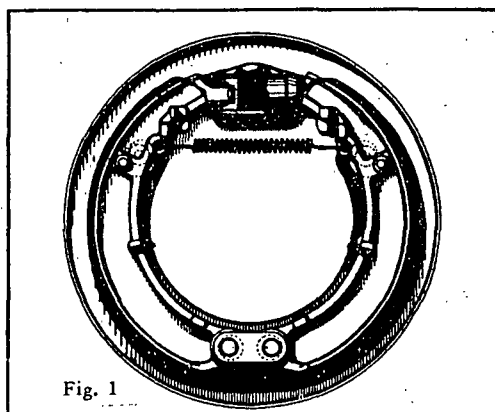
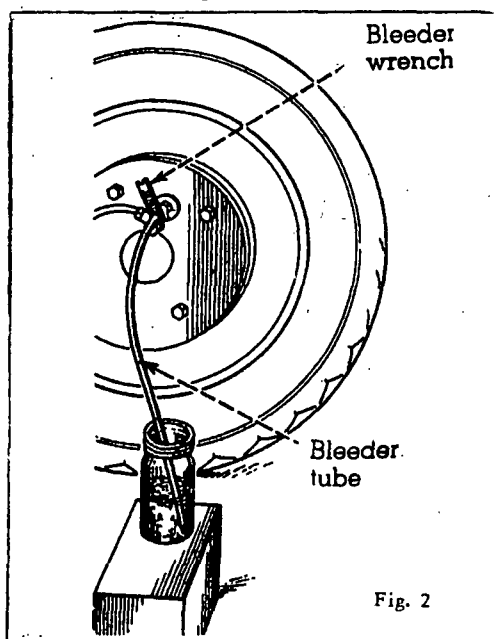




pedal is being "pumped," the end of the hose must be submerged in the fluid. A clean receptacle should be used for this purpose and the fluid may be spilled back into the original container after all lines have been bled. Do not spill the fluid immediately into the reservoir since it may contain small air bubbles which will defeat the purpose of the entire operation. Upon settling for several hours the bubbles will disappear.



Special pressure tanks are available for bleeding hydraulic brakes. With their use, one man can do the job. Fluid under pressure is contained in the tank and a special fitting enables tank to be connected to filler hole of master cylinder reservoir. This eliminates necessity of "pumping" brake pedal to cause fluid circulation.

VACUUM BOOSTER OPERATED HYDRAULIC BRAKES REACTIONARY TYPE

A reactionary type vacuum power cylinder, permitting greater pressures to be built up in the system with less effort on the part of the operator, is explained below. The vacuum power unit "U" Figure 1. utilizes the intake manifold vacuum as a source of power. It is of the "vacuum suspended" type with both sides of the piston submerged in

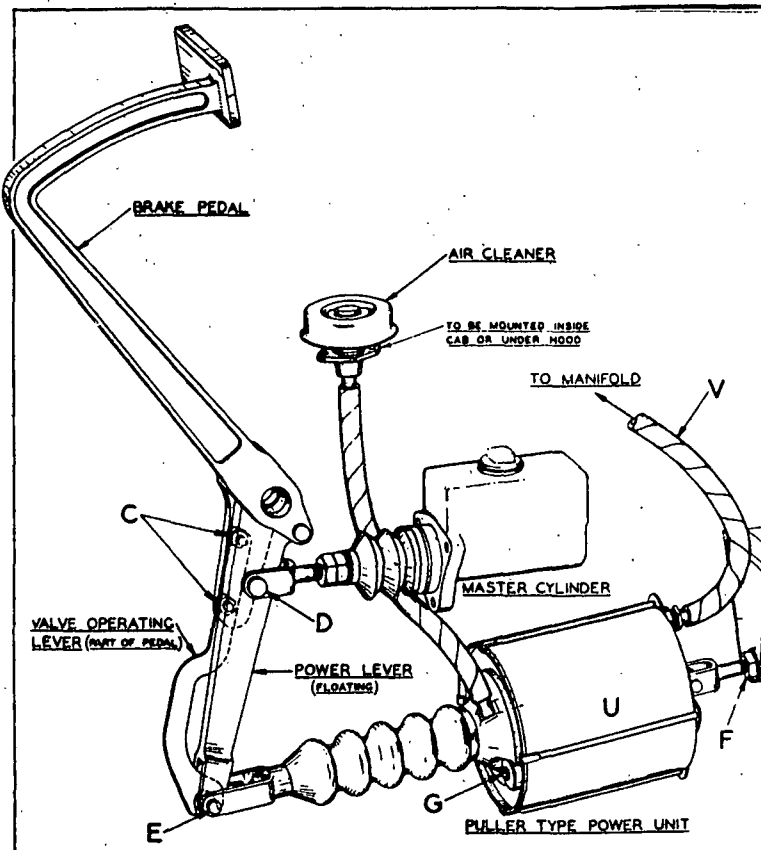


Fig. 3

vacuum when the brakes are in released position. Brake application is obtained by admitting atmospheric pressure to the rearward side of the piston (the piston rod end of the cylinder) without dumping a charge of raw air into the intake manifold. The vacuum line "V" connects the front of the power cylinder to the manifold (Fig. 3).

A check valve is incorporated in the intake line which maintains maximum vacuum in the cylinder during any cycle of operation and also seals the system after the engine is stopped, permitting a power brake application.

The vacuum power unit is of the reactionary type, that is, it is so connected to the master cylinder and brake pedal that it supplies approximately sixty percent of the power applied to the master cylinder, the other forty percent being supplied by manual effort on the brake pedal pad. This permits the operator to "feel" the brake at all times and to have full control of it. The deceleration of the vehicle increases in direct proportion with pedal pressure.

The valve operating the power unit is contained within the unit and is operated by a rod extending through the power unit piston rod to the valve operating lever (See Fig. 4 and 5).

If adjustments described later are made correctly, a movement of approximately $\frac{1}{2}$ " of the brake pedal pad pushes the valve inward, admitting atmospheric pressure to the rearward side of the piston. This air, or atmospheric pressure on the piston moves it toward the front of the cylinder and through the power lever connection applies pressure to the master cylinder.

From the remote air cleaner (Fig. 3 and Fig. 5), air enters the cylinder through a connection in the end plate dust cover holes in the hollow piston rod