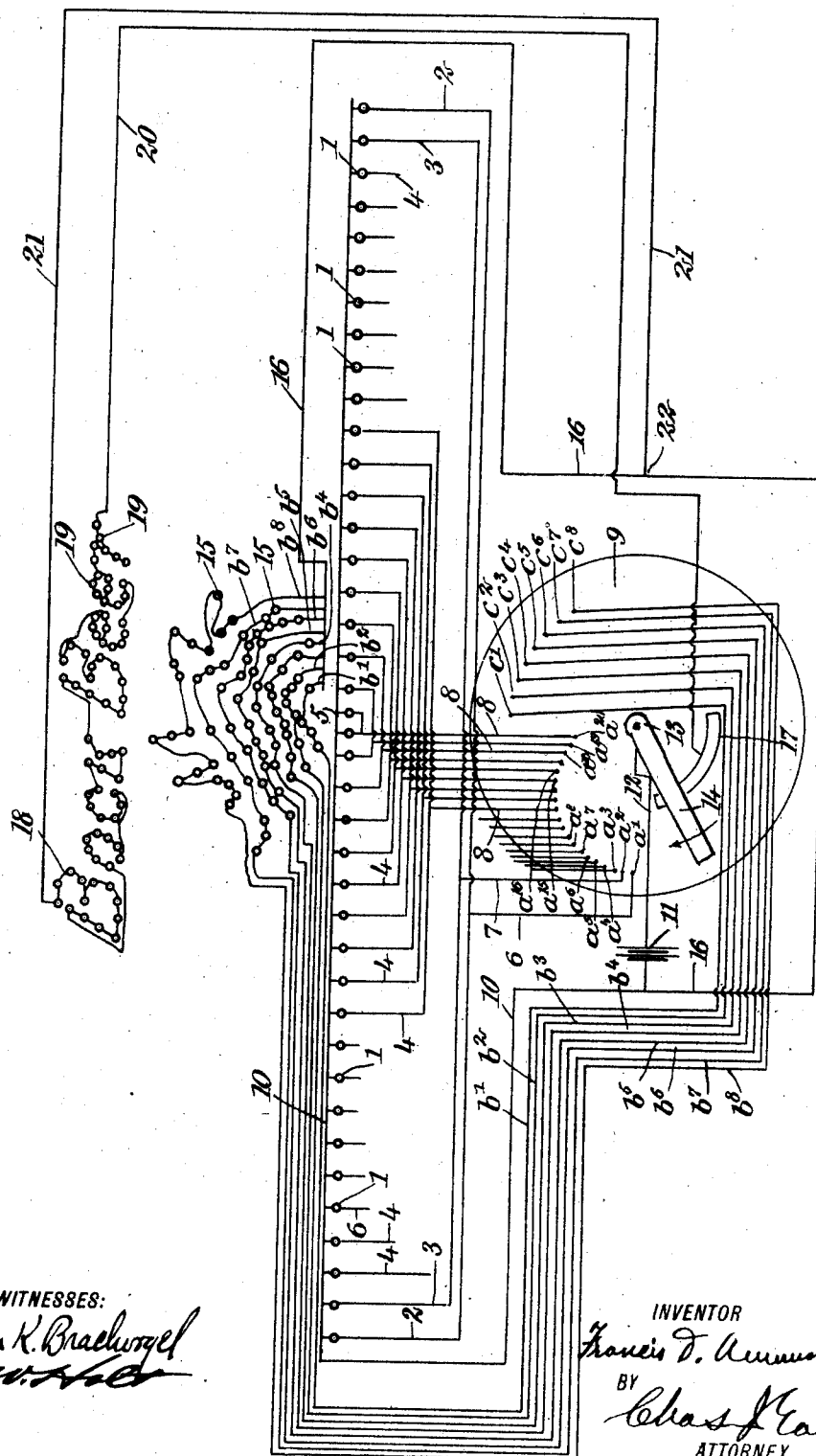


F. D. AMMEN.
ELECTRIC SIGN.
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927,018.

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WITNESSES:

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ELECTRIC SIGN.

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To all whom it may concern:

Be it known that I, FRANCIS D. AMMEN, a citizen of the United States, residing in the city, county, and State of New York, have invented a new and useful Improvement in Electric Signs, of which the following is a specification.

My invention relates to signs and especially to electric signs, such as used for advertising purposes.

The object of the invention is to produce a sign giving a novel effect and which will arrest the attention of passersby and fix the advertised article upon the memory.

More specifically the object of the invention is to produce the light effects of a collision to attract the attention.

The accompanying drawing diagrammatically illustrates my invention.

Referring more particularly to the parts, 1, 1, etc. represent a plurality of electric lights arranged in a horizontal row. The light on the extreme right is in parallel circuit with the light on the extreme left through branch wires 2, 2; the light next to the one at the extreme right is likewise connected in parallel with the next light to the left end by suitable branch conductors 3, 3; similar branch conductors 4, 4 connect all the remaining lights in parallel and in opposite pairs, the members of each pair being equidistant from a central point 5. The conductors 2, 2 connect with a conductor 6; the conductors 3, 3 connect with a conductor 7, and all the other conductors 4, 4 similarly connect with conductors 8 as branches. Many of these wires are not completely shown in order to make the drawing clearer. These conductors 6, 7, 8, 8, 8, etc., are all connected, respectively, as shown, with a plurality of contact points or contacts a' a^2 a^3 etc. to a^{20} arranged upon a contact dial or circuit maker 9, as indicated. After passing through the lights 1, 1, etc., the conductors 2, 3, 4, 4, etc., all connect to a main return wire 10, which extends along the row of lights and connects with a battery 11; the opposite terminal of the battery is connected by a conductor or wire 12 with the shaft 13 or pivot of a rotating contact arm 14. When the arm is touching any of the contacts a' a^2 , etc., it closes a circuit through the corresponding lights. The arm is wide enough to cover several of the contacts, so that when the arm is on the contacts, several lights forming a short band will be lighted at

the right, and a corresponding band at an equal distance from the center will appear at the left. As the arm rotates in the direction of the arrow, these bands of light will appear to rush toward each other; the contacts are arranged progressively nearer and nearer together in angular arrangement about the center 13, so that the speed at which the bands of light approach each other continually increases. In this way, the bands of light appear to rush together and collide at the central point 5, where they become suppressed.

Near the point 5, I provide a cluster of lights 15 which are arranged in sections or branch circuits b' b^2 , etc. to b^8 , and the lights are arranged substantially in imaginary radial lines, extending from the point 5. These branches b' b^2 , etc., lead respectively from contact points or contacts c' c^2 , c^3 , etc. to c^8 arranged as shown on the aforesaid contact dial 9. At the other side the branches b' b^2 etc., connect with the main return wire 16 which leads to the wire 10 and back to the battery 11. As the arm 14 leaves the contact a^{20} the contacts c' c^2 , etc. are passed in succession, closing circuits through the branches or light sections b' b^2 b^3 , etc. in succession; the contacts c' c^2 , etc. are equidistant sufficiently so that as the lights of one branch become suppressed, the lights of the next branch appear, and so on. As the lights are arranged in substantially radial lines, lighting the lights in the manner described gives the effect of lighted points or sparks flying out from a central point. This effect following immediately upon that of the apparent impact of the two bands of light gives the effect of a collision with debris and sparks flying in all directions from the point of collision. After the arm 14 leaves the last contact c^8 all becomes dark until the arm strikes a segment 17 on the dial 9, which closes a circuit through a sign 18 formed of lights 19 supplied by a wire 20, leading from the segment 17, and connecting with a return wire 21, which leads back to the battery through wire 16 with which it connects at the point 22.

The mode of operation of the entire sign will now be briefly described. The contact arm in passing over the contacts a' a^2 , etc., maintains two bands of light at opposite ends of the row of lights and as the arm advances these light-bands approach each other at a high speed, apparently collide and become

suppressed or arrested. Immediately after this occurs, the cluster of lights become active from the inner point 5 outwardly, giving the effect of sparks and debris. Then, as this display disappears, the name of the article advertised appears at the electric lights 19.

What I claim is:

1. A series of lights, means for successively lighting and extinguishing the units of the series of lights beginning at points at a distance from and rapidly approaching a meeting point thereby producing the effect of a collision of lighted points approaching each other, and means for making a sudden display of lights at the point of meeting, thereby producing the effect of an explosion at that point.

2. A series of lights, means for successively lighting and extinguishing the units of the series of lights beginning at points at a distance from and rapidly approaching a meeting point thereby producing the effect of a collision of lighted points approaching each other, and means for suddenly lighting the units of a plurality of series of lights, at the meeting point, thereby producing the effect of an explosion at the meeting point.

3. A series of lights, means for successively lighting and extinguishing the units of the series of lights beginning at points at a distance from and rapidly approaching a meeting point thereby producing the effect of a collision of lighted points approaching each other, and means for suddenly lighting the units of a plurality of series of lights extending in different directions at the meeting point, thereby producing the effect of an explosion at the meeting point.

4. A series of lights, in a line, means for successively lighting and extinguishing the units of the series beginning at opposite ends and progressing in opposite directions toward a meeting point, thereby producing the effect of a collision of lighted points rapidly approaching each other, and means for making a sudden display of lights at the meeting point thereby producing the effect of an explosion at that point.

5. Means for producing the light effect of a collision which consists of a plurality of series of lights extending outward from a point, means for rapidly and successively lighting and extinguishing the units of said series whereby they apparently run toward and collide at that point, a plurality of normally suppressed lights at said collision point arranged in sections about the meeting point, and means for rendering said light sections

active at the moment of the apparent collision.

6. A sign consisting of a plurality of lights arranged in a row, means for lighting several of said lights, near the ends of said row to form lighted bands, means for apparently advancing the lighted bands of said row toward each other at a high speed by lighting and extinguishing several of said lights of said row successively, a plurality of lights arranged around the apparent meeting point of said lighted bands, and means for lighting said last lights progressively outward in succession from said meeting point.

7. A sign having a row of lights, means for lighting said lights at opposite points on said row to form lightbands, means for apparently advancing said lightbands at a high speed to a meeting point by lighting and extinguishing the lights of the row successively, means for suppressing said lightbands by extinguishing the lights of the row at said meeting point, a cluster of lights arranged in substantially radial lines about said meeting point and means for lighting the lights of said cluster when said lightbands apparently meet.

8. In an electric advertising device, a row of lights, means for maintaining lighted bands on said row by lighting some of the units thereof, means for apparently advancing said lighted bands to a meeting point at a high speed by successively lighting and extinguishing units of said row of lights, means for making a display of lights at said meeting point substantially simultaneously with the apparent meeting of said bands of light, means for suppressing said display, and a sign bearing a legend and means for lighting said sign.

9. In an electric advertising device, a row of lights, a cluster of lights at a point on the length thereof, a contact device, a plurality of circuits from said contact device passing through said rows of lights, a plurality of circuits passing through said cluster of lights, a sign legend, a circuit passing through the same from said contact device, means for closing said circuits successively through said row of lights beginning with the outermost, and means for closing the said circuits through said cluster and through said sign legend.

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Witnesses:

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