

### Controls

The left-hand knob governs "d.c." ranges and the right-hand knob the "a.c." ranges, the switching being interlocked in such a manner, that it is only possible to obtain "d.c." readings by setting the "D.C." switch to a range and rotating the "A.C." switch to the position marked "D.C." A similar procedure is necessary when making an "a.c." measurement, and the instrument is therefore protected from damage in the event of both switches being left on ranges when making a test, for in this condition there is no circuit through the meter. Should "a.c." be passed through the instrument when it is set to a correct "d.c." range or vice versa, no pointer indication will be produced, and no damage will result, provided that the meter is not overloaded on the range selected.

It is possible to determine whether a source is "a.c." or "d.c." since pointer deflection can only be produced with switches set for the same type of measurement as the supply.

The knobs marked "P," "Q" and "R" are of use in conjunction with the resistance ranges, etc., and full details of their functions will be given in a later section of the book.

*If at any time it becomes necessary to re-set the pointer to zero, the slotted zero adjusting screw should be used.*

### Overload Protection

Apart from the facility with which measurements can be made, one of the most attractive features of the instrument is the provision of an automatic cut-out which completely eliminates the inconvenience and expense of replacing fuses. The incorporation of this device will be found to be of particular value when conducting experimental work, for it imparts to the user the feeling of mental ease and confidence. When performing such work with conventional moving coil meters, these can be easily ruined by inadvertently applied overloads, whereas the Avometer is so well protected that it can withstand considerable mishandling.

If an overload is applied to the meter, the cut-out knob springs from its normal position in the panel, thus breaking the main circuit, and this knob has only to be depressed to render the instrument again ready for use. It is important to note that the cut-out should never be re-set when the instrument is connected to an external circuit, whilst the fault which caused the overload should be rectified before the meter is reconnected. The mechanism functions on moderate overloads if the moving coil hits the forward or reverse end stops,