Aug. 14, 1951 M. H. NUSBAUM ET AL 2,564,170

PORTABLE VISUAL AND ELECTRIC TRAFFIC SIGNAL

Filed Oct. 6, 1949

FIG. 1

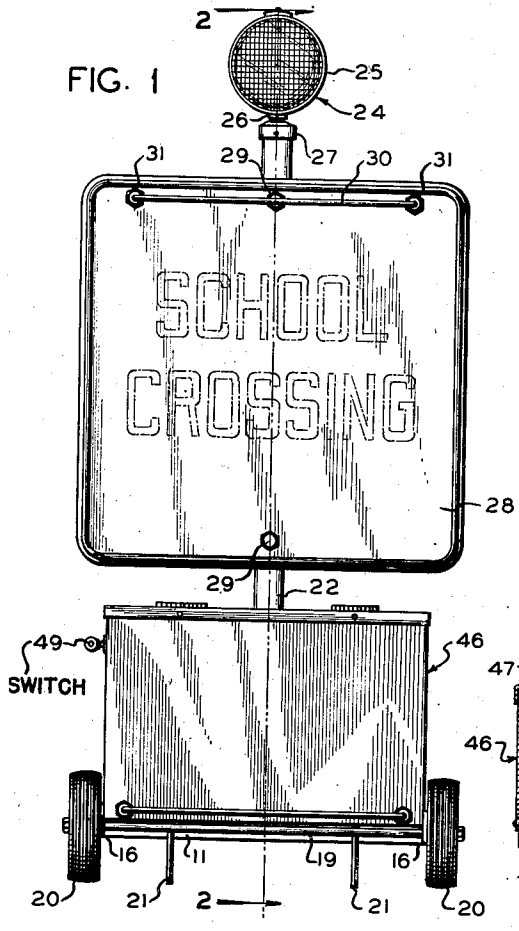


FIG. 2

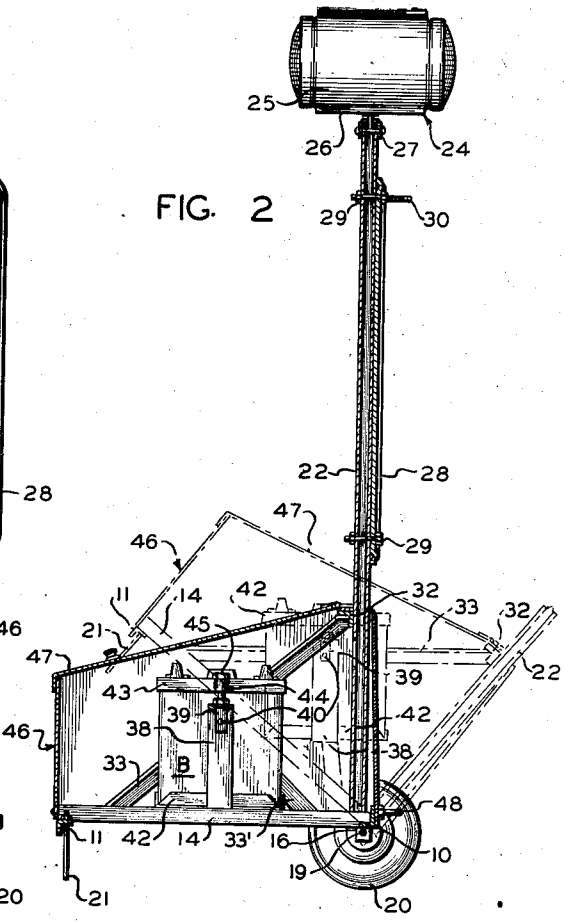


FIG. 3

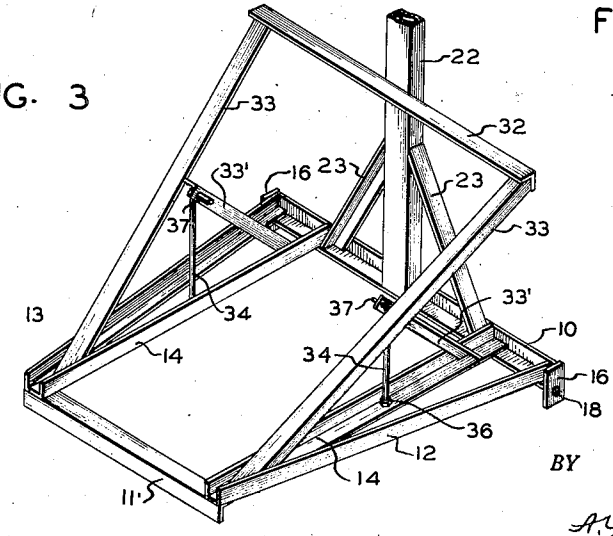
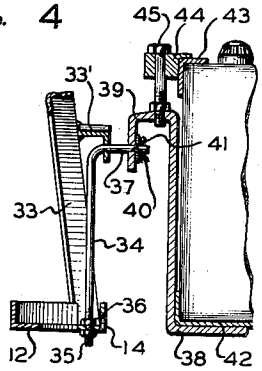


FIG. 4



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PORTABLE VISUAL AND ELECTRIC TRAFFIC SIGNAL

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6 Claims. (Cl. 177—329)

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This invention relates to signalling and more particularly to a visual signal adapted for use on a roadway or the like to warn of the proximity of construction work, hazardous conditions, or the like. Heretofore signals and signs of various types and supported in numerous ways have been employed to warn the drivers of vehicles approaching construction work of the necessity for proceeding with caution. Similar signs have also been used for other purposes, including warnings for crossings, schools, and the like.

Frequently the need for indicators of this type in a given position is of relatively short duration. For example, in the construction of highways, installation of pipe lines and the like, the progress of the work requires that the warning indicators be moved from time to time, often as much as every day or perhaps every few hours. In some situations, a signal is only required for a short period of time and in such instances the cost of erecting a suitable one is often out of proportion to the use required.

It is often necessary to provide a sign for approaching drivers to read during the day time and a light or the like to supplement the sign during the hours of darkness. This problem has been only partially met up to the present time by the provision of separate types of signals for day and night use, necessarily requiring additional expenditure and transporting problems.

In the past portable traffic signals have been used, but these have not proven entirely satisfactory because they include no easy means for their transportation.

Accordingly, it is an object of the present invention to provide a visual signal in which the above described deficiencies are overcome.

A further object of the invention is to provide an easily movable signal which combines a signal light for night use with a sign for imparting information to those approaching the same.

A further object of the invention is to provide a combined signal adapted for night and day use having its own source of power, and which is capable of being easily moved.

A still further object of the invention is the provision of an easily movable signal for night and day use which is inexpensive to manufacture and durable in construction.

A further object of the invention is the provision of a signal, including a lamp, which is particularly adapted for carrying a conventional wet cell battery as a source of power and without leakage of fluid from the battery during movement.

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Further objects and advantages of the invention will be apparent from the following description taken in conjunction with the accompanying drawings, wherein:

Fig. 1 is a front elevation of a device constructed in accordance with the present invention;

Fig. 2, a section on the line 2—2 of Fig. 1;

Fig. 3, an isometric of the main framework construction; and,

Fig. 4, a detail of the battery support.

Referring to the drawing, the signal device comprises a substantially trapezoidal horizontally disposed main frame of angle iron or other structural members including a longer base member or front portion 10, a shorter base member or rear portion 11, and sides 12 and 13. Parallel bridging members or struts 14 extend perpendicularly from the extremities of the base member 11 to the base member 10 and are rigidly secured thereto. The elements of the frame described are secured together by suitable means such as bolts, rivets, welding or the like to provide a rigid structure. Although the frame is illustrated as substantially trapezoidal, it is understood that other desired configurations may be employed.

Depending arms 16, rigidly secured to the extremities of the front member 10, are provided with aligned apertures 18 positioned below the sides 12 and 13 for the reception of a supporting axle 19.

Wheels 20 are journaled upon the axle 19 adjacent the extremities thereof and exteriorly of the main supporting frame. To maintain the supporting frame in a horizontal position when at rest the rear base member 11 is preferably provided with a pair of legs 21.

A vertically disposed standard 22 which may be of rectangular cross-section or of other desired configuration is mounted with an extremity upon the front frame member 10 and substantially centrally of its length. Suitable angular braces 23 extending from the standard to the member 10 are provided for insuring rigidity of the structure and suitable fastening means such as bolts, welding or the like may be utilized for securing the standard in position.

A signal light 24 is mounted upon the upper extremity of the standard 22. Preferably this includes a casing 25 having a depending bearing portion 26 receivable within a cap 27 which surrounds the upper extremity of the standard 22, a bolt retaining this cap in position. The bearing portion of the light is rotatable within the cap 27 to permit adjustment of the direction of the

beam thereof. A suitable source of electrical energy for the signal light is provided, and will be hereinafter more fully described.

The signal light is visible from either direction and may be provided with appropriate lenses to indicate caution or danger or otherwise. The standard **22** preferably carries a second visual signal or marker bearing an appropriate legend indicating the specific conditions existent at the point where the device is placed. This second signal may be in the form of a substantially flat sign **28**, and may be legible from one or more directions as desired. It is secured beneath the signal light **24** and on the side of the standard away from the frame previously described by means of bolts **29** extending through the sign and the standard. A substantially U-shaped handle **30** having threaded extremities is secured to the sign **28** adjacent the upper extremity thereof and projecting away from the standard by means of fastening elements **31** to assist in the moving and positioning of the device.

To impart additional strength and rigidity to the standard and main frame assembly and to provide a support for a battery, a secondary supporting frame is provided. This comprises a member **32** transversely secured at its midpoint to the standard **22**. Attached to the extremities of the member **32** is a pair of angularly disposed bracing members **33** which are secured to the rear frame member **11** between the frame side members and the bridging members **14**. Angularly disposed struts **33'** extend from the bracing members **33** to the adjacent bridging members.

Rod members **34** having threaded ends **35** secured to the bridging members **14** respectively by means of bolts or the like **36** are provided to support a source of electrical energy such as a storage battery B. Each of the rods extends upward substantially perpendicularly to the members **14** and has an offset end portion **37** extending through the strut members **33'** to provide a support for the battery.

The battery is carried by means of an upwardly open U-shaped strap **38** the extremities of which extend outwardly from its sides and double back to provide ears **39** having suitable aligned apertures **40** for the reception of the offset end portion **37**. Retaining means such as cotter pins **41** are provided at the ends of the rods. A rectangular support **42** is carried by the lower and central portion of the U-shaped strap to provide an extended supporting surface for the battery, and a rectangular frame **43** is attached to the upper portion of the strap by means of lugs **44** through which bolts **45** pass to engage the strap. The frame assists in retaining the battery in position and may be easily removed by removing the bolts **45**. By means of the pivotal support, the battery is free to tilt as the frame is tilted during movement in order to maintain the battery substantially level and avoid the spilling of liquid thereupon.

For protecting the supporting framework and storage battery from dirt, the elements and the like, and for providing a pleasing external appearance a casing **46** is provided having a hinged top **47** which permits access to the interior of the casing. The top is spaced from the offset ends **37** sufficiently that it will not interfere with tilting of the battery.

A substantially U-shaped rail **48** is attached to the casing on the side corresponding to that nearest the standard and extends substantially parallel to the handle **30** in order that the assembly may be easily tilted and to assist in its maneuvering.

In order to supply electrical current from the storage battery B to the light **24** suitable wiring is installed through the standard **22** and includes a switch **49**. The switch is of conventional make and may be set to maintain a steady flow of current or to connect the signal light to a conventional blinker element, not shown, in order to provide a blinking signal.

In use the device may be easily moved from one location to another by means of the wheels supporting one side thereof, the handle **30**, and the rail **48** being used as needed to assist in its maneuvering.

It will be obvious to those skilled in the art that various changes may be made in the invention without departing from the spirit and scope thereof and therefore the invention is not limited by that which is shown in the drawings and described in the specification but only as indicated in the appended claims.

What is claimed is:

1. A movable signal comprising a main frame having a front member and a back member connected by side members, depending arms extending from said front member and having alined apertures therein, an axle supported in said apertures, wheels journaled on said axle, and at least one supporting leg attached to said back member and adapted to cooperate with said wheels in maintaining said frame in a horizontal position; a standard mounted substantially midway of said front member and extending substantially perpendicularly to the plane of said main frame; an electrical signal light mounted on said standard; bracing members extending from said front member to said standard; a secondary frame transversely disposed to said main frame and having a front member attached to said standard and spaced from and substantially parallel to the front member of said main frame, side members extending from approximately the extremities of said front member of said secondary frame to said side members of said main frame near the extremities of said side members; struts extending substantially perpendicularly from approximately the midpoint of said side members of said secondary frame to said side members of said main frame; rod members extending from said main frame to the extremity of said strut adjacent said side members of said secondary frame, said rod members having offset end portions extending inwardly of said frame and through said struts to provide alined stub axles; a storage battery and a carrier therefor having an upwardly open U-shaped strap with spaced ears extending from the upper extremities thereof, said ears being provided with alined apertures adapted to receive said stub axles for a pivotal movement thereon, a platform carried by said strap its lower portion and providing an extended support for said battery a frame connected to the upper portion of said strap and adapted to retain said battery on said carrier; an electrical connection from said battery to said light; a flat sheet member for the reception of data attached to said standard above said frames, a U-shaped handle attached to said sheet member near its upper extremity and extending away from said frames; a casing surrounding said frame and said carrier and having a cover pivotally connected thereto; and a second U-shaped member attached to said casing and extending outwardly therefrom between said wheels.

2. A movable signal comprising a main frame having a front member and a back member connected by said members, depending arms extending from said front member and having alined apertures, an axle supported within said apertures, wheels journaled on said axle, and at least one supporting leg attached to said back member and adapted to cooperate with said wheels in maintaining said main frame in a horizontal position; a standard mounted substantially midway of said front member and extending substantially perpendicularly to the plane of said main frame, an electrical signal light mounted on said standard; a secondary frame transversely disposed to said main frame and having a front member attached to said standard and spaced from and substantially parallel to said front member of said main frame, side members extending from approximately the extremities of said front member of said secondary frame to said side members of said main frame near the extremities of said side members; struts extending from said side members of said secondary frame to said side members of said main frame; rod members extending from said main frame to the extremity of said struts adjacent said side members of said secondary frame, said rod members having offset end portions extending inwardly of said frames and through said struts to provide alined stub axles; a storage battery and a carrier therefor having an upwardly open U-shaped strap with spaced ears extending from the upper extremity of said strap, said ears being provided with alined apertures and adapted to receive said stub axles for pivotal movement thereabout; and an electrical connection from said battery to said light.

3. A readily transportable signal comprising a supporting frame, wheels carrying one side of said frame and at least one leg connected to and adapted to support the other side of said frame, a standard extending upwardly from the side of said supporting frame carried by said wheels, an electrical signal light mounted on said standard, a sign attached to said standard, rod members extending inwardly of and spaced upwardly from said supporting frame, a carrier pivotally mounted upon said rod members, a battery mounted on said carrier, a casing enclosing said frame and said carrier and spaced sufficiently from said carrier to permit said battery to pivot freely on said rod members, an electrical connection from said battery to said signal light, a handle extending outwardly from said side, and a foot engaging member extending outwardly from said casing.

4. A readily transportable signal comprising a supporting frame, wheels carrying one side of said frame, at least one leg connected to and adapted to support the other side of said frame, a standard extending upwardly from said supporting frame, an electrical signal light carried on said standard, rod members extending inwardly of and spaced upwardly from said supporting frame, a carrier pivotally supported upon said rod members, a battery mounted on said carrier, an electrical connection from said battery to said signal light, and a casing enclosing said frame and said carrier and spaced sufficiently from said carrier to permit a battery mounted thereon to pivot freely.

5. A readily transportable signal comprising a supporting frame, wheels and supporting legs attached to lower portions of said frame, a standard extending upwardly from said supporting frame, an electrical signal light carried by said standard, a carrier pivoted on said supporting frame and having a pivotal axis substantially parallel to that of said wheels, a battery mounted on said carrier, and an electrical connection from said battery to said signal light, whereby the signal may be readily moved on its wheels and the battery maintained in an upright position.

6. A readily transportable signal comprising a supporting frame, wheels and a supporting leg attached to the lower portion of said frame, an electrical signal light carried by said supporting frame, a carrier for a storage battery pivoted upon said supporting frame and having a pivotal axis substantially parallel to that of the wheels, whereby the signal may be easily tilted for movement on its wheels and the carrier maintained in an upright position, and an electrical connection from said light to a position adjacent said carrier whereby said light may be energized by a battery positioned in said carrier.

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