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APPARATUS FOR PHOTOGRAPHING A TRAFFIC VIOLATOR

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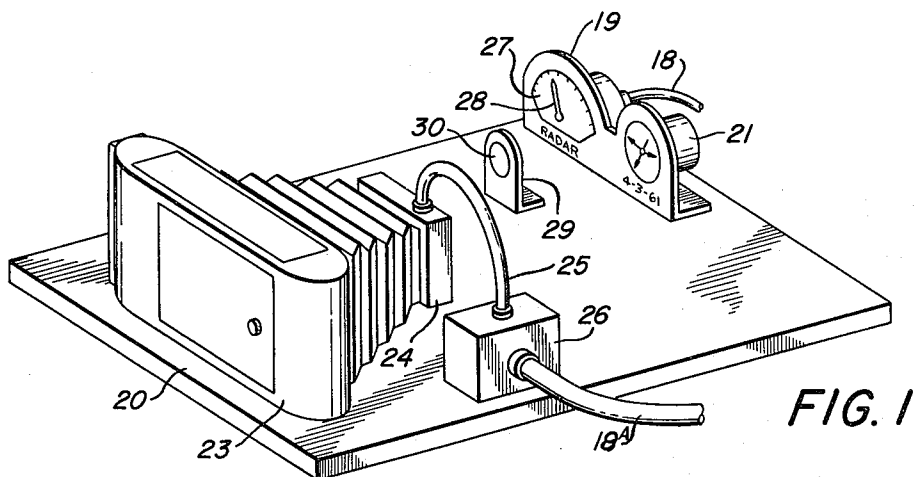


FIG. 1

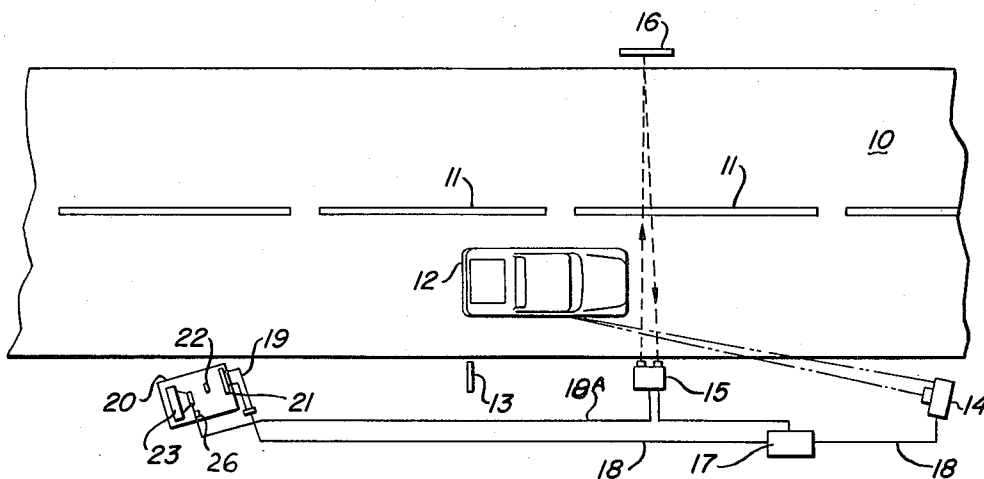


FIG. 2

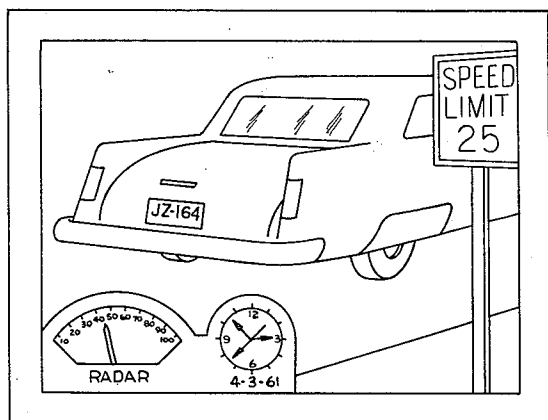


FIG. 3

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APPARATUS FOR PHOTOGRAPHING A TRAFFIC VIOLATOR

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3 Claims. (Cl. 346—107)

This invention relates to a method of photographing a traffic violator so as to provide photographic evidence of the violation and more particularly to the apparatus for performing the method.

The principal object of the invention is the provision of a method and apparatus for determining the speed of a traffic violator, registering the speed on a dial and photographing the traffic violator, the speed registering dial and a clock and calendar simultaneously together with the speed limit sign so that the resulting photograph completely illustrates the violation.

A further object of the invention is the provision of a method of providing a photographic record of a traffic violation which utilizes a speed indicating device in conjunction with a camera positioned to photograph the traffic violator and the speed indicating device.

A further object of the invention is the provision of the combination of a radar actuated speed indicating device, a clock and calendar and a camera arranged to photograph said device, clock and camera and a traffic violator actuating said speed indicating device.

A still further object of the invention is the provision of apparatus for photographing a traffic violator and including a radar speed indicating device, a clock and a calendar, a camera and a lens positioned between said camera and said speed indicating device, clock and calendar and arranged to photograph said traffic violator and said speed indicating device, clock and calendar simultaneously to produce an accurately focused clearly legible photograph showing the traffic violator, the radar speed indicating device and the clock and calendar.

The present invention relates to a method of providing photographic evidence of a traffic violation through the use of a camera positioned alongside a roadway and having a field of view encompassing the path of the traffic violator, a traffic control sign or the like and a speed indicating device actuated by the traffic violator automatically indicating on a dial thereof the speed of the traffic violator. The apparatus is arranged to be automatically actuated by the traffic violator and comprises apparatus which is relatively compact and portable and capable of being positioned in various locations along a roadway or the like by law enforcement officers.

It is well known that radar actuated speed indicating devices are being widely used in an attempt to control speeding. It is also well known that the use of such devices requires the presence of an officer observing the indicating dial of the speed indicating device as well as the violator whose automobile is actuating the device. In presenting evidence of such a traffic violation, the officer observing the device must testify as to the violation and no other evidence of the violation is available. The present invention provides apparatus and a method of using it which produces photographic evidence of the traffic violation which is admissible in court and which clearly indicates the actual circumstances and the identity of the violator, thereby eliminating the heretofore necessary sole reliance on the officer's testimony and of equal importance providing an accurate and positive record of the actual speed of the vehicle.

The method therefore comprises the use of a speed indicating device actuated by radar or otherwise as will be understood by those skilled in the art which will register the speed of the actuating vehicle upon a dial and the use of a camera arranged to photograph the speed indicating

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dial, a clock date notation and the traffic violator including the license number and the speed limit sign simultaneously so as to produce a photographic record of the occurrence.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being the intention to cover all changes and modifications of the example of the invention herein chosen for purposes of the disclosure, which do not constitute departures from the spirit and scope of the invention.

The invention is illustrated in the accompanying drawing, wherein:

FIGURE 1 is a perspective view of a portion of the apparatus disclosed herein for photographing a traffic violator.

FIGURE 2 is a plan view of a portion of a roadway, a traffic violator thereon and a symbolic arrangement of the apparatus used in performing the method disclosed herein.

FIGURE 3 is an illustration of a photographic print produced by the apparatus used according to the method described herein.

By referring to the drawings, and FIGURE 2 in particular, it will be seen that a roadway generally indicated by the numeral 10 is viewed in top plan view, the roadway includes center lines 11, 11 dividing the roadway into right and left lanes. A vehicle 12 is shown in the right lane proceeding from left to right. A traffic sign 13 is positioned beside the roadway 10 and comprises a speed limit sign. A Doppler effect radar unit 14 such as described in U.S. Patent 2,785,395 is positioned alongside the roadway 10 at a point spaced in relation to the sign 13 and a photo-electric switch actuating unit 15 is positioned alongside the roadway 10 and directed across the roadway at right angles thereto either toward a light source or light reflecting surface such as illustrated and indicated by the numeral 16. A junction box 17 connects the radar unit 14 and the photo-electric unit 15 by means of electrical conductors 18 and 18a with a remotely positioned radar actuated speed indicating device 19 preferably mounted on a platform 20 alongside a clock and calendar unit 21.

A focusing lens 22 is mounted on the platform together with a camera 23 which may be of the "Polaroid" type which will produce a completely developed photographic print in a few seconds.

Still referring to FIGURE 2, it will be observed that the camera and platform 20 are so positioned that the vehicle 12, the traffic sign 13, the speed indicating device 19 and the clock and calendar unit 21 are within the field of view so that a picture taken by the camera will show the traffic violator's vehicle 12, the traffic sign 13, the speed indicating device 19 and the clock calendar unit 21. The lens 22 is so arranged relative to the camera 23, the speed indicating device 19 and the clock and calendar 21 so that they will be in proper focus along with the vehicle 12 and the speed limit sign 13. Thus, a photographic print is produced as illustrated in FIGURE 3 of the drawings which clearly shows the speed limit sign 13, the traffic violator's vehicle 12, the license thereon, the speed indicating device 19 with the indicator hand thereon indicating the actual speed of the vehicle at the time the photograph was taken and the clock and calendar indicating the date and time.

By referring now to FIGURE 1 of the drawings, it will be seen that the camera 23 preferably of the "Polaroid" type, is shown mounted on the platform 20 and provided with an electrically actuated shutter mechanism 24. An electric cable 25 connects the shutter mechanism 24 with a junction box 26 and one of the electrical conductors 18a heretofore referred to extends from the connection box 26 to the junction box 17 and the circuit

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therein is controlled by the photo-electric unit 15 heretofore described.

The speed indicating device 19 includes a dial 27 calibrated in miles per hour, and an indicator hand 28. Those skilled in the art will observe that the indicator hand 28 can be actuated by the Doppler effect radar unit 14 such as heretofore used in determining the speed of traffic violator's vehicle. As illustrated herein, the electrical conductor 18 extends from the mechanism 19 to the radar unit 14 by way of the connection box 17.

Still referring to FIGURE 1, it will be observed that a lens mount 29 is positioned on the platform 20 between the camera 23 and the speed indicating device 19 and the clock and calendar unit 21. A lens 30 in the mount 29 brings that portion of the area behind the lens 30 into proper focus for the camera while the remainder of the field of view of the camera is focused at a distance therefrom as heretofore described in connection with FIGURE 2. The clock and calendar unit 21 may comprise a spring wound or electrically actuated clock and manually set calendar numerals so arranged that when viewed through the lens 30 in the lens mount 29 the speed indicating device 19 and the clock and calendar unit 21 will appear as shown in FIGURE 3.

In operation, as shown in FIGURE 2, the vehicle 12 approaches from the left of the figure and its speed is determined by the radar unit 14 which directs a radio beam against the vehicle and receives the reflected signal, measures the time elapsed and translates the same into miles per hour which it registers simultaneously on the speed indicating device 19. As the vehicle 12 passes the speed indicating device 19 and the camera 23 it moves into the field of view of the camera 23 alongside the speed limit sign 13, which is also within the view of the camera 23, and when the vehicle is in desired position it interrupts the light beam or radio beam, as the case may be, from the photo-electric unit 15 which trips the camera lens actuating device 24. The resulting photograph appears in FIGURE 3 and clearly shows the violator's vehicle 12 identified by the license number, the speed limit sign 13 indicating the speed limit at that particular point and the dial 27 on the speed indicating device 19 showing the speed of the vehicle 12 together with the time and date.

It will thus be seen that a photographic record is pro-

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duced by a method and with apparatus which meets the several objects of the invention, and it will occur to those skilled in the art that the camera 23 is then manually or automatically set for the next picture and the next violator. It will also occur to those skilled in the art that the photo-electric switch actuating unit 15 as disclosed herein may also take the form of a second radar set trained on the vehicle and arranged to trip said camera lens actuating device 24 when the vehicle moves into a pre-determined position in relation to said camera 23. Having thus described my invention, what I claim is:

1. Apparatus for producing photographic evidence of a traffic violation and comprising a speed indicating device and a radar speed determining unit positioned in spaced relation alongside a roadway and arranged to be actuated by a vehicle approaching the same on said roadway, said speed indicating device being electrically connected with and responsive to said radar speed determining unit, a camera arranged to photograph an area of said roadway supervised by said radar speed determining unit, said speed indicating device being positioned within the field of view of said camera and a lens positioned between said camera and said speed indicating device and arranged to focus part of said camera's field of view on said speed indicating device, a shutter actuating means on said camera and means positioned adjacent said roadway and connected with said shutter actuating means and arranged to be actuated by said vehicle on said roadway within the field of view of said camera within the area supervised by said radar unit.

2. The apparatus set forth in claim 1 and wherein said means comprises a photo-electric cell and relay controlled switch actuated by said photo-electric cell.

3. The apparatus set forth in claim 1 and wherein said means comprises a second radar unit trained on said vehicle and arranged to be actuated thereby at a pre-determined point.

References Cited in the file of this patent

UNITED STATES PATENTS

2,619,402	McCutcheon	Nov. 25, 1952
2,683,071	Pearle	July 6, 1954
2,785,395	Platzman	Mar. 12, 1957
2,907,253	McDonald	Oct. 6, 1959
3,032,766	Weaver	May 1, 1962