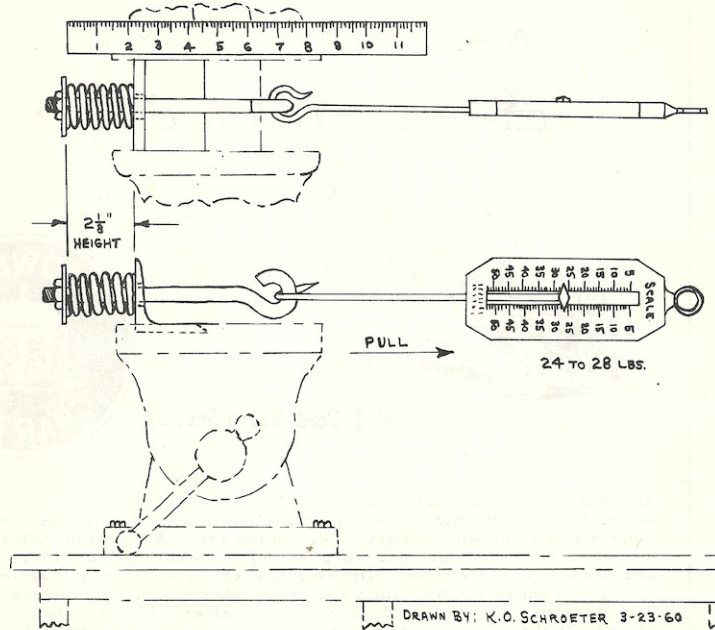


**Model T Ford Valve Seating**

An ideal valve seat is a narrow edge. It is more easily ground and will last longer than a wide edge. The drawings above show the action of the valve on a piece of carbon which might locate on the seat. A wide seat holds the carbon which will soon burn and warp the valve. A narrow seat cuts the carbon and keeps the seats clean. Drawing (A) shows a grain of carbon passing through an exhaust valve with a wide seat; when closing (B) the grain of carbon tends to become lodged between the valve and seat; when completely closed (C) the grain of carbon acts to warp the valve and stem. Drawing (D) shows a grain of carbon passing through an exhaust valve with a narrow seat; when closing (E) the grain of carbon tries to lodge between the valve and seat; when completely closed (F) the narrow edge of the valve seat cuts the grain of carbon causing one part to pass into the exhaust manifold and the other part to remain in the combustion chamber to be burned during the next power stroke or removed during the next exhaust stroke.

By  
Les Klee

## Method For Calibrating Valve Springs

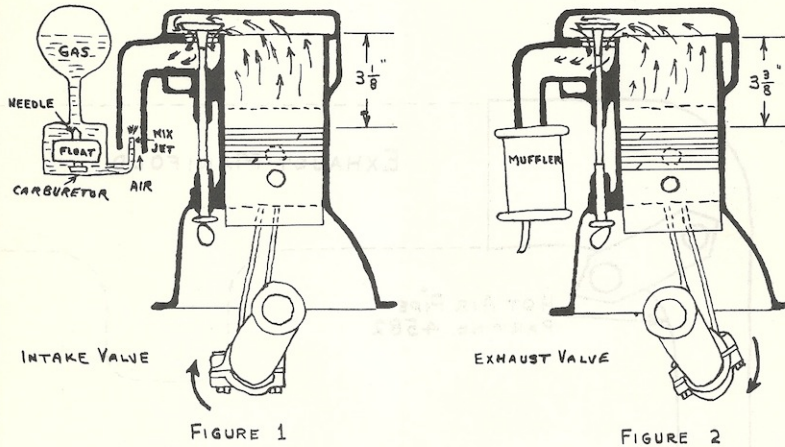


Valve springs must be up to capacity in order to properly seat the valve and to assure that the stem will draw through guide after exhaust gases have deposited carbon on the valve stem.

These springs should register 24 to 28 lbs. of pressure at 2-1/8". A recent check on a 1911 Model T showed that the springs had dropped to a 9 lbs. pressure at this height.

The above sketch shows one method for calibrating. You may prefer a bathroom scale and house-bricks, but the important item for efficient, smooth operation is to keep your valve springs up to capacity.

## VALVE SETTING IS VALVE TIMING



It is definitely wrong to set the Model "T" Ford valve clearances to the minimum ( $1/64$ ) for the purpose of having a quiet and smooth running motor. This practice can throw the valve timing off considerably. The Model "T" Ford camshaft is not made with the accuracy to permit uniform valve setting. The minimum valve setting recommended is .016 and to get the correct timing it may be necessary to go up to .040 max. clearance in some instances.

The intake valve closes on the up stroke of the piston. If the intake valve is set with too close a tolerance, some of the gases will be forced back into the intake manifold resulting in not enough gas for proper combustion. See Fig. 1.

The exhaust valve closes on the down stroke and if not enough valve clearance is provided, the exhaust valve will open too soon, resulting in power being wasted by escaping through the open valve. See Fig. 2.

The dotted lines in both figures show the position of the pistons with improper clearance.

DRAWN BY: K.O. SCHROETER