

Fill the gasoline tank with gasoline, strained through a cloth or chamois, so as to prevent any dirt or water from getting into the tank. See that there is no leak in the gasoline tubing between the tank and the mixer, that the check valve in the tubing next to the mixer, or this check valve may be found in some engines near the tank, is not stuck and the ball works freely up and down. Use a squirt can and inject two or three squirts of gasoline in the air inlet elbow. Put on the switch. Retard the timer lever which will be found on the 2½ and larger size engines, by shoving it towards the cylinder as far as it will go. On those engines having a damper or throttle in the air intake, close same to draw in the charge or inject a little gasoline with a squirt can into the air opening before attempting to start engine. After engine takes 4 or 5 impulses open the damper or throttle wide.

GASOLINE ADJUSTMENT.

The needle valve on mixer should be opened about one-half to one turn. The best intermediate position can easily be determined by noting what effect a slight turn makes in the speed of the engine and its exhaust.

If too much gasoline (the needle valve opened too much) the exhaust will be black, so the needle valve should be screwed in a trifle until the black smoke ceases. Blue smoke is an indication of too much lubricating oil. When the black smoke is produced the engine will not speed up nor will it develop full power and will sometimes stop.

If not enough gasoline is fed, flames will issue from the muffler and the engine will stop. After the proper point or adjustment of needle valve has been found it can be left in that position.

Next take hold of the rim of fly-wheel on the 4 H. P. and larger sizes (use the handle in fly-wheel on smaller sizes) and give it a quick pull over (which is turning the fly-wheel from right to left as you stand facing the side of it), and the engine should start every time providing your coil is properly adjusted; the batteries each and every one show 10 amperes or better, and your spark plug is not broken or fouled and the points in the spark plug must not be over 1/32 of an inch apart.

TO STOP ENGINE.

Turn off the switch and be sure that the fly-wheel does not stop at a point which will allow the exhaust valve to remain open. (Exhaust valve is open when spring is shoved in.)

TO PREVENT FREEZING.

Open drain cock located in bottom of cylinder, also in cylinder head on 6J.

TO CHANGE SPEED.

Increase the tension on the governor spring for speed; de-