame, I insert packing-strips D, of rubber or the like, between the said margins of the plates and the faces of the frame to which they are secured, said packing-strips serving to prevent water from entering the interior space of the sign. Such packing-strips may also be placed between the meeting edges of adjacent panels when the sign is constructed as shown in Fig. 1 or between the meeting edges of adjacent panels and plates when the sign is constructed as shown in Fig. 5; but they will not usually be necessary at these points because the flat overlapping parts will in themselves rest so closely in contact as to sufficiently prevent entrance of rain at the side faces of the sign.

The panels B and plates B' and B² are shown as provided with offset parts b, b', and b² at one of their side margins, such offset parts being arranged to overlap the meeting margins of the adjacent plates or panels and being raised above the level of the top and bottom margins of the panels and plates a distance equal to the thickness of said panels and plates, so that the said end margins will rest flat against the side faces of the frame A when the overlapping margins are in contact with each other.

The panels B B, to which the lamps forming the letters or numbers are attached, are shaped to form around the central parts thereof and between the said central parts and their top, bottom, and side margins oblique or angular bands b³, which, being at an angle to the planes of the margins and central parts of the panels, serve to stiffen or give rigidity to the same, so that when said panels are made of sheet metal they will have no tendency to bend or buckle, but will remain flat and keep their shape. The desired stiffening effect may be afforded by bands b³, made of any one of various cross-sectional forms; but, as herein shown, the central parts of the panels are elevated above the marginal parts of the panels, and the bands b³ serve to connect said central raised portions with the said marginal parts.

It will of course be understood that the wiring of the several lamps on the sign will be located within the hollow interior thereof, and will thereby be protected from the weather. As shown in the drawings, supply and return wires extend along the sockets for each panel, and said wires are connected with cables E E', which extend through insulating-thimbles e e, inserted in holes in the frame A.

For supporting the sign rods F F are shown as inserted vertically through the upper and lower members of the frame and provided at their upper ends with eyes f f, by which they may be engaged with a suitable support, such as the horizontal tubular rod G, which is attached to and projects from a building or other suitable support. The cables E E' are shown as extended from the thimbles e e through the tubular supporting-rod G, the same entering the outer end of the rod and projecting from the inner end thereof, where they may be connected with the wires of the supply system.

The sign illustrated is made alike on its two opposite faces, the same being adapted for use where both faces of the sign are visible or displayed to the public; but the invention will be equally embodied in a sign one side only of which is intended to be visible and which is provided with lamps on one of its side faces only.

In the construction of a sign made as described a frame is first made of rectangular form of proper width to receive the panels and of the length required, according to the number of letters to be placed on the sign and other considerations. Panels having the required letters are then selected and attached to the frame, spacing or filling plates being applied at the ends of the frame and between the panels as may be desired or preferred.

An important advantage of the construction described is that the separate panels, provided with letters, numbers, and characters required for signwork, may be prepared in advance of orders, and when a sign is needed it becomes necessary merely to make a frame of the required size and to then select and apply the panels bearing the needed letters, figures, and characters.

I claim as my invention—

1. An electrically-illuminated sign comprising a rigid frame and a plurality of separate lamp-supporting panels permanently attached to the frame and connected at their meeting margins by means affording waterproof joints.

2. An electrically-illuminated sign comprising a rigid surrounding frame, inclosing walls secured to the frame and forming therewith a box-like structure, said inclosing walls embracing a plurality of separate lamp-supporting panels and means affording tight joints between the panels and frame and between the adjacent margins of the panels.

3. An electrically-illuminated sign comprising a rigid open frame, and a plurality of separate lamp-supporting panels attached at two opposite margins to two opposite members of the frame, fastening devices extending through said margins of the panels and into the frame, said panels being joined edge to edge by means affording waterproof joints.

4. An electrically-illuminated sign comprising a rigid frame and a plurality of sepa-

rate lamp-supporting panels attached to the frame, said panels being offset at their meeting margins to a depth equal to the thickness of the panels.

5 5. An electrically-illuminated sign comprising a rigid open frame and a plurality of separate lamp-supporting panels which fit at their end margins against the side faces of two parallel members of the frame and are
10 attached thereto, said panels being joined at their side margins by means providing water-proof joints.

6. An electrically-illuminated sign comprising a rigid frame, a plurality of separate
15 lamp-supporting panels attached at two of their end margins to parallel members of the frame and spacing or filling plates attached at their end margins to the said parallel members of the frame and meeting the panels at
20 the side margins of the latter in overlapped relation.

7. An electrically-illuminated sign comprising a rigid frame, a plurality of separate
25 lamp-supporting panels attached at their end margins to parallel members of the frame and spacing or filling plates at the ends of the sign attached to the said parallel members and to the end members of the frame, and meeting at their inner margins in overlapped relation
30 the outer side margins of the outermost or end panels.

8. An electrically-illuminated sign comprising a rigid frame, a plurality of separate
35 lamp-supporting panels attached at their end margins to parallel members of the frame, spacing or filling plates at the ends of the sign attached to the said parallel members and to the end members of the frame and meeting at their inner margins in overlapped relation
40 the outer side margins of the outermost or end panels, and spacing or filling plates interposed between the panels, and attached at their ends to said parallel members of the frame with their said margins meeting in
45 overlapped relation the adjacent side margins of the adjacent panels.

9. An electrically-illuminated sign comprising a rigid frame, and a plurality of separate
50 lamp-supporting panels attached at their end margins to the side faces of parallel members of the frame, said side faces being flat and the panels each having at one of its sides, an outwardly offset marginal part adapted to overlap the adjacent side margin of an adjacent
55 panel or plate.

10. An electrically-illuminated sign comprising a rigid frame and a plurality of lamp-supporting panels attached at their end margins to the opposite parallel members of the
60 frame, said panels being each made of sheet metal and having a central part which is joined to the side and end marginal parts of the panel by a continuous portion which surrounds said central part and is bent at an angle to the por-

tions within and without the same to give stiffness to the panel, said central part of the panel being perforated to receive lamp-sockets.

11. An electrically-illuminated sign comprising a rigid frame and a plurality of sheet-metal lamp-supporting panels permanently
70 attached at their end margins to opposite, parallel members of the frame in overlapped relation, each of said panels being apertured for the insertion of a lamp socket or sockets, and being provided with a lamp socket or
75 sockets which is secured in the aperture or apertures therein.

12. An electrically-illuminated sign comprising a frame embracing channel-bars arranged with their side flanges directed inwardly and a plurality of lamp-supporting
80 panels on each side of said frame and overlapping at their end margins the said flanges, and means for fastening said panels to said flanges, said frame and attached panels constituting an inclosure to receive the inner ends
85 of lamp-sockets.

13. An electrically-illuminated sign comprising a frame embracing a continuous channel-bar bent to form an open or surrounding
90 frame with the flanges of the members directed inwardly and a plurality of lamp-supporting panels attached at their end margins to the flanges of opposite members of the frame and joined at their side margins by means affording
95 waterproof joints.

14. An electrically-illuminated sign comprising a frame a plurality of lamp-supporting panels attached at their end margins to the side faces of opposite parallel members of the frame in overlapped relation and packing-strips interposed between the said end
100 margins of the panels and the frame to form tight joints between said parts.

15. An electrically-illuminated sign comprising a frame, a plurality of sheet-metal lamp-supporting panels at each side of said frame and attached at their ends to opposite frame members and provided with openings to receive lamp-sockets, sockets extending through said openings each comprising
110 a tubular body made of insulating material and clamped on the panels, said frame being made of such width as to receive, without interference, sockets extending through said panels from both sides of the sign, thereby constituting an inclosure into which the inner ends of the lamp-sockets are adapted to extend.
115

In testimony that I claim the foregoing as
120 my invention I affix my signature, in presence of two witnesses, this 9th day of March, A. D. 1903.

JOHN H. GOEHST.

Witnesses:

C. CLARENCE POOLE,
WILLIAM L. HALL.