

## CHAPTER XVII

### THE SEISMOLOGICAL OBSERVATORY AT THE UNIVERSITY OF SAN FRANCISCO, SAN FRANCISCO, CALIFORNIA

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The University of San Francisco Station started operating under limited activity in April, 1950. The instruments, two long period, 20 second horizontal and one short period, 2 second vertical Sprengnether seismographs were purchased from the Sprengnether Instrument Company of Saint Louis in April of 1947. The recording system is a three component recorder with control panel and optical system made by the same firm.

The site of the vault is located under the church and is based on solid rock of the Franciscan series so prevalent in the area. Since a great deal of excavating was required to make room for the recording station, it was not until March of 1948 that the vault was ready for occupancy. It comprises two rooms with forced ventilation; one containing the piers for the instruments and the other a dark room. The former contains three concrete piers resting on solid rock and separated from the floor, one for the seismometers, one for the galvanometers, and the third for the

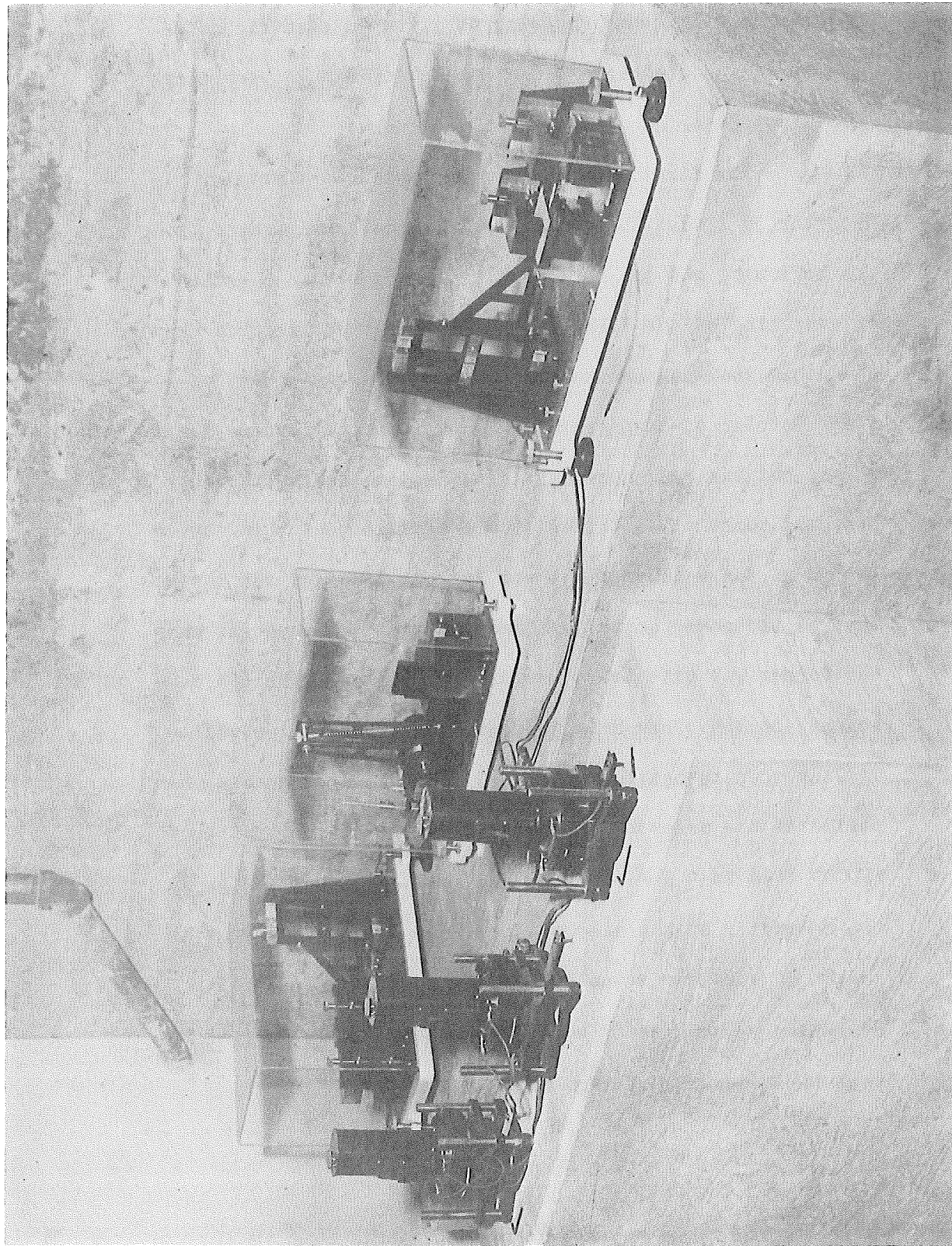


Reverend Alexis I. Mei, S. J.  
Founder and Director

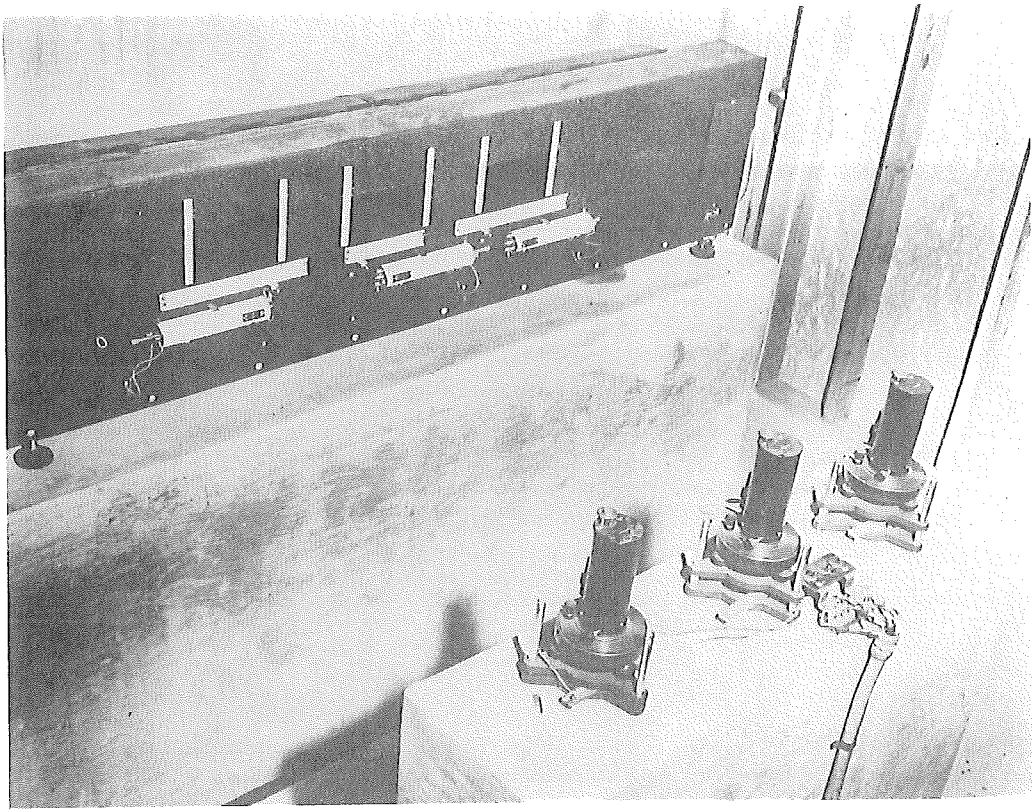
recording drum. The dark room, besides the ordinary equipment customarily found therein, contains an electric rotating drum type of drier which turns out finished recordings in four minutes.

The first records of the station were obtained in December of 1948. The vertical gave excellent records from the beginning but the horizontals were poor with a great deal of wandering of the light spots. Intermittent records showed that this restlessness continued through a great part of 1949. About October of that year the E-W seismometer became fairly steady but the N-S component continued to waver, though lessened somewhat. It then became evident that this oscillation of the N-S component was not the fault of the instrument as it became quite as steady as the E-W component when the former was oriented to record E-W motion. The E-W component, on the other hand, received these irregular oscillations when turned to record N-S motion. A change in the period of the seismometers from 20 seconds through various values down to 9 seconds produced no significant change in the character of the aberrations.

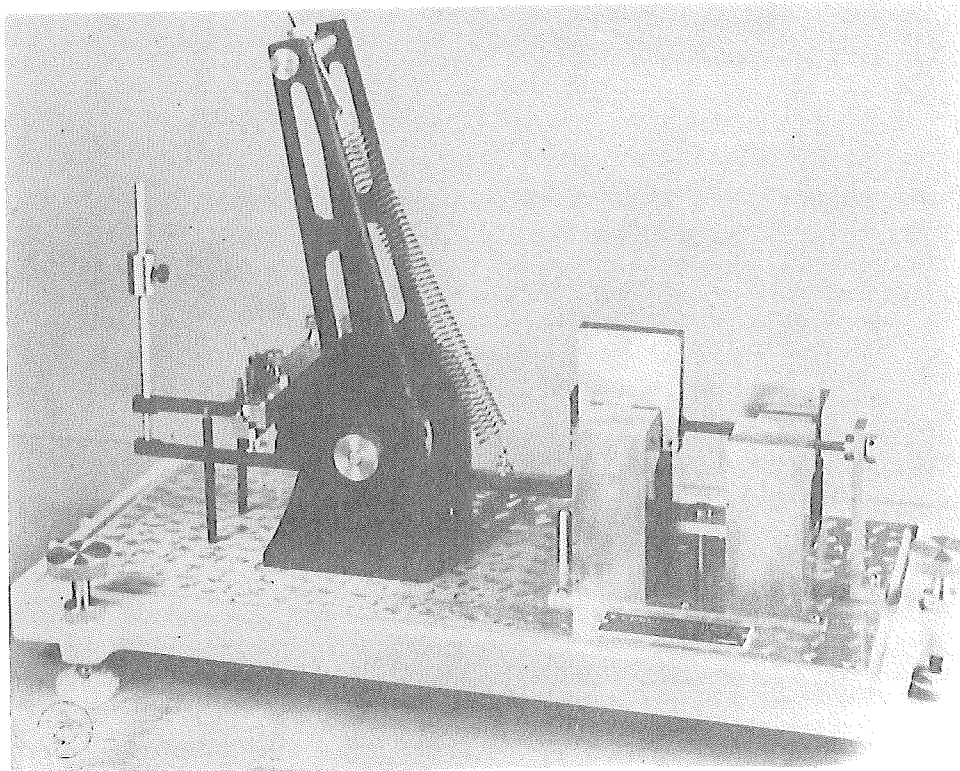
Finally it was decided to put the station into operation regardless of these defects and seek to eliminate them in the course of regular operation.



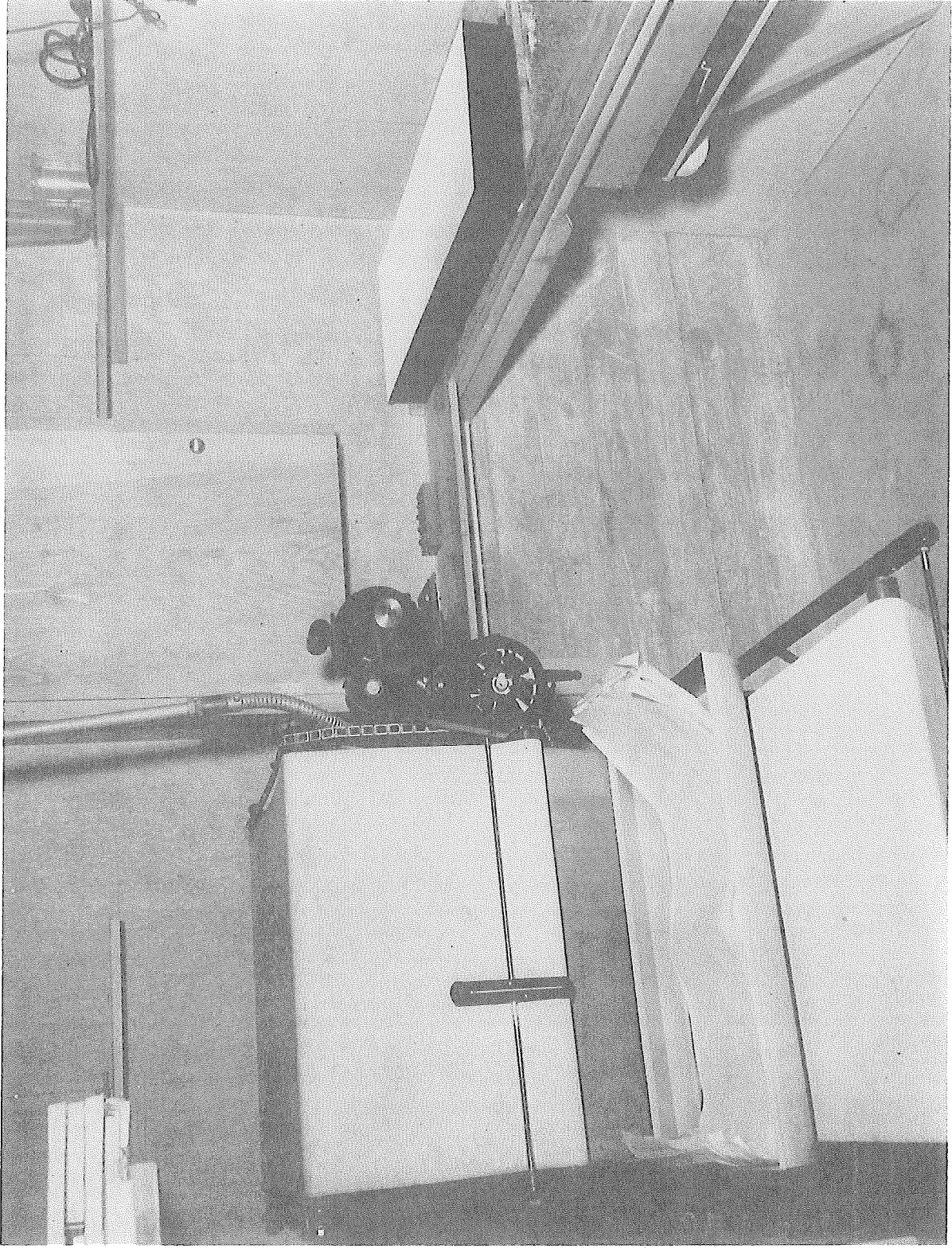
Sprengnether Seismographs - Two Long Period Horizontal and in the Middle One Short Period Vertical Component  
University of San Francisco



Sprenghether Triple Drum Recorder and Leeds and Northrup Galvanometers



Detail of Sprenghether Short Period Vertical Seismometer



Dark Room - Developing Table and Dryer  
University of San Francisco