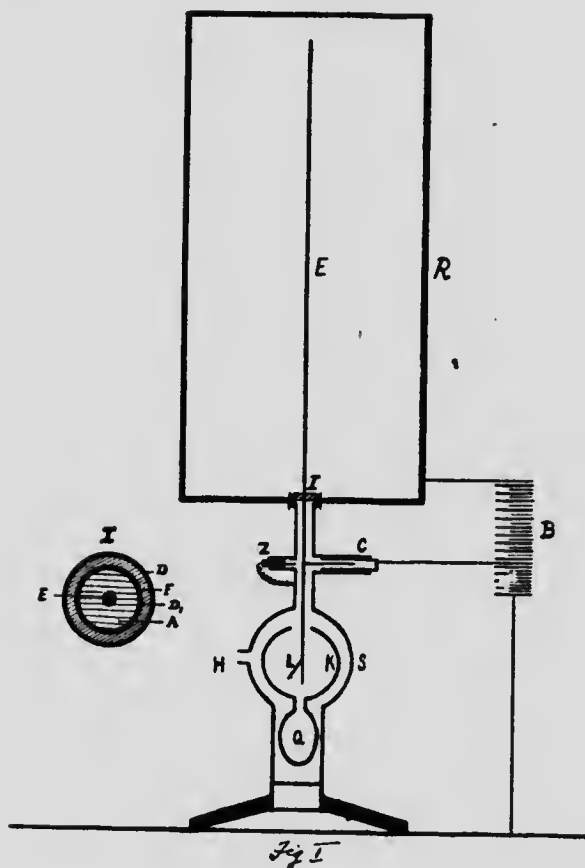


It would seem from these observations, therefore, that very little diurnal variation exists in the penetrating radiation at Toronto. Wright's observations, however, were extremely limited in number and it was decided to extend them, to ascertain whether it would be necessary to modify in any way the conclusions which might be drawn from them. The following paper contains an account of these observations and it will be seen from the results that they point quite definitely to the absence of any regular diurnal variations.



II.—APPARATUS.

The measuring instrument used was the latest type of Wilson gold-leaf electroscope, and the arrangement of apparatus adopted is shewn in Fig. 1. The case of the electroscope was joined to earth and the leaf system to an electrode which passed up into the ionising chamber R. This chamber was insulated from the electroscope case, and could be charged as desired by means of the battery B to any