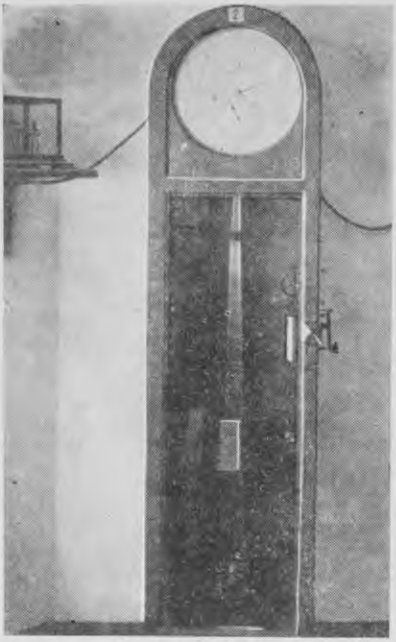

Control Clock.

And if all the clocks stopped? As they are well cared for, this is unlikely, but what is possible is that a severe earthquake could upset the adjustments of the pendulums. To anticipate such a happening six chronometers in varnished boxes sit on a special table and tick away smugly. Most of them are marine chronometers set in gimbals and no earthquake is likely to upset them. Each clock, slave or control, has a duplicate, so no need for adjustment ever interrupts the maintenance and transmission of the exact time. So by wireless or the stars, by clocks or chronometers, at the Dominion Observatory time marches on—but with exactitude. The Director, incidentally, would agree with the Mad Hatter about timepieces—butter is *not* good for the works.

Underneath the building, in what used to be the storeroom and ammunition dump of a coastal battery situated here towards the end of the last century, is a small cell with a glass window about a foot square in the door. Inside is the Observatory's most accurate clock. In order that its accuracy may not be disturbed by fluctuations in temperature, only very rarely is the cell entered.

Although founded primarily to provide a uniform time service for the Dominion, and still carrying out that function, nowadays the main task of the Observatory is seismology, the study of earthquakes. The first seismograph was installed in 1916, and four years later the Observatory became the country's official seismological institute.

Since 1932 there have been nearly a dozen stations recording seismic disturbances, with the Dominion Observatory as the central station. In addition, the Observatory acts as a central station for the South-west Pacific area as well as New Zealand. To do this it makes use of data from eastern Australian and island stations in the Pacific, publishing the results in bulletins, which are distributed throughout the world.

The simplest seismograph, made in New Zealand by the way, is housed in a small building a few yards from the Observatory. Here a sheet of smoked paper is wrapped round a metal cylinder which slowly revolves and moves also longitudinally driven by a small clock. Three steel pens, their points just touching the paper, are connected to three pendulums, two swinging horizontally on the gate principle, and one vertically. The pendulums are delicately balanced, and the whole is securely bolted to a solid concrete block. Any earth tremor locally will set the pendulum swinging and the pens scratching out their story. When the sheet is finished, it is taken off the roller and varnished. In this way the record is made permanent.

This instrument is not sufficiently delicate, however, to measure earthquakes at a great distance. For more distant earthquakes and the smaller local ones there are three seismographs in the underground chamber. Here in a room lit by two bulbs with special filaments giving a weak red light are the seismographs and their respective recording instruments. Two are long-period seismographs and one a short-period instrument. By period the seismologist