# Battery

## General

The battery serves as a power supply for the electric accessories when the engine is not running and to supply power to the starter for cranking the engine. When the engine is running the generator supplies part of its output to charge battery. The energy thus stored can be drawn from the battery at any time.

## Construction and Function

The 6 volt battery consists of 3 cells, each of which contains positive lead dioxide ($PbO_2$) plates and negative lead (Pb) plates. There is one more negative plate than positive plate so that there is a negative plate at each end of the cell. The plates are held apart from each other by separators made

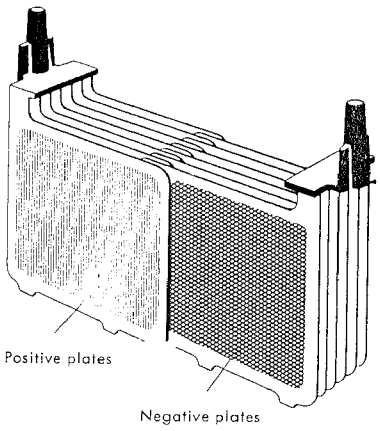


Fig. 34

of acid resistant porous material. There is a complete set of negative and positive plates in each of the three cells of the battery case which are sealed with plastic material.

The bottom of the battery housing has fins which support the plates. The space between the fins serves as a mud space where the small particles which break off the plates can accumulate without causing short circuits between the plates. The detachable battery cell caps also function as ventilators.

Each cell when fully charged has a voltage of approx. 2 volts. By connecting the three cells in series a combined battery voltage of 6 volts is obtained.

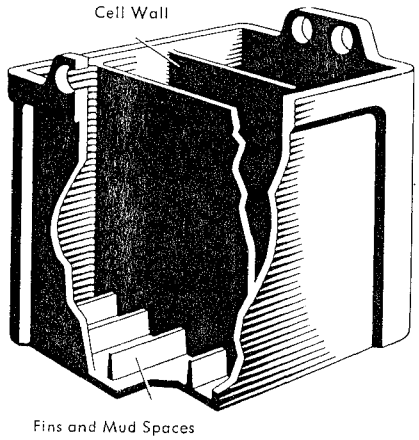


Fig. 35

For clear identification the positive and negative poles are provided with a plus (+) and a minus (—) sign respectively. They are also of different size (positive pole is larger in diameter).

The electrolyte consists of dillute sulphuric acid ($H_2SO_4 + H_2O$) which has a specific gravity of 1.285 or 32° Bé (Baumé).

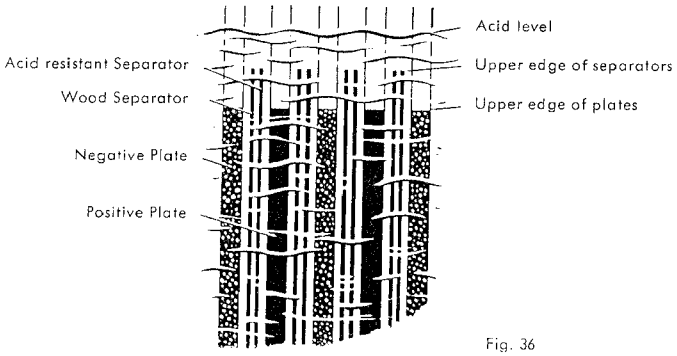


Fig. 36