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A. SMITH

STARTER CONTROL FOR AUTOMOTIVE VEHICLES

Filed May 16. 1927

Fig. 1.

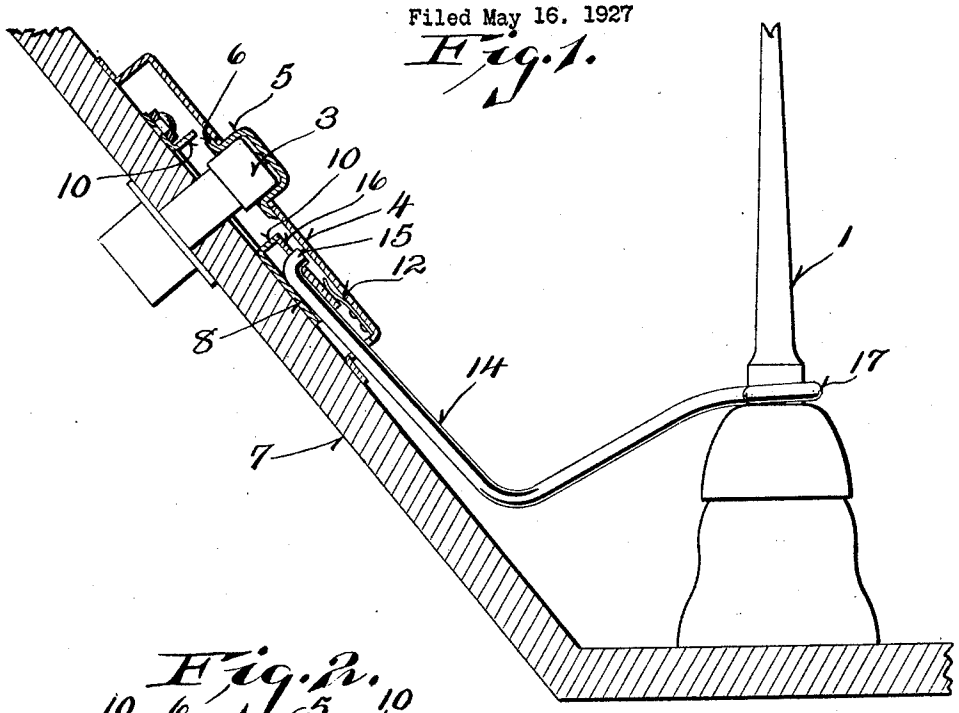
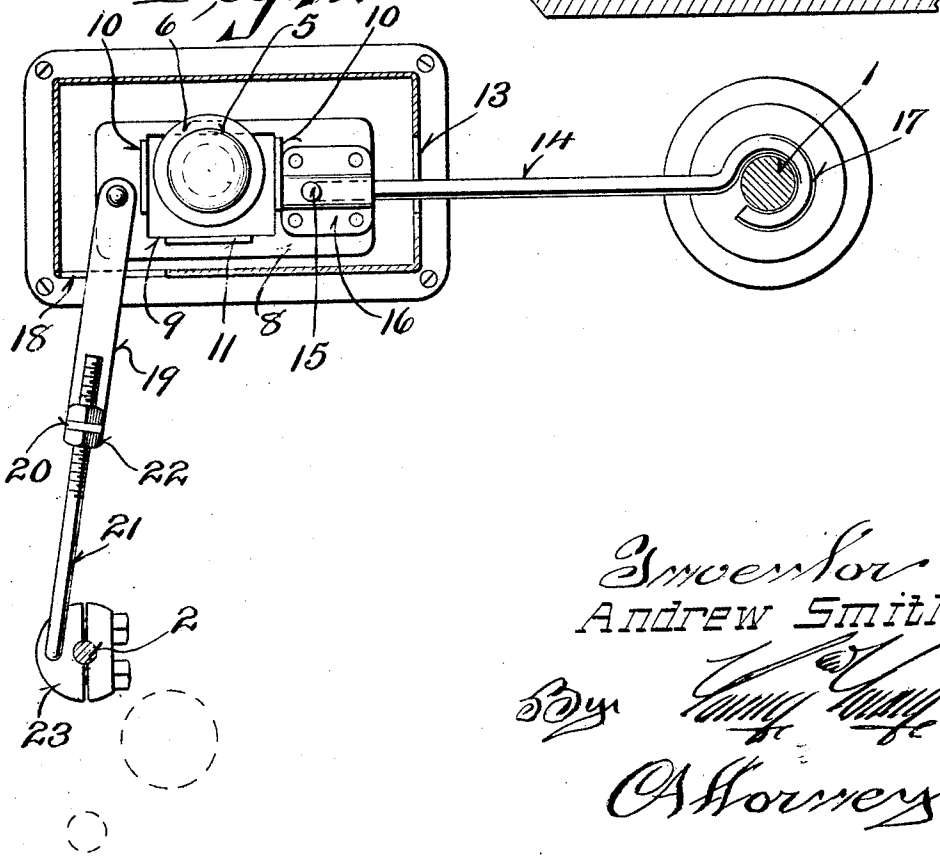


Fig. 2.



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UNITED STATES PATENT OFFICE.

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STARTER CONTROL FOR AUTOMOTIVE VEHICLES.

Application filed May 16, 1927. Serial No. 191,681.

This invention relates to a starter control for automobile vehicles.

In automobile vehicles, it frequently happens that the starter is thrown into operation by the starting switch or button while the transmission is in gear. This almost always results in damage to the starting mechanism or to some other portion of the apparatus. Further, it is frequently the case that in starting the spark is too far advanced beyond its initial position, so that the engine backfires at the time that it is started, thus causing damage to the apparatus.

This invention is designed to overcome the defects noted above and objects of such invention are to provide means associated with the transmission mechanism so that when the transmission is in gear, the starting mechanism is rendered inoperative and to provide means associated with the spark control mechanism, so that when the spark is advanced the starting mechanism is also rendered inoperative.

Further objects are to provide a simple cheaply produced and easily applied attachment for automotive vehicles which does not require any alteration of the standard equipment of a machine, but which cooperates with such standard equipment and secures the protection against inadvertent starting, noted above.

An embodiment of the invention is shown in the accompanying drawings in which:—

Figure 1 is a fragmentary view of a portion of an automotive vehicle showing the starter button and a portion of the transmission mechanism and of the device in section;

Figure 2 is a plan view of the structure shown in Figure 1, such view showing the casing in section as well as the spark rod and the transmission lever.

Referring to the drawings, it will be seen that the transmission lever is indicated by the reference character 1, the spark rod, by the reference character 2, and the usual starter button, by the reference character 3.

The device comprises a casing 4 which is positioned around the starter button and is centrally apertured, so that the button head may project through such aperture. This aperture slidably receives a cup or cap 5 which fits over the head of the starter button and is provided with a marginal flange 6 to prevent its outward withdrawal. Thus, in using the starter, it is merely necessary to step upon the cap 5 in the usual manner. This casing is secured to the dash 7 or in any other suitable position immediately adjacent the starter button, as indicated.

Within the casing, a slide 8 is carried and is provided with a rectangular aperture 9 through which the starter button projects. Further, it is to be noted that the front and rear of this rectangular aperture are provided with upstanding flanges 10 and one of the sides is provided with an upstanding flange 11. These flanges are adapted to be slid by mechanism hereinafter described, beneath the flanges 6 of the cap 5, such latter flanges being preferably bevelled at their edges, as shown in Figure 1, to facilitate this operation. When any of the flanges 10 or 11 are positioned beneath the flange 6 of the cap, the starter mechanism is rendered inoperative as the button is locked against depression. Preferably, a light spring 12 is carried by the casing and bears against the slide 8, as shown in Figure 1, to prevent rattling.

The casing is provided with a slot 13 through which a link or rod 14 projects. The forward end of the rod is upturned, as shown at 15 in Figures 1 and 2, and is pivotally received by the slide, being preferably carried within a clip 16 secured to the slide, as shown most clearly in Figure 2. This link or rod extends rearwardly and then upwardly and its outer end is coiled into an eyelet 17 which fits around the transmission lever 1. Further, it is to be noted from Figure 2, that the casing is provided with a slot 18 through its side within which a link 19 operates. This link is pivoted at its inner end to the slide, preferably at the forward end of the slide, as shown in Figure 2, and is provided with an upturned lug 20 apertured to receive a threaded rod 21. This rod 21 is locked in adjusted position to the lug 20 by means of nuts 22. The outer end of the rod is downturned and is pivotally received by a member 23 clamped to the spark rod 2, as shown in Figure 2, and with the pivot point of the rod 21 eccentric to the axis of the spark rod 2.

From the mechanism described and illustrated, it is apparent that when the transmission is in gear the lever 1 is rocked either

forwardly or rearwardly and, consequently, one or the other of the flanges 10 will be positioned below the flange 6 of the cap 5 and, consequently, will lock the cap against motion with the result that the starter mechanism is rendered inoperative.

Further, it will be seen that when the spark is advanced, the slide is moved laterally and the flange 11 is positioned in locking engagement beneath the flange 6.

Thus, it is apparent that no damage can come to the starter from inadvertent operation thereof as it is locked whenever the transmission is in gear and also whenever the spark is advanced.

It will be seen further that the device can be made as an attachment as shown in the drawings and can be readily applied to existing types of automobiles. It is to be distinctly understood however that this form of construction is not the only form possible with this invention as other means may be employed for rendering the starter inoperative under the conditions enumerated above.

Therefore, although the invention has been described in considerable detail, such description is intended as illustrative rather than limiting as the invention may be variously embodied and as the scope of such invention is to be determined as claimed.

I claim:

1. An attachment for an automotive vehicle having a starter button and a transmission lever, said attachment comprising a casing adapted to surround said button, a cap for the reception of said button, a slide carried within said casing and having means for locking said cap against depression, and a link pivoted to said slide and having means for the reception of said transmission lever.

2. In an automotive vehicle, the combination of a starter button, transmission mechanism, spark control mechanism, a slide for locking said button against depression when said slide is moved in any one of a plurality of directions, means operatively joining said slide with said transmission mechanism for moving said slide in either of two directions, and means operatively joining said slide and said spark control mechanism for moving said slide laterally of the first mentioned path of movement.

In testimony that I claim the foregoing I have hereunto set my hand at Milwaukee, in the county of Milwaukee and State of Wisconsin.

ANDREW SMITH.