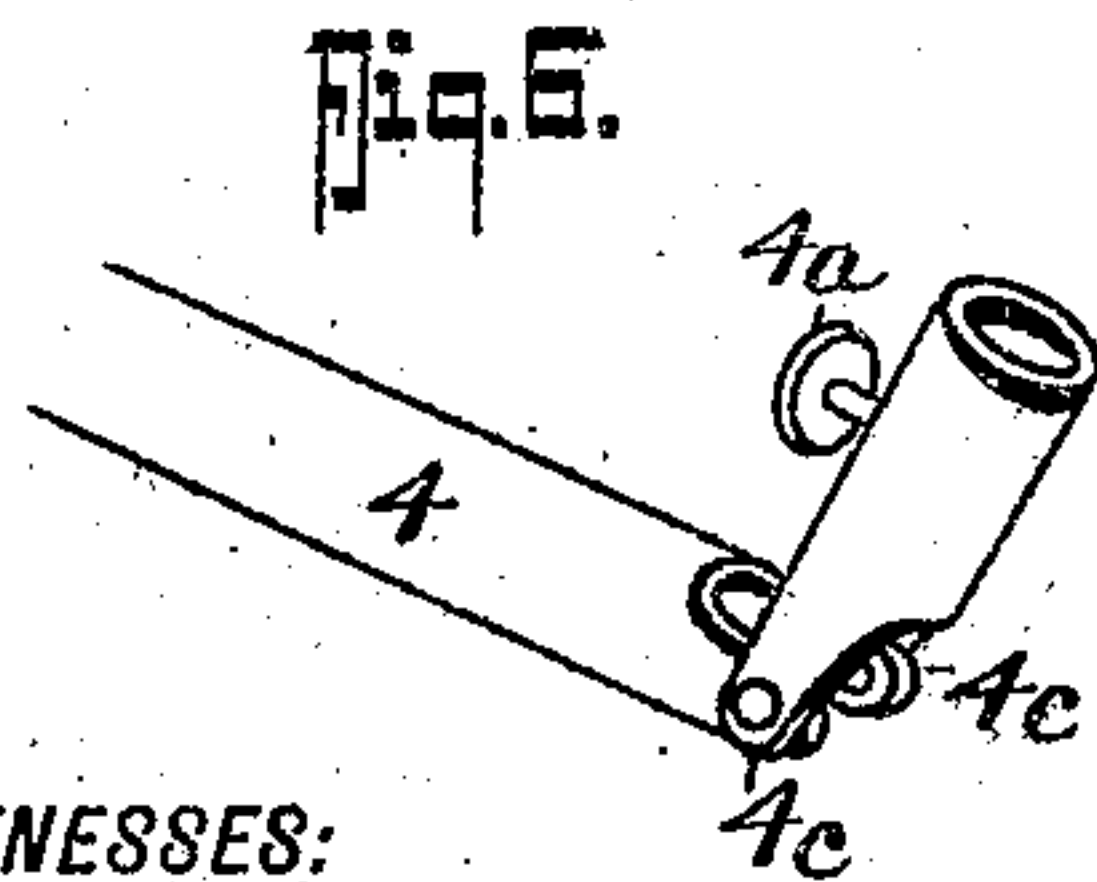
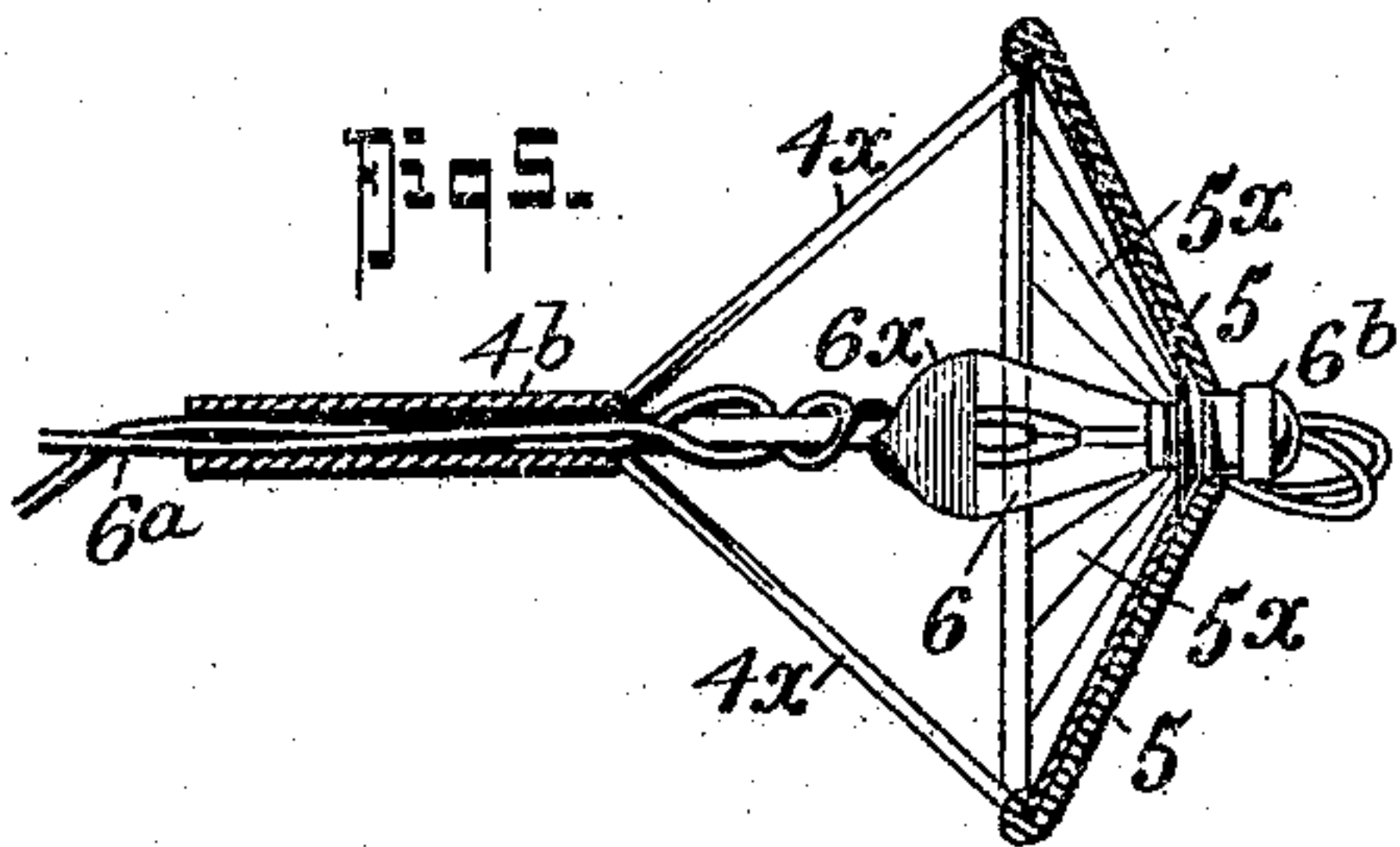
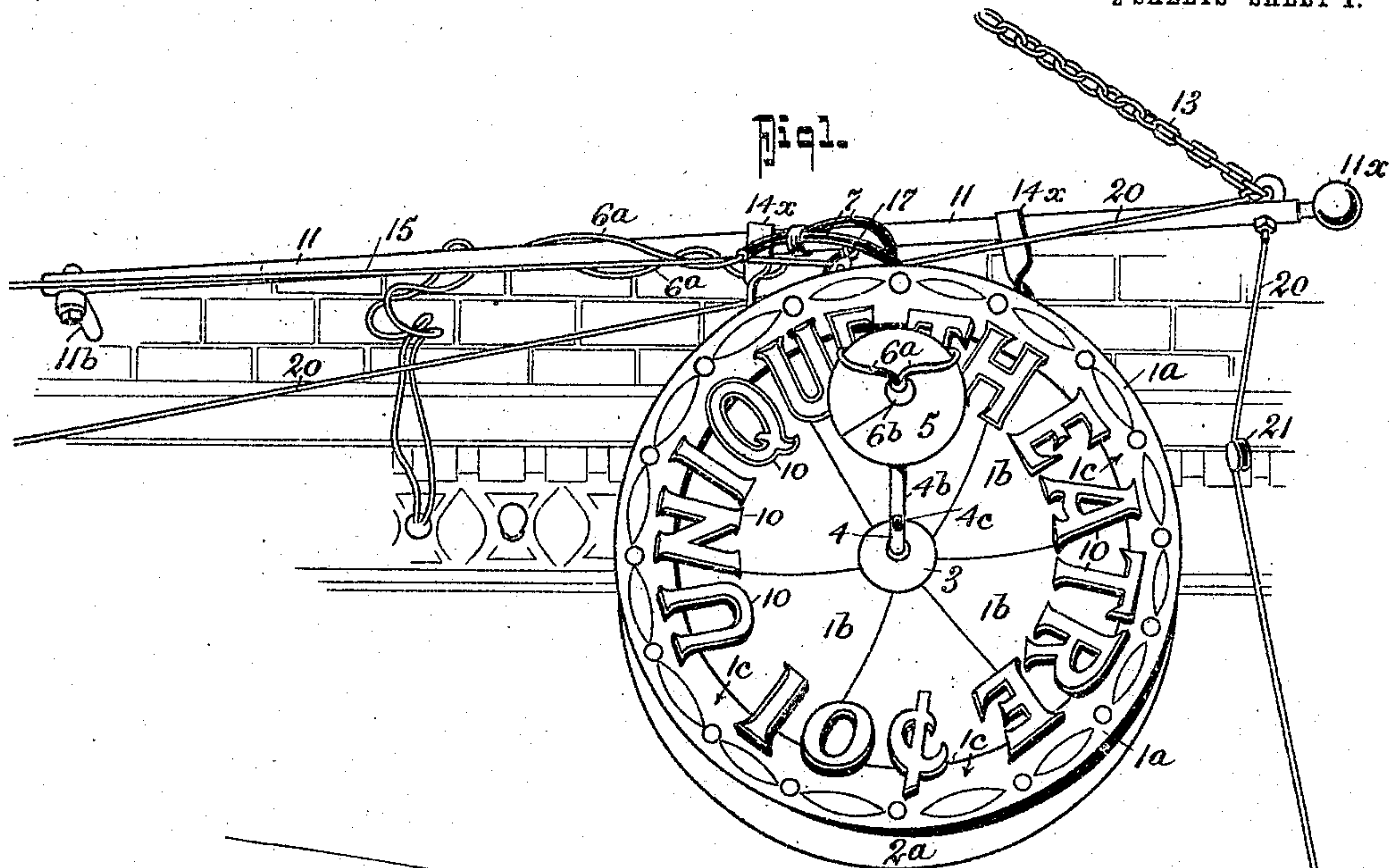


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R. E. BELCHER.  
ELECTRIC SIGN.  
APPLICATION FILED OCT. 27, 1908.

Patented Mar. 23, 1909.  
2 SHEETS—SHEET 1.



WITNESSES:

John T. Schrott  
Charles H. Wagner.

INVENTOR

Robert E. Belcher.

BY

Fred G. Dieterich & Co.  
ATTORNEYS.

R. E. BELCHER.

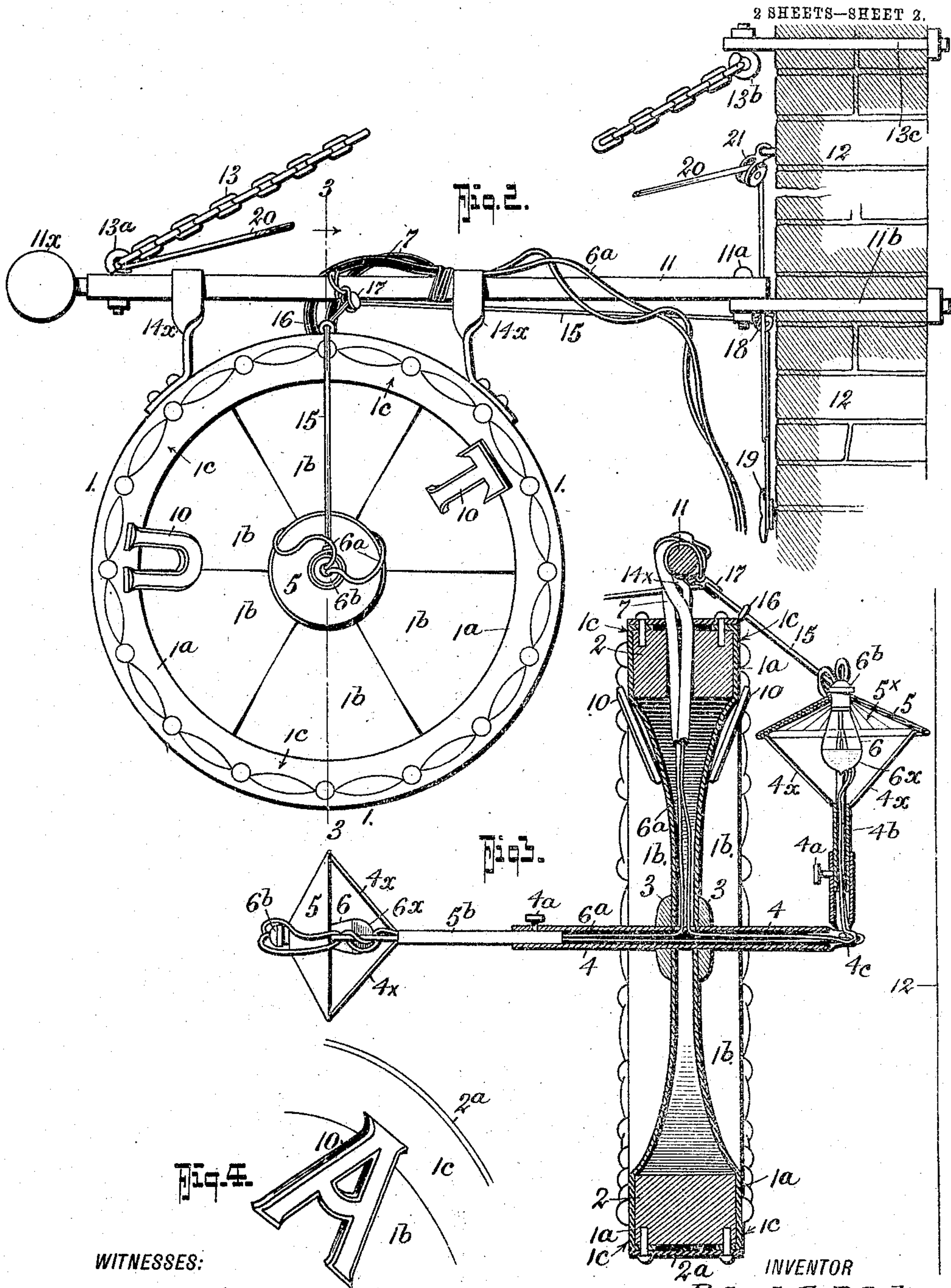
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ATTORNEYS.



# UNITED STATES PATENT OFFICE.

ROBERT E. BELCHER, OF PORTLAND, OREGON.

## ELECTRIC SIGN.

No. 916,092.

Specification of Letters Patent.

Patented March 23, 1909.

Application filed October 27, 1908. Serial No. 459,736.

*To all whom it may concern:*

Be it known that I, ROBERT E. BELCHER, residing at Portland, in the county of Multnomah and State of Oregon, have invented certain new and useful Improvements in Electric Signs, of which the following is a specification.

My invention relates to certain new and useful improvements in electric signs, and in its general make-up comprises a light carrying body to which suitable letters are attached, light bulbs supported at the ends of arms or bars, and provided with reflectors for concentrating the light upon the faces of the letter carrying body whereon the letters are arranged in concaved formation.

Primarily my invention has for its object to provide an electrical sign, each face of which can be illuminated by one electric light bulb instead of having each letter separately illuminated by numerous electric light bulbs, and to provide an electric sign that can be read with equal facility from opposite directions, and to provide an electric sign that is absolutely fire-proof and of lighter construction than those now in ordinary use.

My invention also embodies those novel details of construction, combination and arrangement of parts, all of which will be first described in detail and then be specifically pointed out in the appended claims, and illustrated in the accompanying drawings, in which:

Figure 1, is a perspective view illustrating my improved sign folded up against a building. Fig. 2, is a side elevation showing the sign in use. Fig. 3, is a central vertical section on the line 3—3 of Fig. 2. Fig. 4, is a detail view of one of the letters. Fig. 5, is a detail view of a part of my invention. Fig. 6, is a detail perspective view of another part which coöperates with that shown in Fig. 5.

Referring now to the accompanying drawings, in which like letters and numerals of reference indicate like parts in all of the figures, 1 designates the sign body, which consists of a sheet metal casing 1<sup>a</sup> having concaved faces 1<sup>b</sup> and parallel peripheral faces 1<sup>c</sup>, the faces 1<sup>c</sup> being suitably ornamented by scroll-work, or otherwise. A suitable supporting frame 2 may be provided, and surrounding the same a sheet metal strip 2<sup>a</sup> may be provided, as shown in Fig. 3, of the drawings.

At the center of the concaved faces 1<sup>b</sup> are rosettes 3, and through these rosettes 3 a main

pipe 4 passes, the pipe 4, at one side being provided with a set screw 4<sup>a</sup> to secure the pipe arm 5<sup>b</sup> that carries the reflector 5 and light bulb 6, in place.

At the other side of the sign, the pipe 4 is provided with a hinge joint 4<sup>c</sup> and a set screw 4<sup>a</sup>, the set screw 4<sup>a</sup> serving to hold the pipe arm 4<sup>b</sup> that supports a second reflector 5, and which carries a second light bulb 6 to illuminate the other side of the sign.

The concaved faces 1<sup>b</sup> of the sign body 1 are covered in practice, with two coats of green paint and two coats of green smalts, which serve to furnish a dark background for the letters 10, which letters may be formed of aluminum, or covered with aluminum paint, to give a contrasty effect. The letters 10 are secured in any suitable manner to the peripheral portions of the concaved faces 1<sup>b</sup> so as to leave a slight space between the letters and the concaved faces 1<sup>b</sup>, so that when the light is reflected onto the sign no shadows will be caused by the letters.

The hollow pipe 4 serves as a conduit for the wires 6<sup>a</sup> that pass to the sockets 6<sup>b</sup> of the lamp bulbs 6 and convey the current thereto, the wires 6<sup>a</sup> passing through the interior of the sign body and out through suitable "alphaduct lumes" 7.

Each pipe arm 4<sup>b</sup> terminates in fingers 4<sup>x</sup> to which the reflectors 5 are secured. The reflectors 5 are slightly concaved or coniformed, as conditions may require, and are provided at their center with the sockets 6<sup>b</sup> into which the bulbs 6 are screwed, the bulbs 6 having frosted tips 6<sup>x</sup> to effect a more even distribution of the light, and also tend to cause the light from the bulb to be directed onto the reflectors 5 and by them focused onto the letter faces 1<sup>b</sup> of the sign and concentrate the rays of light thereon, thus enabling the letters to be read at a greater distance than if each letter were separately illuminated with electric bulbs. Each reflector 5 is of the sectional mirror-back type, that is to say, the reflecting surface 5<sup>x</sup> is composed of a series of mirror portions, see Figs. 3 and 5.

Each concaved face 1<sup>b</sup> of the sign is composed of a plurality of sections, each section being concaved to the required degree.

11 designates an arm or support which is pivoted at 11<sup>a</sup> to a bolt 11<sup>b</sup> that is secured to the masonry 12 of the building from which the sign is supported and the arm or hanger bar 11 is ball-tipped as at 11<sup>x</sup>, and is further supported by a chain 13 that is se-



cured to an eye bolt 13<sup>a</sup> at the forward end of the arm 11 and is further secured to an eye bolt 13<sup>b</sup> that in turn is fastened to a bar 13<sup>c</sup> in the wall 12 of the building to which the sign is attached.

The sign 1 is supported from the arm or hanger bar 11 by straps 14<sup>x</sup>, as shown in Figs. 1 and 2, of the drawings.

15 designates a braided wire that is secured to the back of the reflector 5 and passes through a screw eye 16 at the top of the reflector and through a pulley block 17 secured to the arm 11 from which it passes over at an angle of about 45° to the wall 12, and through another pulley block 18, after which it is secured to a cleat 19 that is fastened to the wall.

20 represents a pair of cables secured to the eye bolt 13<sup>a</sup> and passing through pulley blocks 21, at each side of the rod 11, by means of one of which the arm 11 may be swung on its pivot to fold the sign against the wall 12, as shown in Fig. 1 of the drawings, and by means of the other the sign may be folded back to its projected position.

As the sign is moved from the position shown in Fig. 2 to the position shown in Figs. 1 and 3, the pipe arm 4 will have its pivot section together with the corresponding arm 4<sup>b</sup> and reflector 5, swung up into a substantially vertical position, as indicated in Fig. 3, so that when the sign is parallel with the wall 12, the arm 4<sup>b</sup> with the corresponding reflector and bulb will be drawn up into the position shown in Fig. 3, and as the hanger arm or bar 11 is again drawn to the position shown in Fig. 2, the folded up reflector 5 will drop into alinement with the other reflector and concentrate its light upon its respective face 1<sup>b</sup> of the sign.

From the foregoing taken in connection with the accompanying drawings, it is thought the complete construction, operation and many advantages of my invention will be readily understood by those skilled in the art to which the invention appertains.

What I claim is:

1. In a sign, a sign body having letter carrying faces and letters mounted thereon around a common center, a light carrier projected from said common center, a reflector and light carried by said carrier to focus the light on the letter face of said sign body, said light carrier having a pivoted section, a pivoted hanger for said sign body, and means for moving said hanger on its pivot and simultaneously actuating said pivoted section of the light carrier to swing the same on its pivot.

2. A sign comprising a body having concaved side faces, letters mounted thereon around a common center, light carrying arms projected from said sign body at said common center and normally held at substantially right angles thereto, a light and a

reflector carried by each of said light carrying arms, said reflector focusing said light upon the letter face of said sign body, means whereby said light carrying arms may be elongated or contracted to move the light and reflector away from or toward the sign body, one of said light carrying arms having a hinged joint whereby said arm and reflector may be folded up against the sign body at times, a hanger for said sign body, said hanger having provisions whereby it may be folded up against a building, means for folding and unfolding said hanger and simultaneously moving said hinged light carrier on its hinged joint.

3. A sign comprising a body having concaved side faces, letters mounted thereon around a common center, light carrying arms projected from said sign body at said common center and normally held at substantially right angles thereto, a light and a reflector carried by each of said light carrying arms, said reflector focusing said light upon the letter face of said sign body, means whereby said light carrying arms may be elongated or contracted to move the light and reflector away from or toward the sign body, one of said light carrying arms having a hinged joint whereby said arm and reflector may be folded up against the sign body, at times, a hanger for said sign body, said hanger having provisions whereby it may be folded up against a building, means for folding and unfolding said hanger, and means for moving said hinged light carrier on its hinged joint to fold the same against the sign body at times.

4. In a sign, a sign body of drum-like form, said body having parallel side rim portions and concaved side portions merging therewith, a rosette secured in the center of said concaved portions, flat letters secured to said concaved portions adjacent said rim portion, an arm projecting from each of said rosettes at substantially right angles to said sign body, a reflector supported at the end of each of said arms, a light carried by said reflector, said reflector arranged to focus the light rays on the concaved face of the sign body to illuminate the same, one of said arms being formed of sections hinged together to permit one section of the arm to be swung on the hinge connection.

5. In a sign, a sign body of drum-like form, said body having parallel side rim portions and concaved side portions merging therewith, a rosette secured in the center of said concaved portions, flat letters secured to said concaved portion adjacent said rim portion, an arm projecting from each of said rosettes at substantially right angles to said sign body, a reflector supported at the end of each of said arms, a light carried by said reflector, said reflector arranged to focus the light rays on the concaved face of the sign



body to illuminate the same, said light carrying arms consisting of telescopic sections, means for maintaining said sections in their various positions, one of said light carrying arms having a hinged joint whereby the reflector and light may be folded up against the sign body.

6. In a sign, a sign body of drum-like form, said body having parallel side rim portions and concaved side portions merging therewith, a rosette secured in the center of said concaved portions, flat letters secured to said concaved portion adjacent said rim portion, an arm projecting from each of said rosettes at substantially right angles to said sign body, a reflector supported at the end of each of said arms, a light carried by said reflector, said reflector arranged to focus the light rays on the concaved face of the sign body to illuminate the same, said light carrying arms consisting of telescopic sections, means for maintaining the said sections in their various positions, one of said light carrying arms having a hinged joint whereby the reflector and light may be folded up against the sign body, and a foldable support for said sign together with means for moving said foldable support into and out of its folded position and simultaneously moving the hinged arm on its hinged joint.

7. In a sign, a sign body of drum-like form, said body having parallel side rim portions and concaved side portions merging therewith, a rosette secured in the center of said concaved portions, flat letters secured to said concaved portions adjacent said rim portion, an arm projecting from each of said rosettes at substantially right angles to said sign body, a reflector supported at the end of each of said arms, a light carried by said reflector, said reflector arranged to focus the light rays on the concaved face of the sign body to illuminate the same, said light carrying arms consisting of telescopic sections, means for maintaining the said sections in their various positions, one of said light car-

rying arms having a hinged joint whereby the reflector and light may be folded up against the sign body, a foldable support for said sign together with means for moving said foldable support into and out of its folded position and simultaneously moving said hinged arm on its hinged joint, said foldable support comprising a hanger arm, and means for pivotally securing said hanger arm to a building, at one end, means for supporting said arm at the other end, guy ropes or cables for moving said arm on its pivot to fold the same against a building or project it therefrom, and a guy rope secured to said pivoted light carrying arm and to a fixed member whereby when the hanger arm is swung on its pivot to fold the same against the building the pivoted light carrying arm will be swung up against the sign body.

8. A sheet metal sign body of drum-like form having side peripherally ornamented faces merging with concaved letter carrying faces, letters secured to said concaved faces around a common axis, a tubular member projecting through the center of said body, other tubular members telescoped into said first mentioned tubular member and adjustably held therein, said other tubular members serving as light carriers, a reflector supported by said light carriers, a light carried by said reflector, current carrying cables connected with said light and passing through said light carrier and said tubular member into said drum-like sign body and out through an aperture in the peripheral wall thereof, one of said tubular members having a hinged joint whereby its respective light carrier may be swung up against the sign body at times, and means for swinging said light carrier on said hinged joint.

ROBERT E. BELCHER.

Witnesses:

HARRY WELTY,  
F. L. KERNS.