

### Fan Hub Puller

Illustrated in Fig. 41 is a fan hub puller, which can be used on the car, eliminating the necessity of removing the fan assembly from the car in order to remove the hub in the arbor press. This puller has been designed especially for this particular job, and will do it better than any other tool heretofore developed.

### Valve Timing

It is very essential that the cam shaft be set so that the valves will open and close in the proper relation to the movement of the

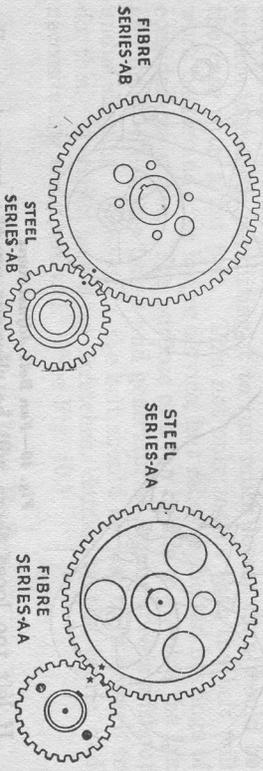


Fig. 42—Timing Gear Markings

pistons. The cam shaft and crank shaft gears are punch marked and if for any reason either gear is removed, the punch marks should

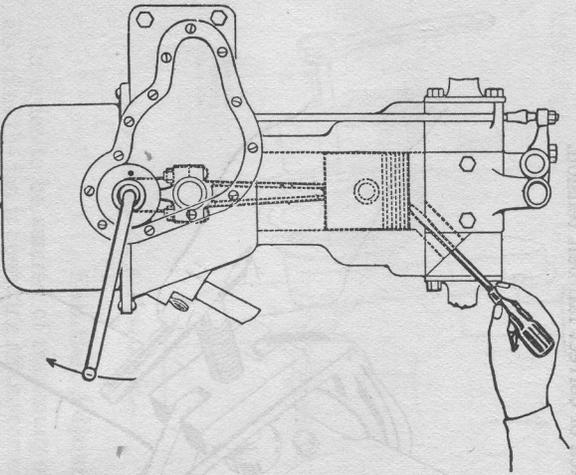


Fig. 43—Locating Top Dead Center

line up as in Fig. 42 when it is replaced.

The finding of "top dead center" is accomplished by turning motor over with starting crank until No. 1 and 4 pistons have reached their top position. To determine this position, if the cylinder head is not removed, remove spark plug and insert a screw driver or rod so one end will rest on top of piston (see Fig. 43).

You can then determine when the piston has reached the end of its upward travel, which is called "top dead center."

Series AB timing gears may be installed in pairs on Series V and Capitol AA motors.

### Timing Motor When New Gears Are Installed

The intake valve on Series "AA" Motors should begin to open when the piston has traveled  $\frac{1}{8}$  of an inch on its downward stroke.

If a cam shaft gear is replaced the cam shaft should be removed to insure a proper fit of the cam shaft thrust bearing and a careful check should be made to see that the No. 1 intake valve is opening at the proper time when the cam shaft is again placed in the motor.

When replacing the crank shaft gear with the cam shaft in place, allowance should be made for a slight turn of the cam shaft due to the helical cut teeth in the gears. Chevrolet timing gears are marked as shown in Fig. 42, which insures speedy and accurate replacement.

If the gears are not punch marked for making, count back (counter clockwise) fifteen teeth, starting with the tooth which is in line with the keyway on the camshaft gear. The punch mark on the crankshaft gear should be opposite or in line with the keyway. The camshaft trust plate is held in place by two screws.

### Semi Automatic Spark

To best understand the difference between manual and automatic control spark let us consider first the method of spark control used

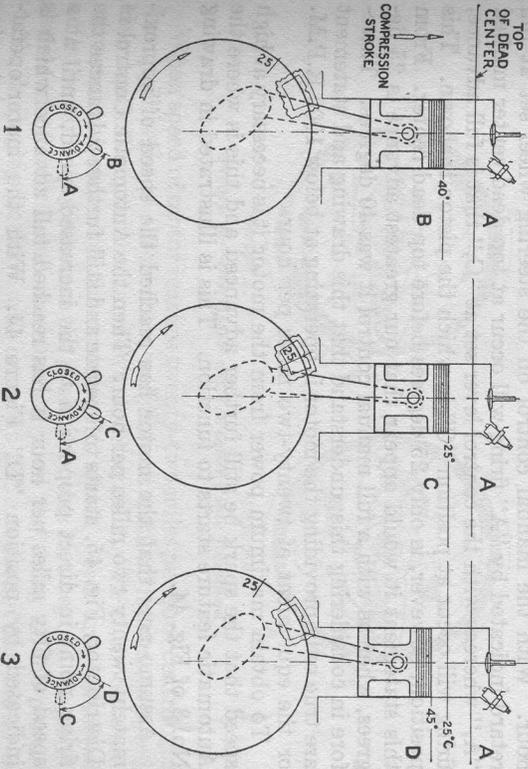


Figure 44—Timing Diagram