R. T. SAVAGE.

SIGN CHARACTER.

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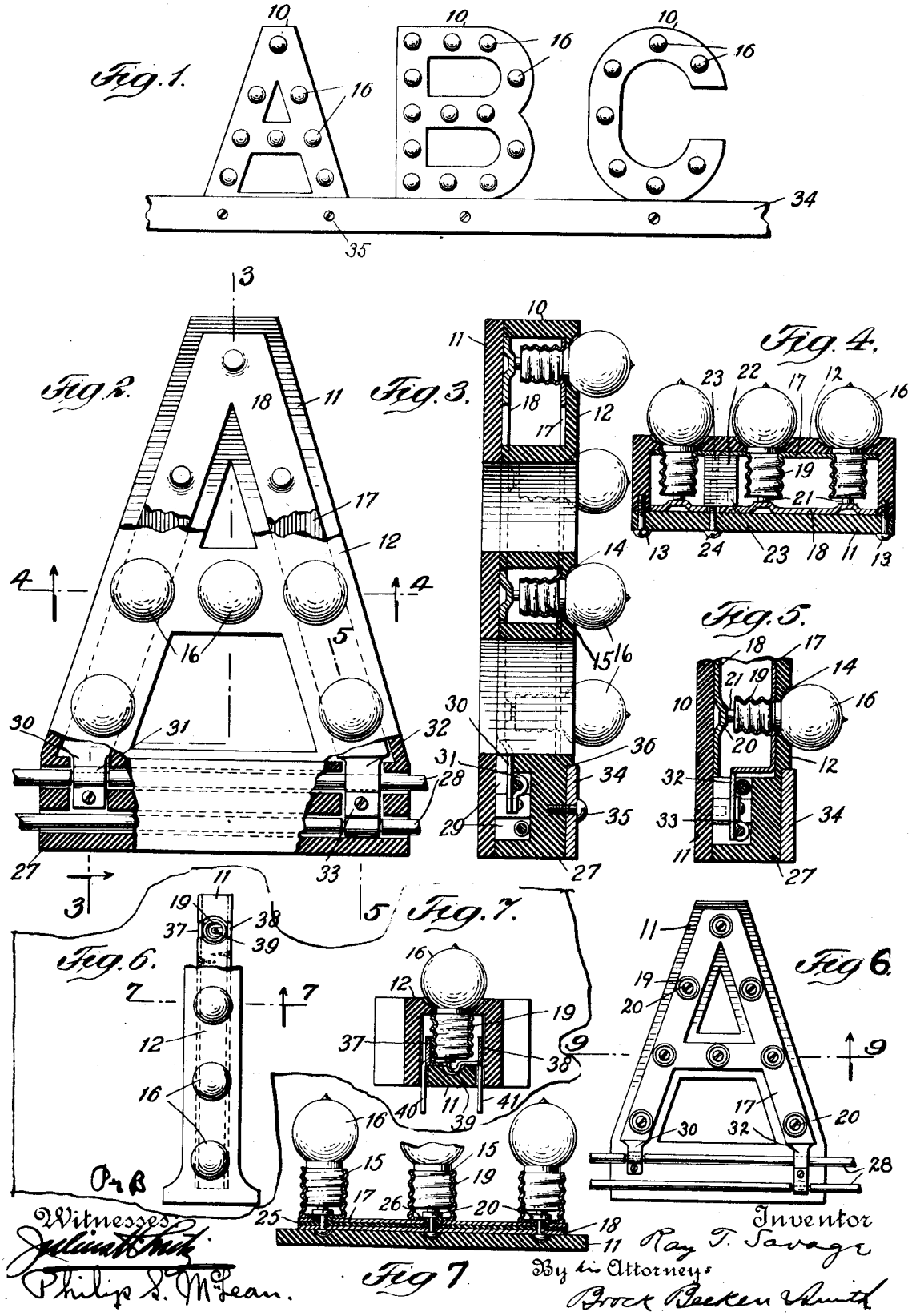


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## SIGN CHARACTER.

1,068,535. Specification of Letters Patent. Patented July 29, 1913.

Application filed October 15, 1912. Serial No. 725,829.

*To all whom it may concern:*

Be it known that I, RAY T. SAVAGE, a citizen of the United States, and a resident of Spring Lake, in the county of Monmouth and State of New Jersey, have invented certain new and useful Improvements in Sign Characters, of which the following is a specification.

My invention relates particularly to that class of sign characters in which electric lamps are employed for illuminating the same, and the general objects of the invention are to simplify and cheapen the cost of production of such devices.

The invention has reference particularly to what are known as miniature sign letters used in store windows and like places, but it is not limited to this particular use.

In a preferred embodiment the invention comprises a separable casing which constitutes the body of the character and is accordingly shaped to form a letter or other desired symbol, and a frame fitted within the casing preferably so that it may be removed therefrom, and carrying a series of lamp terminals which receive the stems of lamps inserted through a suitable opening or openings in the face of the casing. This so-called terminal frame is preferably made up of a pair of plates insulated from each other, one of which plates carries suitable sockets to receive the stems of the lamps, and the other of which plates carries contacts to be engaged by the end terminals of the lamps. A special feature of the invention resides in forming these sockets integral with the plate which carries them and also the contacts carried by the other plate integral with that plate.

Various other features of the invention will appear as the specification proceeds.

In the accompanying drawing I have shown several preferred embodiments of the invention but I would have it understood that various changes and modifications such as come within the scope of the appended claims may be made without departing from the true scope of the invention.

In the drawings: Figure 1 is a view in front elevation illustrating a bank or group of letters constructed in accordance with and embodying my invention. Fig. 2 is an enlarged face elevation of one of these letters with parts broken away to better illustrate the various features of construction. Fig. 3 is a longitudinal sectional view taken substantially on the line 3—3 of Fig. 2. Fig. 4 is a transverse sectional view taken substantially on the line 4—4 of Fig. 2. Fig. 5 is a detail sectional view taken approximately on the line 5—5 of Fig. 2. Fig. 6 is a view illustrating a slight modification of that form of the invention shown in Fig. 2. In this view the front of the letter casing has been removed. Fig. 7 is an enlarged cross-sectional view taken on the line 9—9 of Fig. 6.

Like reference characters have been used to refer to corresponding parts throughout the several views.

In its preferred form the body of the sign character is formed by a hollow casing 10 which, for ease of manufacture and assemblage of the various parts, is preferably made in separable sections. It is here shown as consisting of a back section or portion 11 and a front or face portion 12, the two portions being suitably united as by means of screws 13 or similar fastenings, as shown in Fig. 4. This casing may be formed of any suitable material but for obvious reasons it is preferably made of some material possessing insulating qualities. A preferred material for this purpose is porcelain since this material may be readily molded to shape and when finished presents a hard, smooth, glazed surface very desirable in an article of this character. The face of the casing is shown as provided with a series of openings 14 suitably spaced to accord with the design of the character and through which the stems 15 of the electric lamps 16 are inserted.

Within the hollow casing there is provided a holder for the lamps and the same is here shown as a frame which, as best indicated in Fig. 2, corresponds in shape to the general outline of the sign character. This frame which carries the lamp terminals is preferably made up of two insulated plates 17 and 18, one of which carries one set of lamp terminals and the other of which carries the other set of lamp terminals. The lamp terminals are usually formed by sockets 19 carried by one plate and coacting contacts 20 carried by the other terminal plate. In order to reduce the cost of manufacture as much as possible, these terminals are preferably formed integral with the plates which carry them. Thus, as clearly shown

in Figs. 3, 4 and 5, the sockets 19 are formed integral with the terminal plates 17, while the contacts 20 are in the form of projections formed integral with the rear terminal plate 18. These three figures show very clearly how, when the stems of the lamps are inserted through the openings in the face of the casing, they pass into the sockets provided for that purpose, thereby making electrical contact with such sockets, while the end terminals 21 of the lamps make engagement with the contacts 20, which are disposed in line with the sockets.

The terminal plates may be insulated from each other in various ways. Thus, as best shown in Fig. 4, they may be spaced apart by blocks or spacers 22 of suitable insulating material. These blocks or spacers may be held in place and the terminal plates be united to form a unitary frame by means of screws 23 or other suitable fastenings. With the two terminal plates spaced apart as in Figs. 3, 4 and 5, one of the plates rests against the inside wall of the face of the casing, while the other plate rests against the inside wall of the back of the casing. Since the frame which carries the lamp terminals follows more or less closely the outline of the sign character, it will be held in proper position simply by inserting it within the casing, but if desired it may be positively secured in place within the casing as by means of suitable fastening screws 24 which, as shown in Fig. 4, may be entered through the back and into engagement with the blocks 22 of spacing insulation.

Another way of constructing the frame which carries the lamp terminals is illustrated in Figs. 6 and 7, wherein the two terminal plates 17 and 18, instead of being oppositely disposed, as in the first form, are merely superposed one on top of the other and separated by a layer of suitable insulation 25. In this form the terminals 20 which are engaged by the end terminals on the lamps preferably pass up into the base of the sockets 19, they being insulated therefrom by suitable insulating bushings 26. The need for these insulating bushings is done away with in the first form of the invention, because there the terminals 20 need not actually pass up into the sockets 19. Thus, as shown in Figs. 3, 4 and 5, a considerable intervening space may be left between the end of the socket 19 and the terminal 20 which is disposed in line therewith.

The electrical connections to the terminal plates may be provided in various ways but in a preferred construction the sign character is provided with a base 27 which is recessed to receive the conductors 28. In the present instance the base of the casing is grooved as at 29 to receive the respective conductors. A simple and preferred method of connecting the conductors with the terminal plates is to provide such plates with terminal extensions which extend down to and are connected with the conductors located within the base. Thus the rear terminal plate is shown as having an extension 30 which extends down to the upper one of the two conductors to which it is electrically connected as by means of a fastening clip 31, and the other of the terminal plates is shown provided with an extension 32 which projects down to the lower conductor to which it is connected as by means of a clip 33.

The various sign characters may be secured in proper relation as by fastening them all to a common support, such as the bar 34, illustrated in Fig. 1. The various characters may be secured either to the front or to the back of the supporting bar, or they may simply be secured on the top of the bar. In the illustration they are shown as being secured to the back of such support, screws 35 being employed for fastening the characters to the bar. And in the case illustrated the base of the sign character is shown as recessed or shouldered, as indicated at 36, to receive the supporting bar.

Instead of using screws or like fastenings for holding the parts of the casing in assembled relation, the lamps themselves may be used for this purpose. This feature will be clear from Figs. 3, 4, and 5, in each of which it will be seen that when the lamp is threaded into its socket, the globe portion of the lamp will be brought into engagement with the face of the casing immediately surrounding the lamp opening therein. And when, as shown in Fig. 4, the lamp sockets are secured to the back of the casing, this will serve to effectually secure the two parts of the casing together.

What is claimed, is:

1. In a sign character, a casing shaped to form a letter or other symbol and provided with openings in the face of the same, a terminal plate within said casing having lamp sockets formed integral therewith, a second terminal plate having integral contacts formed thereon in line with the sockets on the first plate, and means for connecting electric conductors to the respective terminal plates.

2. In a sign character, a hollow casing provided with suitably spaced openings in the face of the same, a terminal plate within the casing resting against the inside wall of the face of the casing, sockets carried by said plate in line with the openings in the face of the casing, a second terminal plate within the casing insulated from the first terminal plate and resting against the inside wall of the back of the casing, contacts carried by the second terminal plate in line with the sockets of the first terminal plate, and means for connecting electric conductors to the respective terminal plates.

3. A sign character comprising a casing and a terminal frame engaged within said casing, the said terminal frame consisting of a front and a back terminal plate insulated from and secured in spaced relation to each other, the said front plate having sockets formed integral therewith and projecting rearwardly toward the back plate, and the back plate having integral contacts formed thereon in line with the sockets and projecting forwardly toward the front plate.

4. A sign character comprising a hollow casing provided with a base grooved to receive electrical conductors, a frame engaged within the hollow casing, made up of a pair of insulated terminal plates, suitable terminals carried by the respective plates to be engaged by electric lamps, conductors engaged within the grooves in the base, and the terminal plates having extensions projecting down into the grooves and connected respectively to the conductors within such grooves.

Signed at Spring Lake, in the county of Monmouth and State of New Jersey, this 8th day of October, A. D. 1912.

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Witnesses:

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