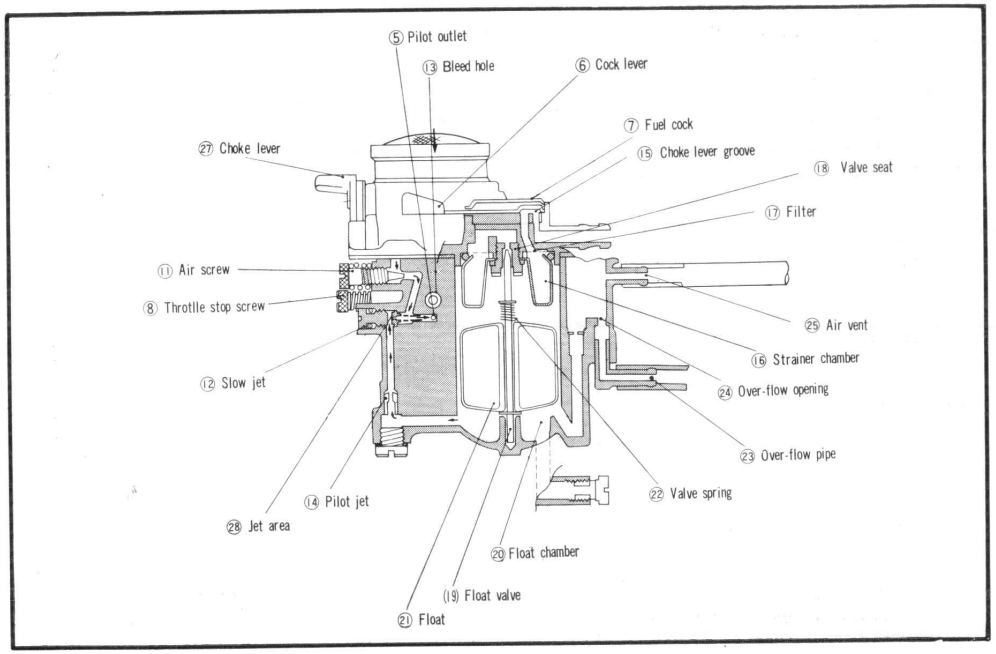

Figure 3–94. Carburetor cross sectional diagram

1. AIR SYSTEM

The carburetor used is a down draft type which draws the air into the carburetor from the top, henceforth the name. The air from the air cleaner which enters from the inlet opening ①, passes by the throttle valve ③ and is drawn into the engine after passing through the venturi. The power output is determined by the volume of air flow which is controlled by the movement of the throttle valve ③ to vary the opening of the venturi ②. **(Fig. 3–93)**

2. FUEL SYSTEM

a. Main system

The fuel enters through the main jet ⑨, and in the main jet, it mixes with the air in the air bleed ⑧ after having been metered by the air jet ⑩. The fuel and air mixture passes through the opening between the needle jet ⑥ and jet needle ④ to be sprayed at the throttle valve ③. The spray mixes with the main incoming air and becomes atomized before being taken into the engine. **(Fig. 3–93)**

b. Slow system

The air which enters from the inlet opening ① passes around the outside of the air screw ⑪ where it is metered and then enters the bleed hole ⑬ of the slow jet ⑫. On the other hand, the fuel from the float chamber ⑳ after being metered by the pilot jet ⑭ and metered again at the jet area ㉘ of the slow jet ⑫, mixes with the air from the bleed hole ⑬ within the slow jet and is sprayed out at the bottom of the throttle valve ③ from the pilot outlet ⑤, to mix with the main flow of air from the carburetor air inlet ① and is then taken into the engine.

3. FLOAT CHAMBER

It is necessary for the carburetor to supply the proper fuel mixture for the respective throttle opening and engine speed; in order to do this, the fuel level must be maintained at a constant level. It is the function of the float chamber to perform this task.

The DP type carburetor incorporates a filter in the float chamber to prevent entry of dust.

The fuel from the tank flows through the groove ⑮ in the fuel cock, enters the strainer compartment ⑯ where the dust and foreign matters in the fuel are allowed to settle, passes through the filter ⑰ and then enters the float chamber ⑳. As the fuel level in the float chamber rises, the float ㉔ becomes bouyant and applies pressure against the valve spring ㉒ to override it and then forces the float valve ⑲ against the valve seat ⑱ to stop the flow of the fuel. When the fuel in the float chamber ⑳ is consumed, it causes a lowering of the fuel level and a consequent lowering of the float ㉑, this causes the float valve ⑲ to unseat and permits the fuel to enter the float chamber. This process is repeated to maintain a constant fuel level in the float chamber. A spring ㉒ is incorporated between the float and the top of the valve floatto prevent the oscillation of the float valve and reduce wear to the valve seat ⑱. Further, to prevent overflowing of the carburetor and causing the flooding of the cylinder due to tilting or the float valve sticking open, an overflow pipe is incorporated to drain off any fuel which exceeds the critical fuel level.

In addition a static air vent tube is located in the float chamber and is vented at the front cover to maintain the air pressure in the float chamber always constant with the outside atmosphere and which is not affected by riding speed or outside wind condition.

4. CHOKE (STARTING)

During cold weather starting, it may be necessary to initially use a rich fuel mixture. For this purpose, a choke valve ㉖ is incorporated. The choke valve ㉖ is closed by raising the choke lever ㉗, this restricts the air and allows the fuel sprayed from the needle jet ⑥ to enter the engine as a rich fuel mixture.

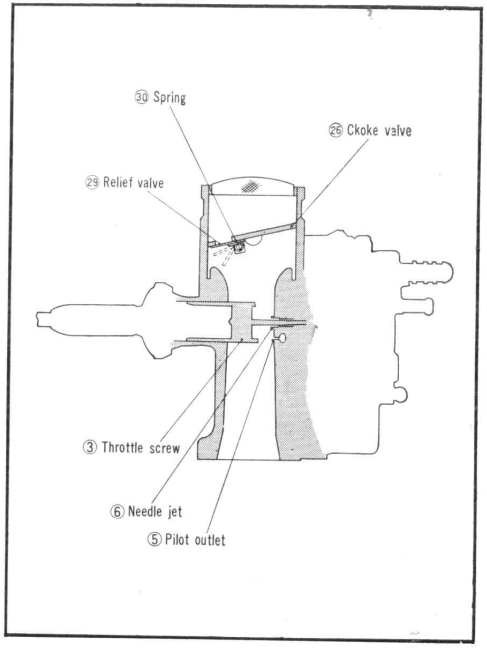

Figure 3–95. Carburetor cross sectional diagram