May 26, 1959 A. COLATRIANO 2,888,668

SAFETY DEVICE

Filed July 25, 1958

Fig. 4.

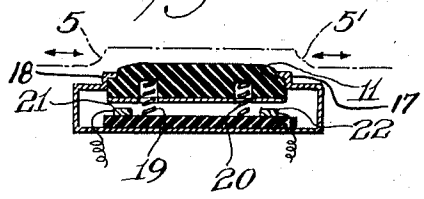


Fig. 1.

Fig. 2.

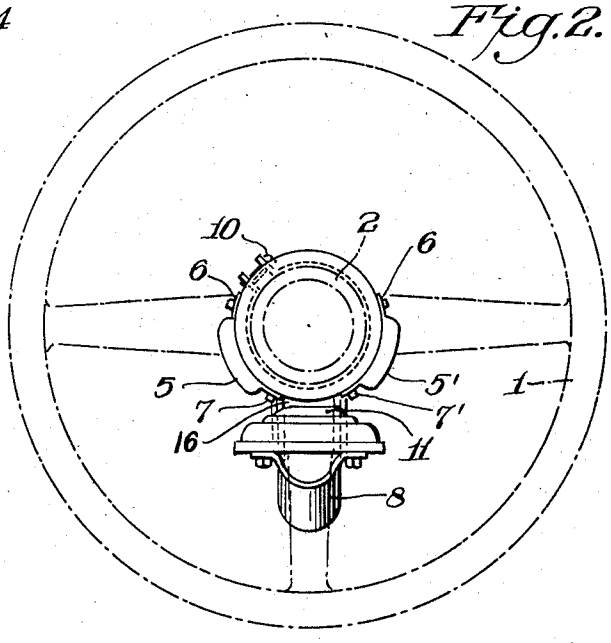
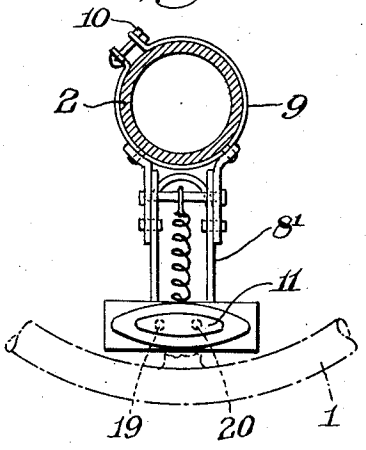


Fig. 3.



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SAFETY DEVICE

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3 Claims. (Cl. 340—279)

The present invention relates to a safety device for automobiles. More specifically, it is an invention designed to prevent sleeping or dozing automobile drivers from suddenly leaving their original direction of travel, crashing into vehicles in other lanes or leaving the road entirely.

In this day and age, the fatality rate on our highways is staggering and many attempts are being made to reduce the death toll and the injury rate. One of the most serious problems to be solved is the sleeping or dozing driver. During an eighteen month period, accident causation on the Pennnsylvania Turnpike was analyzed. It was determined that 13.2% of the accidents occurring during that period were the result of drivers falling asleep at the wheel of the vehicle as reported in Pennsylvania Turnpike Joint Research Group, Accident Causation, 1954.

Many such accidents are the direct result of drivers undertaking prolonged trips at a time when they are physically exhausted. In a typical situation, frequently noted in the newspaper accounts, it may be a serviceman returning to base after a weekend liberty. Another factor that induces drowsiness in the operator are long stretches of relatively straight, flat roads, of which the New Jersey Turnpike is typical. The present invention is accordingly designed for use on turnpikes, etc., where the number of sharp curves are at a minimum, e.g., the New Jersey Turnpike.

Novel features and advantages of the present invention will become apparent to one skilled in the art from a reading of the following description in conjunction with the accompanying drawings in which similar reference characters refer to similar parts and in which:

Fig. 1 is a side view in elevation of one embodiment of this invention;

Fig. 2 is a sectional view taken through Fig. 1 along the line 2—2 and looking in the direction of the arrows;

Fig. 3 is a sectional view taken through Fig. 1 along the line 3—3 and looking in the direction of the arrows; and

Fig. 4 is a sectional detail taken through Fig. 1 along the line 4—4 and looking in the direction of the arrows.

Referring to Fig. 1, an automotive steering device is shown, including a steering wheel 1, a shaft column 2 and a gear shift lever 3. Below the steering wheel there is a section 4 of shaft column 2 which rotates with the steering wheel 1. On each side of section 4 there are two projections 5 and 5', the distance between plates 5 and 5' is adjustable by means of slots 6 and bolts 7 to suit the driving conditions. Below plates 5 and 5', a goose neck spring clamp 8 (operating position) and 8' (non-operating position) is attached to a stationary

part of the shaft column 2 by means of metal band 9 and adjustable screw combination 10. The free end of the clamp is equipped with an electrical contact member 11, which is shown in detail in Fig. 4. An electrically-operated audible alarm 12 is attached to the shaft column 2 and is electrically connected to contact member 11 by means of wire 13; audible alarm 12 is electrically connected to the automotive electrical system by means of wire 14, and wire 15 runs between the automotive electrical system and contact member 11.

Fig. 2 shows the relationship between plates 5 and 5' and contact member 11 when the latter is in the operating position. A spring-operated recess plate 16 on the outer surface of contact member 11 is located against or in close proximity to section 4 and between plates 5 and 5' in such a manner that a slight rotation of steering wheel 1 brings plates 5 or 5' into contact with recess plate 16 and forces it into a recessed position.

Fig. 3 illustrates the relative position of shaft column 2, metal band 9, adjustable screw combination 10, goose neck spring clamp 8' and contact member 11 in the inoperative position.

In Fig. 4, contact member 11 is shown in detail. Recess plate 16 in the normal position is forced against shoulders 17 and 18 by springs 19 and 20. By the pressure of a plate 5 or 5' the plate is forced against points 21 and 22, thus completing the electrical circuit and actuating the audible alarm.

The illustrations exemplify a preferred embodiment of the invention, but it is not entered to limit the invention thereto. Numerous modifications may be made without varying the basic principles therein disclosed. For example, projections 5 and 5' on the steering wheel column could be simple protuberances or raised plates on either side, each having sufficient elevation to force recess plate 15 into the closed position. Goose neck spring clamp 8 can be replaced with other types of holders so long as the pressure holding recess plate 8 against projection 5 or 5' is greater than pressure of springs 19 and 20. Also, other means can be provided to disconnect the audible alarm system for routine driving purposes; for example, an on-and-off switch could be located in the electrical system.

What is claimed is:

1. A device for waking sleeping drivers of motor vehicles which includes a means for actuating an electrical audible alarm, said means comprising (1) a steering wheel shaft column, (2) a source of electrical current, (3) an electrical contact member mounted on a stationary section of said steering wheel shaft column, said contact member in normal position having a spring-operated electrical circuit interruption, and (4) projections located on a rotating section of the steering wheel shaft column, said projections being spaced in such a manner that the electrical contact member can rest against the steering wheel shaft column when the motor vehicle is proceeding in a relatively straight line and when the steering wheel is rotated a pre-determined distance the projections contact the electrical contact member and close the spring-operated electrical circuit interruption.

2. A device of claim 1 wherein the electrical contact member is a goose neck spring clamp.

3. A device of claim 1 wherein the electrical audible alarm is an electric buzzer.

No references cited.