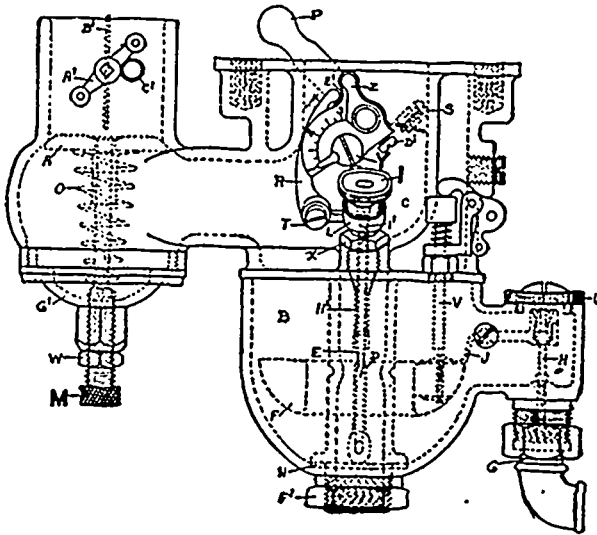


air valve which opens more and more as the speed of the engine increases. Compensating air valve, when once adjusted, admits a regulated supply of air in accordance with the degree of vacuum produced by the piston of the motor.

In the type F the throttle is water-jacketed with a butterfly valve in place of the sliding disc type used on the other models. There are two adjustments of the gasoline needle valve. The first acts through a knurled button, marked "I," which is turned to the right or left until a proper mixture is obtained with a low throttle. The second adjustment acting through an eccentric cam marked "Y," causes the lever "Q" to move the needle valve up and down in the spraying nozzle until the proper mixture for high speed

and without black smoke in exhaust. Then try controlling engine speeds by throttle. If the engine runs at low speed and fires regularly, but will not do the same at high speed, tighten the tension on the spring behind automatic air valve. This may be done by loosening the winged thumb nut and turning the milled screw head to the right a couple of turns at a time, the locking in place by tightening the thumb nut until a trial of engine speed is made to determine whether mixture is right or not. If not correct, make adjustments little at a time on the air valve until the engine will run at all speeds without showing black smoke. Then lock the thumb nut tight, after which there are no further adjusting to be done.

When properly adjusted the Schebler



is obtained. The compensating air valve marked "AOM" with its sensitive spring "O," keeps the mixture uniform between those two regulations and allows air to pass through freely, thus preventing a vacuum in the cylinder. The constant air opening "9" through the center of the body allows the engine to be throttled down very low and still receive enough air to supply a good mixture.

#### INSTRUCTIONS FOR CONNECTING AND ADJUSTING.

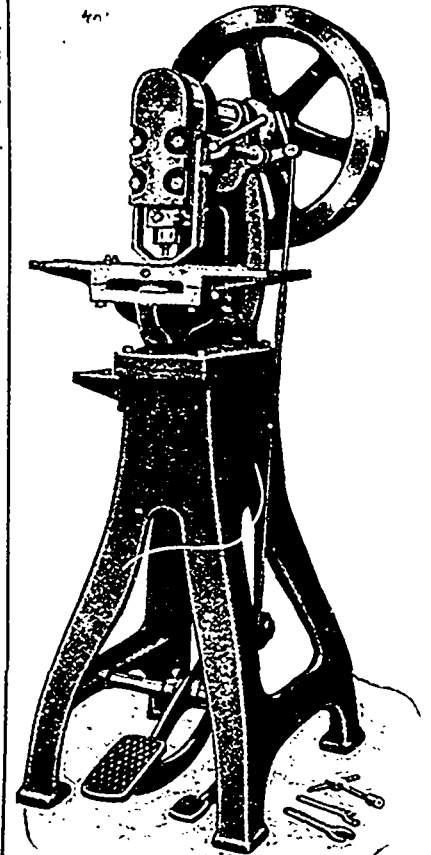
Place Carburetor about 6 inches below the bottom of gasoline tank, connecting a pipe or tube to union G. Pipe to be brass or copper and not less than  $\frac{1}{2}$  inch hole. (N.B.—Don't use rubber tubes, as float chamber will not fill properly and rubber makes a sediment in the gasoline). Be sure the tube or pipe is thoroughly free of dirt or corrosion. After all connections are properly made, turn on the gasoline and wait a few moments for float chamber to fill. Set throttle valve so it stands a trifle open. Turn needle valve about one half turn open. Flush carburetor and your engine is ready to start. The proper mixture is obtained by adjusting the needle valve as the case may require. If black smoke and red flame is observed, then the mixture is too rich. If a yellow flame is shown, mixture is not rich enough. After a deep blue flame has been obtained, open the throttle lever gradually. If motor misses explosions and there is no black smoke or red flame shown from exhaust, it is evident that mixture is not quite rich enough. Open needle valve slightly until firing is regular

Carburetor actually economizes in the use of fuel.

- A Compensating air valve.
- B Float chamber.
- C Mixing chamber.
- D Spraying nozzle.
- E Needle valve.
- F Float
- G Reversible union.
- H Float valve.
- I Needle valve and adjusting screw.
- J Float lever.
- K Throttle.
- L Needle valve retainer.
- M Air valve adjusting screw.
- N Cork Gasket.
- O Air valve spring.
- P Throttle lever.
- Q Needle Valve lift lever.
- R Throttle stop.
- S Pivot screw.
- T Float cap.
- U Flushing pin.
- V Lock nut.
- W Needle valve hex connection.
- X Spring cam casting.
- Y Eccentric high speed adjustment.
- Z Air valve lever.
- 1 Air valve butterfly-fly disk.
- 2 Spring.
- 3 Lock screw.
- 4 Cam spring.
- 5 Lock nut for bowl.
- 6 Air valve cap.
- 7 Needle valve retaining spring.
- 8 Needle valve spring.
- 9 Constant air opening.

## New Punch and Die Press

The Automatic Specialty Co., Cincinnati, Ohio, have recently developed and placed on the market a combination foot and power press shown in illustration herewith. It was designed with a view of supplying the demand for a small press to be used where power is available or otherwise where manufacturing of light sheet metal and brass



COMBINATION PUNCH AND DIE PRESS MADE BY AUTOMATIC SPECIALTY CO.

goods is carried on. This adapts it to the use of tanners, stove and cornice workers, and other similar lines of manufacture, where foot power only is available.

The ram is fitted up with an adjustable gib to take up the wear, though this would be reduced to a minimum owing to the large area of bearing surface provided. The automatic clutch may be operated either by the hand lever shown at the right of the spindle, or by the right-hand foot lever. The fly-wheel is bronze bushed, and can readily be replaced at small cost. When being used as a foot press, the treadle beneath the machine is connected with a crank-pin on the fly-wheel which is revolved by the foot of the operator in this way. For light work, a working stroke can be made at every revolution of the fly-wheel by this method. For heavy work, beyond the range of the usual foot press, the fly-wheel may be speeded up for several revolutions and the automatic clutch thrown in, as when working with power, when the stored momentum will punch a hole well up to the full capacity of the machine.

The machine is regularly provided with a front and side gauge on the bolster plate for

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