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AUTOMATIC ENGINE CUT-OUT FOR TRACTORS

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Fig. 1.

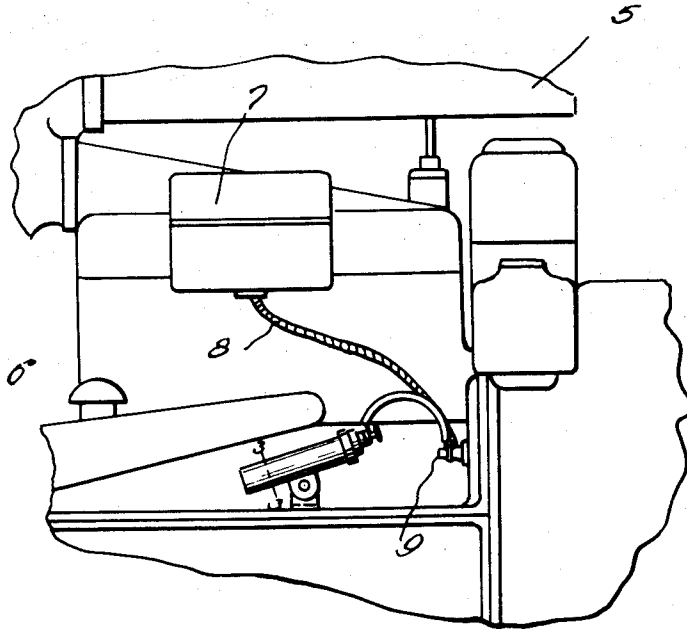


Fig. 2.

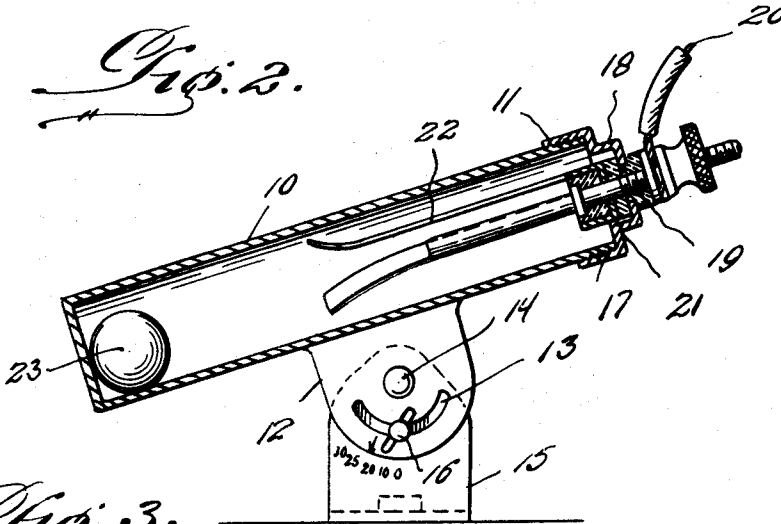
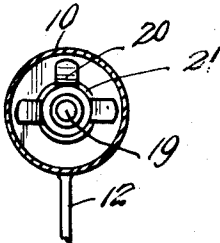


Fig. 3.



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AUTOMATIC ENGINE CUT-OUT FOR TRACTORS.

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This invention relates generally to tractors, and has more particular reference to an automatic engine ignition cut out for tractor engines, the primary object of the invention residing in the provision of such a device, wherein the engine ignition will be cut off in the event that the tractor rears up upon its traction wheels for thereby cutting off the power, and allowing the tractor to right itself, which would otherwise result in the complete turning over of the tractor.

An additional object of the invention is to provide an ignition cut out of the above character, wherein the same may be set to operate at any predetermined angle of the tractor to suit different demands.

A still further object of the invention is to provide automatic ignition cut out means that is relatively simple of construction and inexpensive of manufacture, and one that may be readily applied to all forms of combustion engine tractors now upon the market.

With the foregoing and other objects in view as the nature of the invention will be better understood, the same comprises the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawing and claimed.

In the drawings wherein like reference characters indicate corresponding parts throughout the several views,

Figure 1 is a fragmentary side elevational view of a conventional form of tractor equipped with an automatic engine cut out for tractors.

Figure 2 is a detail longitudinal sectional view through the cut out mechanism per se, and

Figure 3 is a transverse section thereof.

Now, having particular reference to the drawing, 5 designates generally the tractor that includes among other elements an internal combustion engine 6, with which is associated a well known form of ignition means that includes a coil box 7, within which are arranged coils, said coils having electrical connection as at 8 with the usual magneto post 9 of the ignition system.

My invention per se, constitutes the provision of a relatively elongated metallic barrel 10, that is open at one end, and screw threaded as indicated by the reference character 11. This barrel 10 is of a suitable length, and the same is formed upon its bot-

tom side and intermediate its ends with a plate or ear 12, that is formed at its marginal edge with an arcuate shaped slot 13. This plate or ear 12 is pivotally secured as at 14 to a metallic bracket 15 that is secured in any desirable manner, and at any predetermined point to the tractor 5, and this preferably at a point adjacent said magneto post 9. The bracket 15 carries a screw threaded bolt that extends through the arcuate slot 13 of the plate or ear 12 for reception of a wing nut 16, and it will be obvious that the barrel 10 may be disposed at any desirable angle with respect to the longitudinal axis of the tractor frame, and maintained in position by the bolt and nut above set forth.

Adapted to be threadedly disposed upon the open threaded end of the barrel 10 is a cap 17, the main wall of which is formed with a cup portion 18, centrally through which extends an opening shown in Figure 2. Disposed within this opening and insulating from the edge thereof in a suitable manner is a metallic post 19, to which is secured one end of a circuit wire 20, the other end of this wire adapted for attachment to the magneto post 8. The post 19 extends within the barrel, and has associated therewith a metallic cup 21, that is formed at its inner edge with spaced longitudinally extending spring strips 22, preferably three in number. The extreme forward ends of these strips are curved outwardly, and terminate closely adjacent the interior of the barrel 10.

Adapted for free rolling movement within this barrel 10 is a heavy ball 23. The position of the barrel 10 with respect to the tractor is preferably as shown in the drawing, it being of course understood that the inclination of this barrel may be changed to meet different demands whenever the same becomes necessary. In the event that the tractor rears upwardly upon its traction wheel, the angle of the barrel will obviously be changed with respect to the ground, and preferably reverse its position with respect to the ground, whereby the ball will move rearwardly within the barrel, and engage between the spring fingers 22 for manifestly spreading the same apart, which spreading will force the curved ends into engagement with the barrel for grounding the circuit from the post 9 through the frame, this will obviously cut out the ignition to the motor.

whereby the same will stop and the power of the rear wheels will be negatived, the tractor will then of course right itself.

5 The specific operation, together with numerous advantages of an automatic engine ignition cut out for tractors of this character will be at once appreciated by those skilled in the art, and even though I have herein described the most practical embodiment of the invention with which I am at 10 this time familiar, it is nevertheless to be understood that minor changes may be made therein, without departing from the appended claim.

15 Having thus described my invention, what I claim as new, and desire to secure by Letters-Patent, is:

An attachment for grounding the ignition

systems of tractor engines or the like including a barrel having one end closed, a cap 20 threaded on the other end, insulation extending through the cap, a post extending thru the insulation into the barrel a cup-like element pierced by the bar and supported within the barrel adjacent the cap, a plurality of 25 spring fingers extending from the element into the barrel and terminating beyond the inner extremity of the bar in outwardly curved portions which are spaced from the interior surface of the barrel, and a ball 30 movable in the barrel to engage the spring fingers and to spread them into engagement with the barrel.

In testimony whereof I affix my signature.

JOHN A. MINNINGER.