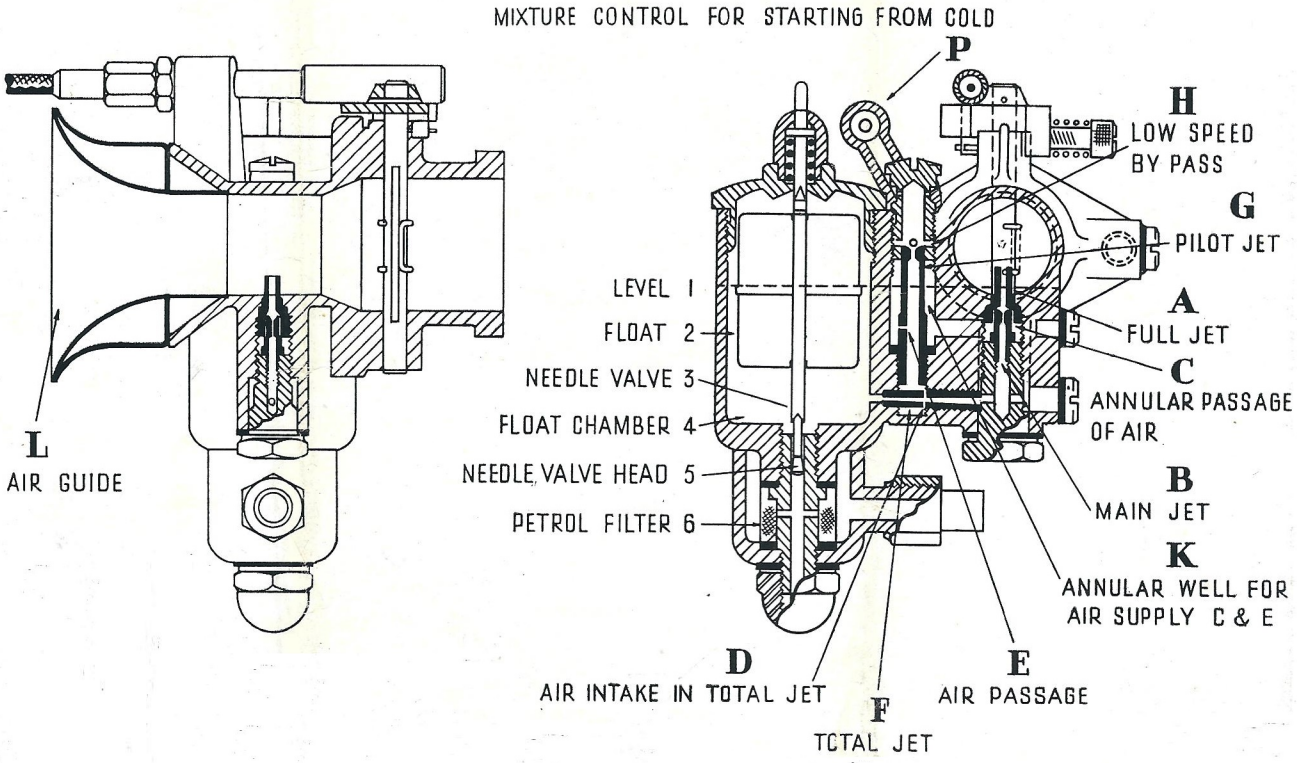
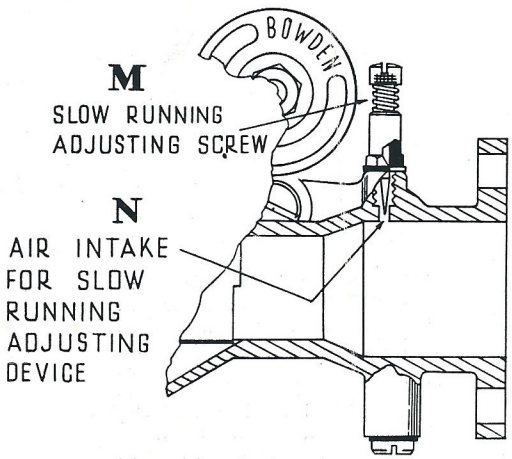
THE BOWDEN CARBURETTER





DESCRIPTION OF OPERATION

When starting the engine, the butterfly being almost closed, the suction on the Full Jet "A" is negligible. The channel delivering the mixture for slow running, comes out at the edge of the butterfly, causing very great suction on the Pilot Jet "G". This suction can be increased by closing, partly or fully, the air intake at "P", by means of the Mixture Control Lever, in the case of the starting of an engine from cold.

For slow running, the Pilot Jet "G" delivers the petrol, which is atomised by the air coming from the intakes "N" and "P". The mixture thus formed, passes to the butterfly, where it is mixed with an additional quantity of air, regulated by the opening of the butterfly, and is then delivered to the cylinder.

As the butterfly is gradually opened, the suction on the Full Jet "A" becomes stronger. This jet delivers petrol, and as air enters into the Pilot Jet Well "K", through the suitable channel, the petrol level in this well falls down until the duct communicating with the annular passage "C" is fully uncovered.

At this moment, the submerged Main Jet "B" delivers petrol into Full Jet "A", whilst air is passing through the suitable channel into "K" and "C", thus finely atomising the petrol.

When the throttle is fully opened, the remaining petrol contained in the Pilot Jet Well "K" and inside the Pilot Jet "G", is drawn through holes "E" and "D", allowing the air to pass through the same holes, when it becomes mixed with the petrol delivered by Total Jet "F". The result is a fine emulsion of petrol and air, made possible by this new air injection.

The petrol mixture delivered by Full Jet "A" has therefore been subjected to two air injections in series. It is then finely emulsionized. This emulsion is finely diffused in the main air current coming through the venturi and choke tube, before it passes into the cylinder.

Acceleration at small throttle openings is ensured by the reserve of petrol contained in Well "K". This petrol is rapidly drawn into the cylinder when the throttle is opened quickly.

THROTTLE. This is of "Butterfly" type, as fitted on all car carburetters, thereby ensuring long life, consistent performance and cheap replacement when spindle wear occurs.

PETROL FILTER. An efficient Petrol Filter is embodied in the design.

JETS. All jets are calibrated in cubic centimeters (c.c.) per minute. Main jets used on motor cycles vary in size from 60 c.c.s for the smallest engines up to 200 c.c.s for the 1,000 c.c. twin engine.