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Patented Apr. 1, 1902.

H. TRIPP & G. E. STEPHENSON.

ELECTRIC LIGHT SIGN.

(Application filed Dec. 17, 1901.)

(No Model.)

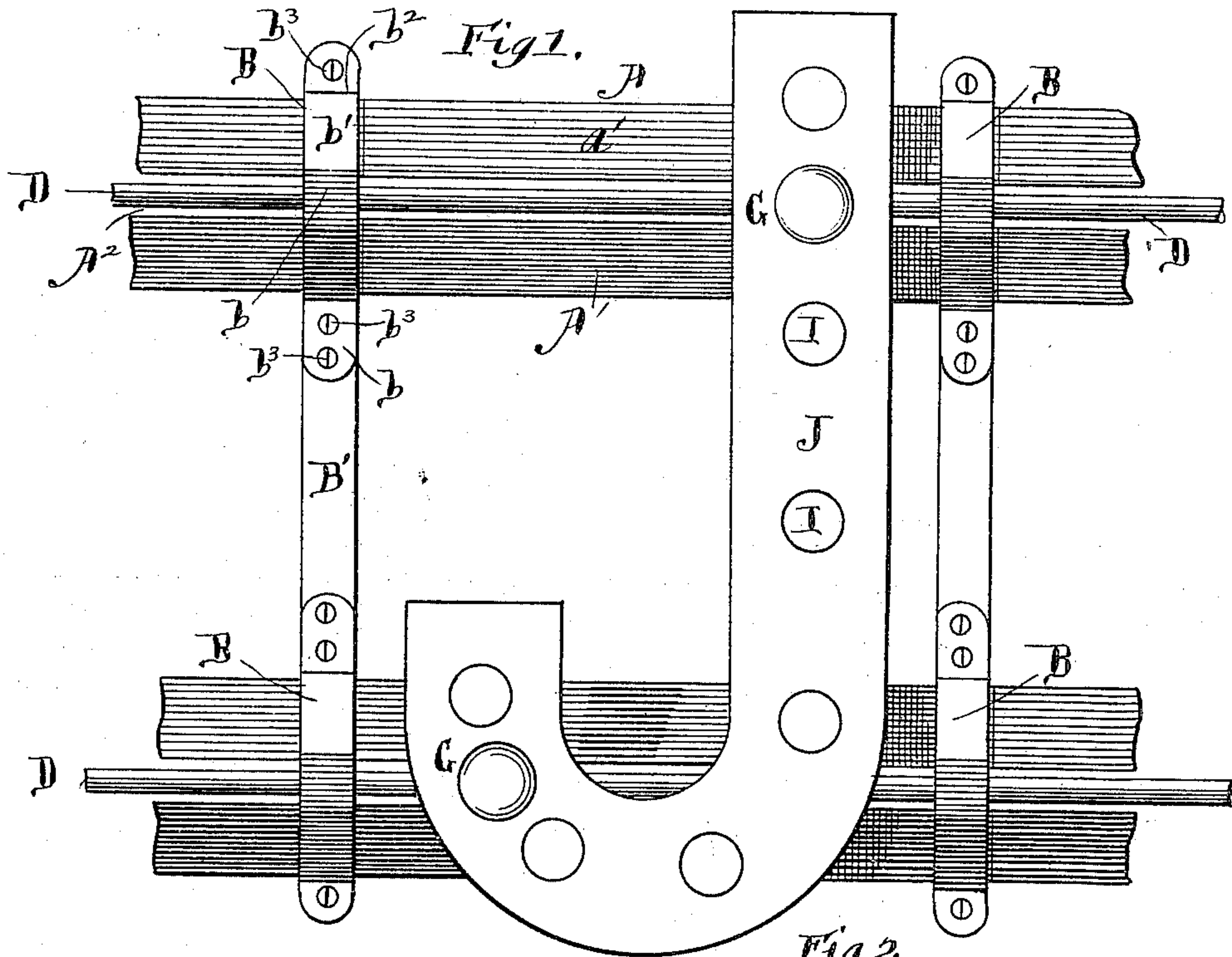
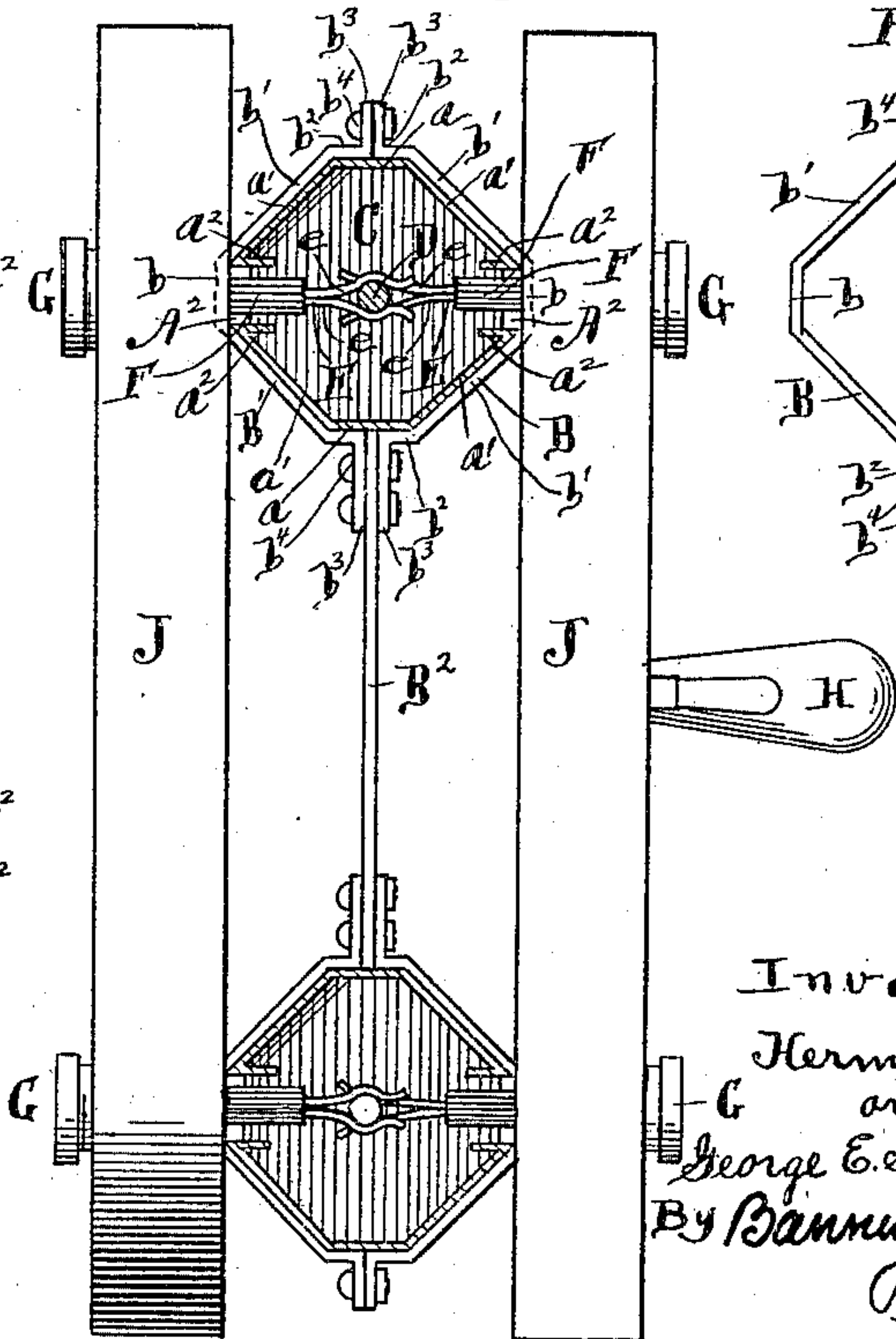
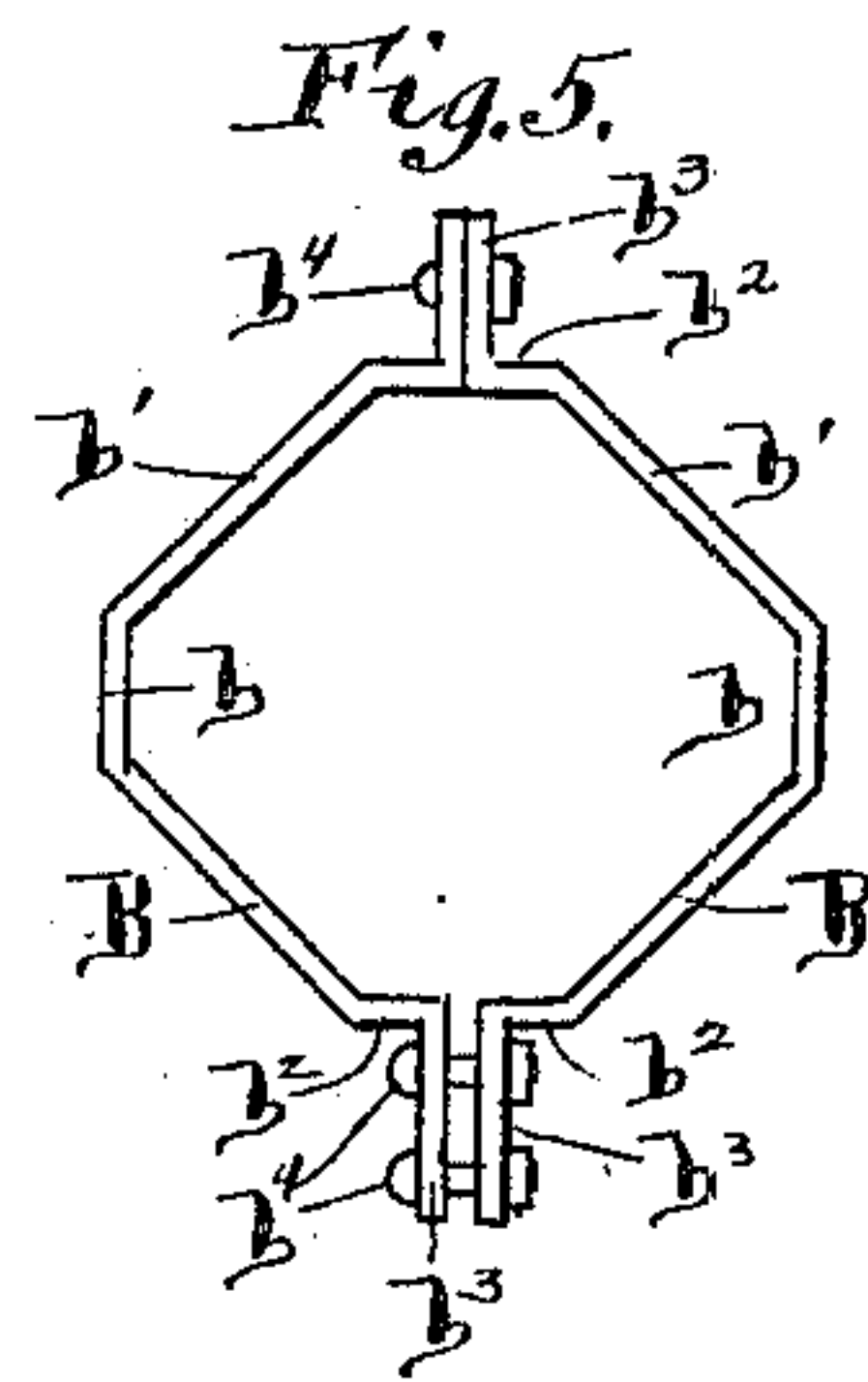
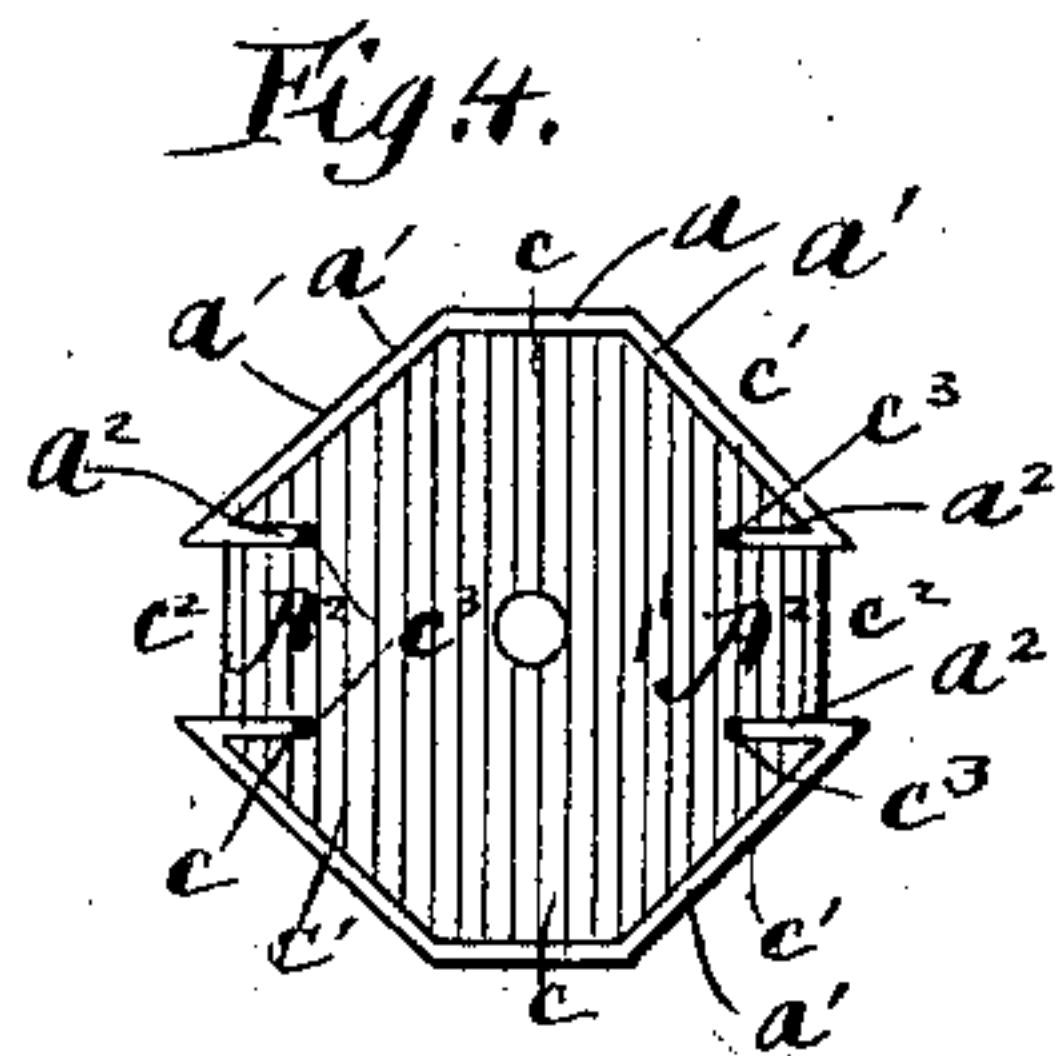
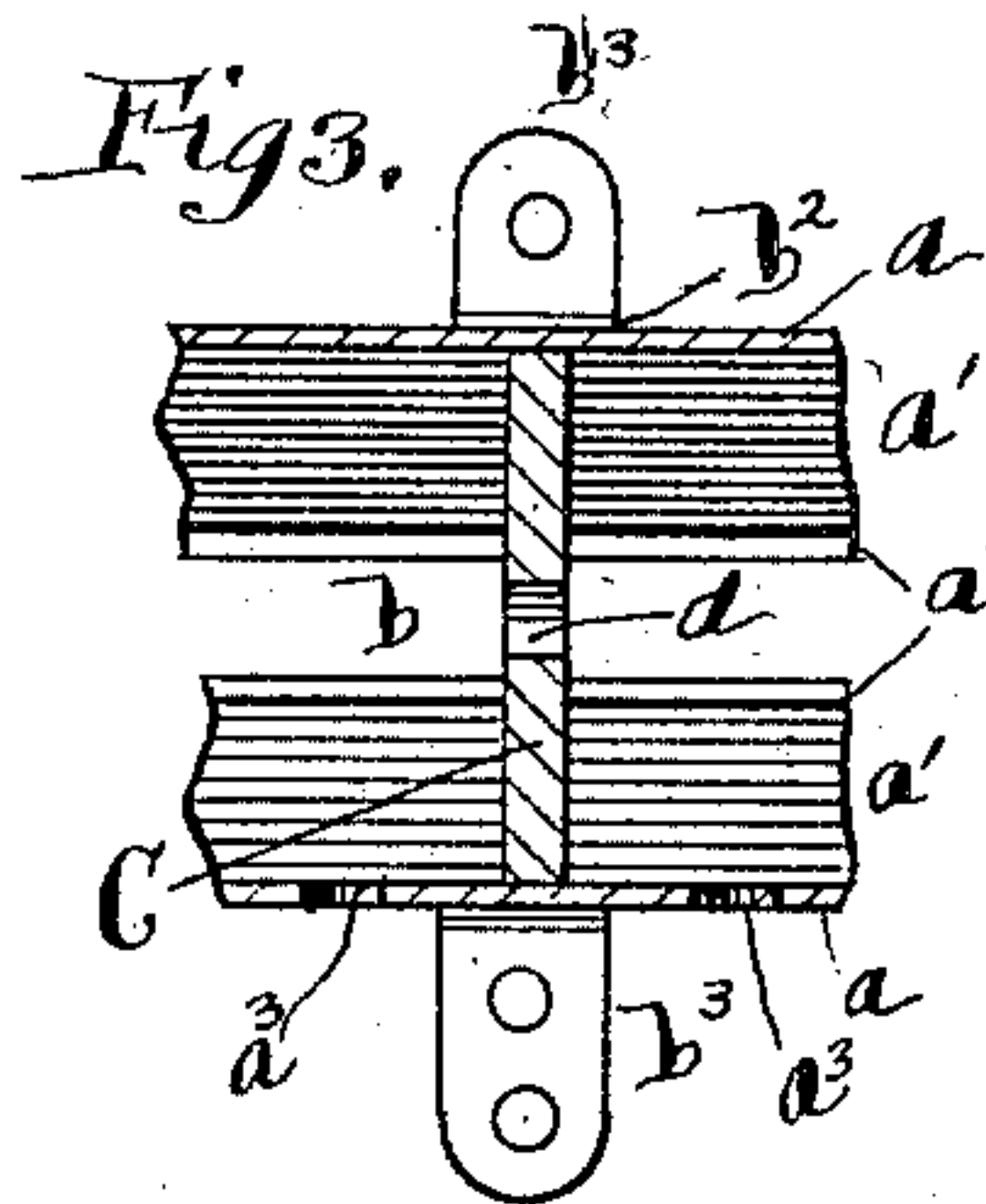


Fig. 2.



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UNITED STATES PATENT OFFICE.

HERMAN TRIPP AND GEORGE E. STEPHENSON, OF CHICAGO, ILLINOIS.

ELECTRIC-LIGHT SIGN.

SPECIFICATION forming part of Letters Patent No. 696,775, dated April 1, 1902.

Application filed December 17, 1901. Serial No. 86,249. (No model.)

To all whom it may concern:

Be it known that we, HERMAN TRIPP and GEORGE E. STEPHENSON, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Electric-Light Signs, of which the following is a specification.

The invention relates to electric-light signs having the characteristics of a readily-removable letter or letters, the letter or letters being detachably connected to the conductor and to the support or carrier for the conductors and letters; and the primary object of the invention is to construct a simple, practical, and efficient support or carrier for the conductors and for the attachment and detachment of the letter or letters.

Other objects are to improve the formation of the support or carrier, to insure a suspension of the conductor in a firm manner, to give rigidity and strength to the support or carrier and at the same time provide for lightness and economy in construction, to improve the arrangement for insulating and supporting the conductors and uniting the sections or divisions of the support or carrier, and to

an edge elevation of the clamp or clasp encircling the bar or hanger.

The carrier or support is constructed of two companion bars or hangers set at the proper distance apart for the length of letters of the sign, leaving an open space between the two companion bars or hangers. Each bar or hanger is preferably made of galvanized iron, but other suitable metal or material can be used, and each bar or hanger is made of two similar sections or halves A and A', set apart, so as to leave a space or slot A² between them for the passage of the connection or clamp which attaches the letter to the conductor. As shown, each half or section of the bar or hanger has three sides a and a', the sides a' standing in diagonal or inclined relation to the side a, and the lower edge of each side a' is inwardly turned to form a lip or edge a² longitudinally of the section or half of the bar or hanger, as shown in Figs. 2, 3, and 4. The two sections or halves when in position for the complete bar or hanger would have what might be termed a "hexagonal" formation in cross-section, with the open space or slot A² centrally separating the sections or halves, and this formation of three sides for

body of the bar or hanger, as shown in Figs. 1 and 2. The arrangement shown has two bars or hangers connected one to the other by ties or straps B' , with the ends of each strap between the ears b^3 , on one side or end of its clasps or clamps, and the end of the bar or strap is secured firmly in place by the tightening-bolts b^4 , two of which, as shown, are employed, the bolts passing through the ears and the end of the bar or strap. The bar or strap can be of the required length for the separation desired between the two companion bars or hangers for the space which may be wanted, and so as to set the bars or hangers at the necessary distance apart for the attachment of the letter or letters.

A plate or block C , preferably of insulating material, is located in each bar or hanger so as to be in direct line with the position of the clasp or clamp around the bar or hanger and furnish a support for retaining the sections or halves of the bar or hanger apart for the openings or slots A^2 on each side in the construction shown, and for this purpose the insulating plate C has an upper and lower straight side, diagonal or inclined sides, and vertical straight sides, forming, in effect, an octagonal shape for the insulating-plate, and when in position the straight sides c at the top and bottom abut against the straight sides a of the sections or halves of the bar or hanger, the diagonal or inclined sides c' abut against the diagonal or inclined sides a' of the sections or halves of the bar or hanger, and the straight sides c^2 are in line with the opening or slot of the bar or hanger, and the turned lip or edge a^2 is entered into a slot c^2 therefor in the edge of the insulating-plate, a slot c^2 being provided for each lip or edge, as shown in Fig. 4. The insulating blocks or plates are spaced a sufficient distance apart to provide a suspension or support for the conductors, and a conductor D is located in each bar or hanger, each conductor passing through holes d therefor in the insulating blocks or plates, and these conductors are for the purpose of conveying the electric current to the electric lamps of the letters for illuminating the letters, as usual. The insulating blocks or plates, in connection with the encircling clasps or clamps, give rigidity and firmness to the body of each bar or hanger, and the blocks or plates and the clasp or clamps should be spaced apart so as to furnish a support for the conductors, which will hold the conductor against sagging to an extent that will take it out of line with the slots or openings longitudinally of the bar or hanger. The insulating blocks or plates are held firmly in place by the pressure of the clasps or clamps, and the blocks or plates and the clasps or clamps, with their connecting parts, should be adjusted so as to not interfere with the attachment of the letters, and for this purpose the clasps or clamps and the insulating blocks or plates are movable on and in the bar or hanger, and in the event of a slight

change in the position of the clasps or clamps and their connecting-bar to permit of the proper location of a letter the change in position can be quickly made, as all that is necessary to be done is to loosen the tightening-bolts, move the clasps or clamps and their bar, as required, and then tighten up the clamping-bolts, again securing the clasps or clamps and their bar firmly in position.

The arrangement shown has the letters applied and held in place by spring-forks E , each fork having spring arms or fingers e , which can be sprung over the conductor when the forks are entered through the longitudinal slot or opening in the bar or hanger, and, as shown, a spring-fork is used for each letter, located near the top and bottom of the letter and at the required distance apart for the entrance of the forks into the longitudinal slots or openings of the two companion bars or hangers, as shown in Fig. 2. The spring-forks, as shown, are connected to and form a part of a fusible plug of the usual construction used in the letters for electric signs, which plug is entered into the casing of the letters, as usual, and admission is had thereto by a removable cap G on the outer face of the letter, a plug and cap being provided at the top and bottom of the letter, as usual. The lamps for lighting up the letter or letters are arranged in series on the letter, so as to present the proper outline for the letter, and incandescent electric lamps can be used, which lamps H , one only being shown, are entered into the ordinary sockets I for incandescent lamps located in the frame J of the letter.

The bars or hangers are to be made of a length for the reception of the number of letters in the sign and are to be positioned apart to suit the length of letters. The bars or hangers are connected together by the cross-plates or ties and the encircling clasps or clasps, with the insulating plates or blocks in place within the interior of the bars or hangers. The conductors are passed through the bars or hangers and held suspended centrally therein by the insulating blocks or plates. The bars or hangers thus completed are attached to the building or other place of use for the sign by brackets or suspending and supporting rods or otherwise, so as to have an overhung relation from the building or place of use or other position, as may be required. The bars or hangers furnish a support or carrier for the letter or letters, and the letter or letters are attached by slipping the spring-forks of the letter or letters through the longitudinal openings or slots A^2 for the fingers of the forks to pass over and clamp onto the conductors, the fingers furnishing a connection with the fusing-plug from which the conducting-wires in the letter extend to the several lights, as usual. The letter or letters can be applied to one side only of the support or carrier or to both sides thereof when the support or carrier overhangs, and as illustrated the letter or letters are applied

to both sides of the support or carrier. The support or carrier when set flat against the wall of a building or other place of use only permits the application of the letters to the front side, in which case the rear straight sides of the bars or hangers furnish a bearing for maintaining the sign as a whole in position. The letters in case of accident to any one or more of them can be readily detached, it only being necessary to withdraw the letter or letters from the support or carrier by an outward pull to disengage the spring-arms of the forks, and the letter when detached can be repaired or replaced by a new letter by simply inserting the spring-forks through the longitudinal slots or openings for the arms of the fork to pass over and engage with the conductors.

The support or carrier, made, preferably, of galvanized iron or other suitable material and having two similar bars or hangers each consisting of two halves or sections, each half or section preferably formed with three sides, makes an exceedingly firm and unyielding carrier or support when completed by the attachment of the clasps or clamps and the insertion of the insulating blocks or plates. The carrier or support as a whole presents an open space instead of a solid background, giving the sign a better outline, and at the same time the construction is one which will maintain the sign as a whole in shape. The completed sign is easily handled, as it is not heavy and cumbersome, and the adjustability of the clasps or clamps and the cross-plates or tie-bars enables the spacing to be adjusted to accommodate the letters without having the clasps or clamps and the cross-bars or tie-plates interfere with the attachment and detachment of the letters, and the construction of the carrier or support is simple in its nature and at the same time is one which enables a letter or letters to be applied to both sides of the sign or only to one side, as may be necessary, thus facilitating the construction of signs having letters on both faces.

The bars or hangers shown are arranged for the attachment of letters in a row and have the sign a single-line formation; but it will be readily seen that by adding another pair or a second pair of similar bars or hangers a two-line or three-line sign is provided. The bars or hangers can be made in defined lengths, and these lengths can be joined end to end, so as to give any length required for a sign, and in joining the lengths end to end a clasp or clamp can be made to encircle the jointure at the abutting ends, so as to furnish rigidity at the juncture between the two lengths. The making of the bars or hangers in defined lengths enables the lengths to be joined end to end for a long sign or to be separated and placed one over the other for a wide sign, thus providing for the construction of signs of different character from the lengths of the bars or hangers. The bottom of the lower section

or half of each bar or hanger can be provided with holes a^3 to allow water or moisture to escape from the bar or hanger, thereby preventing water from rising in the bars or hangers and contacting with the conductor, thereby impairing its conductive qualities, the holes a^3 extending, if desired, in a series or being at proper distances apart for escaping the water or moisture. The arrangement shown provides for an open space between the two bars or hangers; but for some uses this open space may not be desirable. When necessary, the open space can be closed by a piece of metal or other material placed between the two hangers, held in place in any suitable manner.

What we regard as new, and desire to secure by Letters Patent, is—

1. In an electric-light sign, the combination of two companion hollow bars or hangers, each bar or hanger consisting of two trough-shaped halves or sections spaced apart to leave on each side an opening or slot longitudinally of the bar or hanger, clasps or clamps encircling the body of each bar or hanger, connecting-straps or tie-bars between the two bars or hangers, and interior supporting plates or blocks for each bar or hanger, substantially as described.

2. In an electric-light sign, the combination of two companion hollow bars or hangers, each bar or hanger consisting of two trough-shaped hollow sections spaced apart to leave on each side an opening or slot longitudinally of the bar or hanger, clasps or clamps encircling the body of each bar or hanger, connecting-straps, or tie-bars between the two bars or hangers, interior supporting plates or blocks of insulating material, and a conductor for each bar or hanger suspended by the interior plates or blocks, substantially as described.

3. In an electric-light sign, the combination of two companion hollow bars or hangers, each bar or hanger consisting of two trough-shaped halves or sections spaced apart to leave on each side an opening or slot longitudinally of the bar or hanger, clasps or clamps encircling the body of each bar or hanger, connecting-straps or tie-bars extending from clasp to clasp between the two bars or hangers and united at the ends to the clasps, interior supporting plates or blocks of insulating material in line with the clasps or clamps on each bar or hanger, and a conductor for each bar or hanger suspended by the plates or blocks centrally within and longitudinally of each bar or hanger, substantially as described.

4. In an electric-light sign, the combination of two companion hollow bars or hangers, each bar or hanger formed of sheet material and consisting of two trough-shaped halves or sections spaced apart to leave on each side an opening or slot longitudinally of the bar or hanger, each half or section having three sides, clasps or clamps encircling the body of each bar or hanger, connecting-straps or tie-

bars between and attached to the clasps or clamps and uniting the two bars or hangers, interior supporting plates or blocks for each bar or hanger, and a conductor suspended by the plates or blocks centrally and longitudinally of each bar or hanger, substantially as described.

5. In an electric-light sign, the combination of two companion hollow bars or hangers, each bar or hanger formed of sheet material and each consisting of two trough-shaped halves or sections having three sides and spaced apart to leave on each side of the bar or hanger as a whole an opening or slot longitudinally of the bar or hanger, clasps or clamps encircling the body of each bar or hanger, each clasp or clamp consisting of two halves or sections each half or section having four sides and each half or section having at its ends an ear, connecting-straps or tie-bars entered between the ears of the clasps or clamps, and attached to the ears by tightening-bolts and uniting the two bars or hangers, interior supporting plates or blocks having eight sides fitting the hollow trough sections or halves, and a conductor for each bar or hanger centrally and longitudinally suspended therein by the plates or blocks, substantially as described.

6. In an electric-light sign, the combination of two companion bars or hangers, each bar or hanger formed of sheet material and each consisting of two trough-shaped halves or sections, each half or section having a straight wall and a diagonal wall on each side of the straight wall, and the two halves or sections spaced apart to leave on each side of the bar or hanger as a whole an opening or slot longitudinally of the bar or hanger, clasps or clamps encircling the body of each bar or hanger, each clasp or clamp consisting of two halves or sections each half or section having a straight side, a diagonal side at each end of the straight side and a short straight end at the terminus of the diagonal sides with ears projecting at right angles from the straight ends, connecting-straps or tie-bars entered between the ears of the clasps or clamps on one side and attached to the ears by tightening-bolts and uniting the two bars or hangers, interior supporting plates or blocks, each plate or block having eight sides, three of the sides fitting the straight and diagonal walls of the hollow trough sections or halves of the bar or hanger, and a conductor for each bar

or hanger centrally and longitudinally suspended by the plates or blocks in the bar or hanger, substantially as described.

7. In an electric-light sign, the combination of two companion bars or hangers, each bar or hanger formed of sheet material and each consisting of two trough-shaped halves or sections, each half or section having a straight wall and a diagonal wall on each side of the straight wall, and the two halves or sections spaced apart to leave on each side of the bar or hanger as a whole an opening or slot longitudinally of the bar or hanger, clasps or clamps encircling the body of each bar or hanger, each clasp or clamp consisting of two halves or sections each half or section having a straight side, a diagonal side at each end of the straight side and a short straight end at the terminus of the diagonal sides with ears projecting at right angles from the straight ends, connecting-straps or tie-bars entered between the ears of the clasps or clamps on one side and attached to the ears by tightening-bolts and uniting the two bars or hangers, interior supporting plates or blocks, each plate or block having eight sides three of the sides fitting the straight and diagonal walls of the hollow trough sections or halves of the bar or hanger, a conductor for each bar or hanger centrally and longitudinally suspended by the plates or blocks in the bar or hanger, and a letter detachably connected to and carried by the conductor and the bars or hangers, substantially as described.

8. In an electric-light sign, the combination of two companion hollow bars or hangers, each bar or hanger consisting of two trough-shaped halves or sections spaced apart to leave on each side an opening or slot longitudinally of the bar or hanger, clasps or clamps encircling the body of each bar or hanger, connecting-straps or tie-bars between the two bars or hangers, each connecting-strap or tie-bar connected with a clasp or clamp on each hollow bar or hanger, interior supporting plates or blocks for each bar or hanger, carrying the conductor within the bar or hanger, and openings in the bottom of each lower trough-shaped half or section of each bar or hanger, substantially as described.

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