

CHAPTER XXI

THE SEISMOLOGICAL OBSERVATORY AT GEORGETOWN UNIVERSITY, WASHINGTON, D. C.

By James B. Macelwane, S. J.

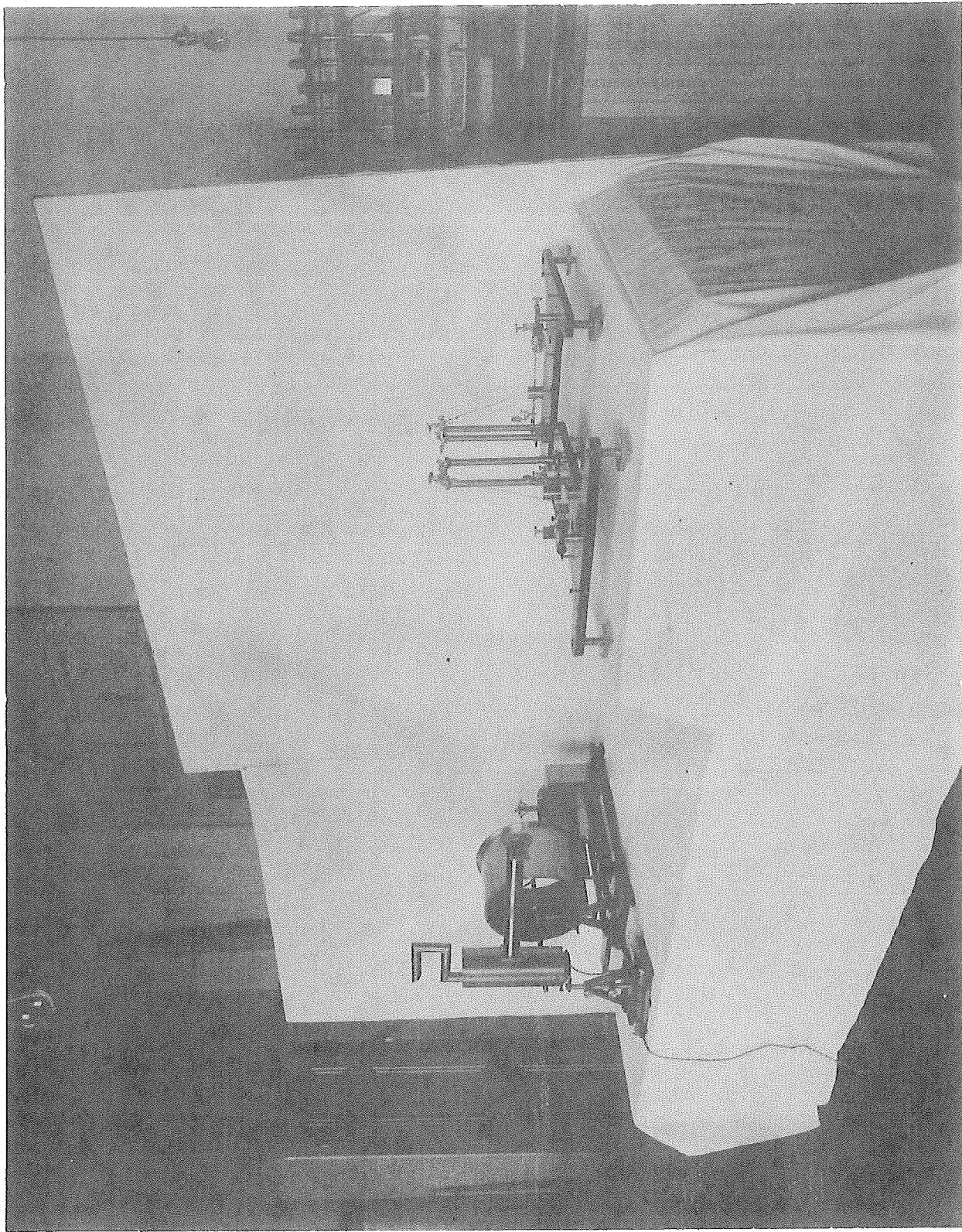
An astronomical observatory had been in existence at Georgetown nearly two thirds of a century and had enjoyed the distinction of being directed by such famous astronomers as Secchi and Hagen when the Seismological Observatory was founded in 1910 through a gift from a Georgetown alumnus, Mr. Patrick H. O'Donnell.

The founder and first director of the Seismological Observatory was the Reverend Francis A. Tondorf, S. J. He was born in Boston, Massachusetts, July 17, 1870, and entered the Society of Jesus at Frederick, Maryland, August 14, 1888. While a teaching scholastic at Loyola College in Baltimore, Maryland, he had attended Johns Hopkins University and, among other studies there, took courses in geophysics.

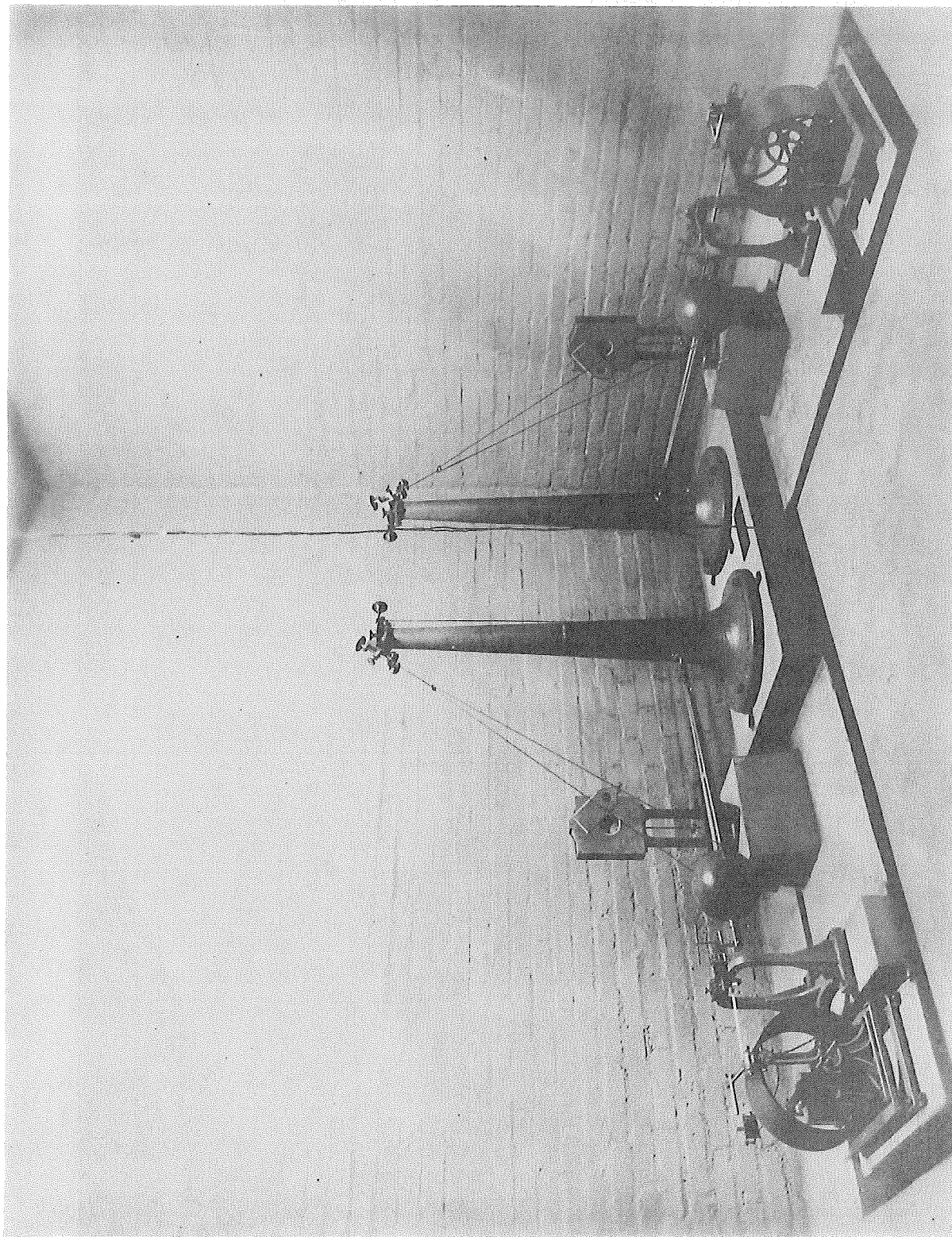
After his ordination and the completion of his studies, he came to Georgetown University in 1908 as Assistant Director of the Astronomical Observatory. He became interested in the project of a Jesuit Seismological Service in the following year and in 1910 through the assistance of Mr. O'Donnell he secured the purchase from Spindler and Hoyer in Gottingen, Germany, of both a horizontal and a



Reverend Francis Anthony Tondorf, S. J.
Founder and First Director of the Georgetown Observatory
demonstrating the large metal globe presented to him by the late Chief Justice White



The Photographic Bosch Seismographs which were later donated to Woodstock College

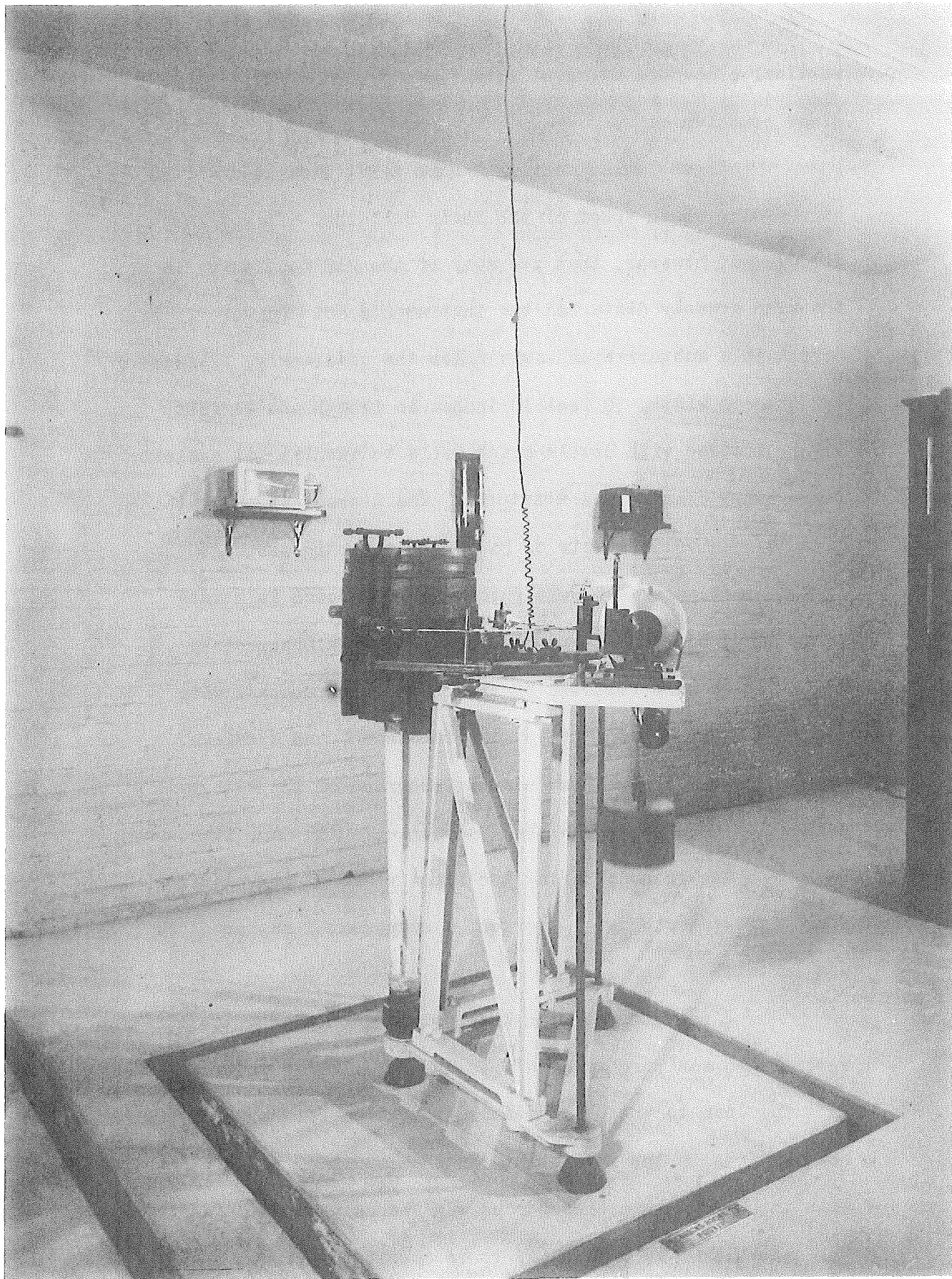


The 25 Kg. Bosch Seismographs which were donated to Weston College

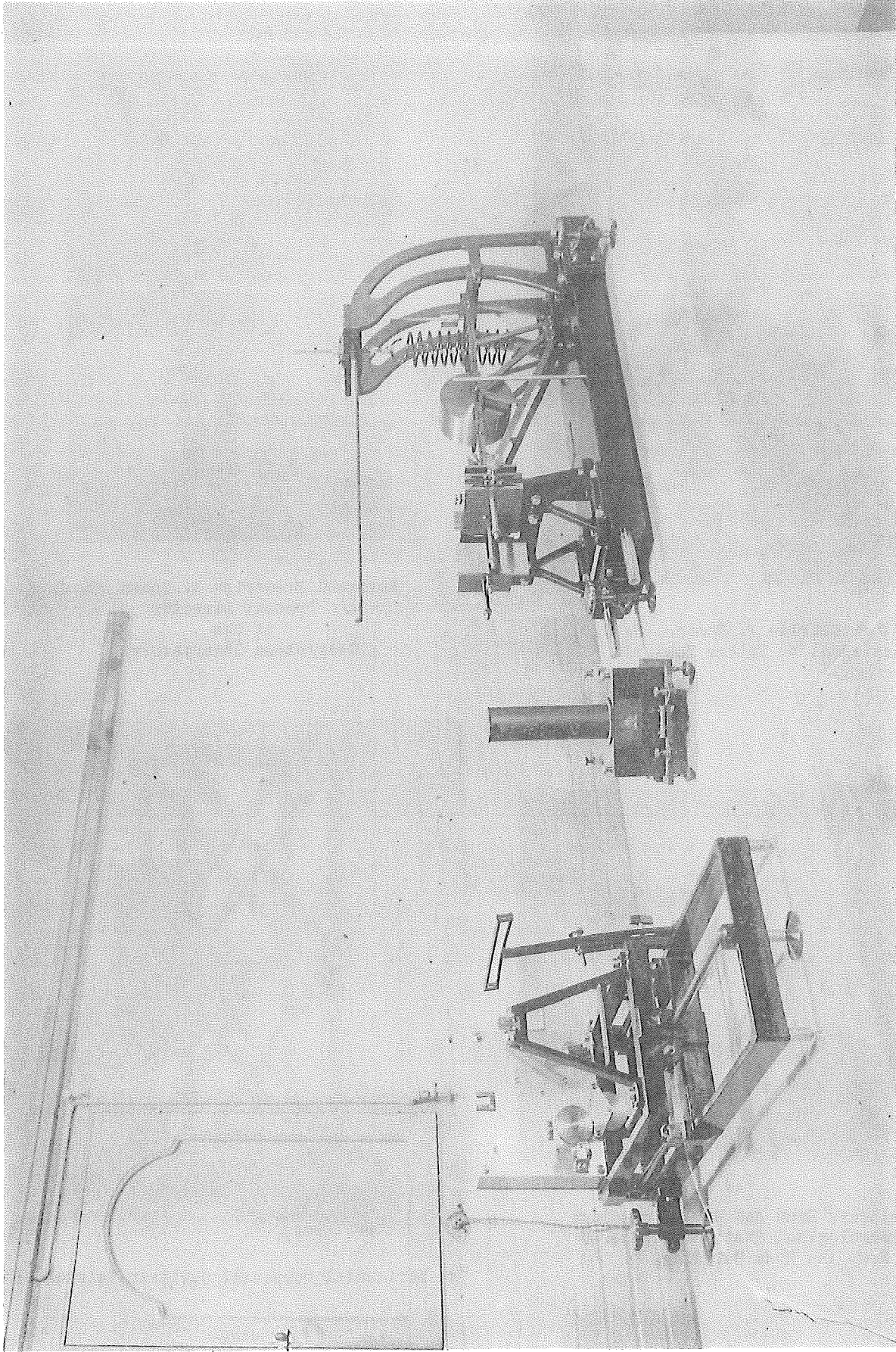
vertical component Wiechert seismograph, each of 80 kilograms pendulum mass.

These two seismographs were first installed at the base of the south tower of the Healy Building. It was soon discovered, however, that the sway of the 212 foot tower in the wind greatly disturbed the instruments and they were transferred to a subterranean vault under the quadrangle, 12 feet 4 inches in width, 30 feet 10 inches in length and 11 feet high, provided with double brick walls to insulate it against temperature changes and moisture. The piers rest on weathered diorite. In 1912 a pair of Bosch photographic seismographs of 200 grams mass each were purchased from Bosch in Strasbourg and installed in a concrete building on Observatory Hill. These were followed by two Bosch-Omori mechanically recording seismographs of 25 kilograms each, and a Mainka, two-component, conical pendulum seismograph of 135 kilograms each which were housed in the quadrangle vault. The time was marked on the records during the first years by signals from four different clocks. Later on, a compensated master clock was installed.

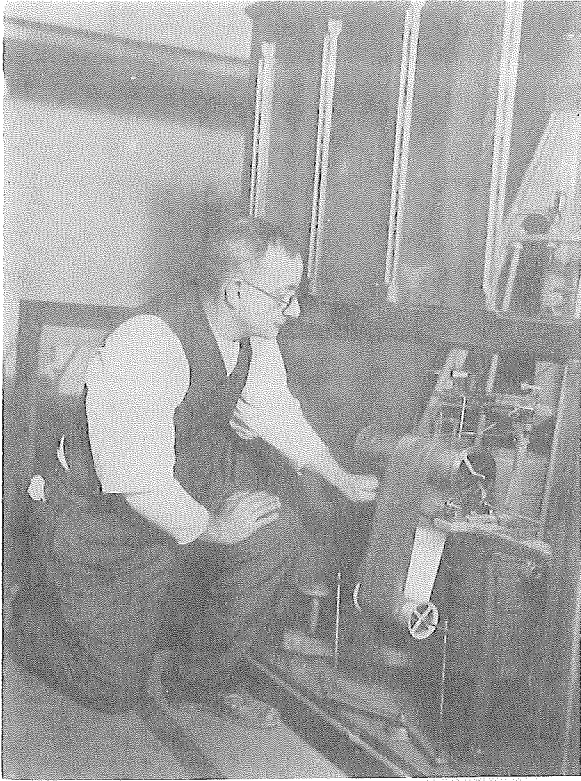
A new 200 kilogram Wiechert horizontal-component seismograph was purchased to free the 80 kilogram instrument for loan to the Crocker Land expedition for earthquake observations in the far north. On the return of the expedition the 80 kilogram seismograph was reconditioned and sent to Guatemala City, Guatemala, to be operated by Senor Claudio Urrutia, consulting engineer to the Guatemalan Government.



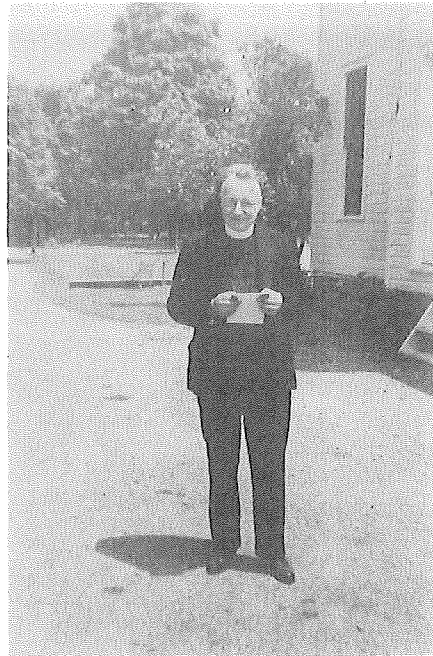
The Wiechert 200 Kg. Seismograph



The Vertical Galitzin Seismograph



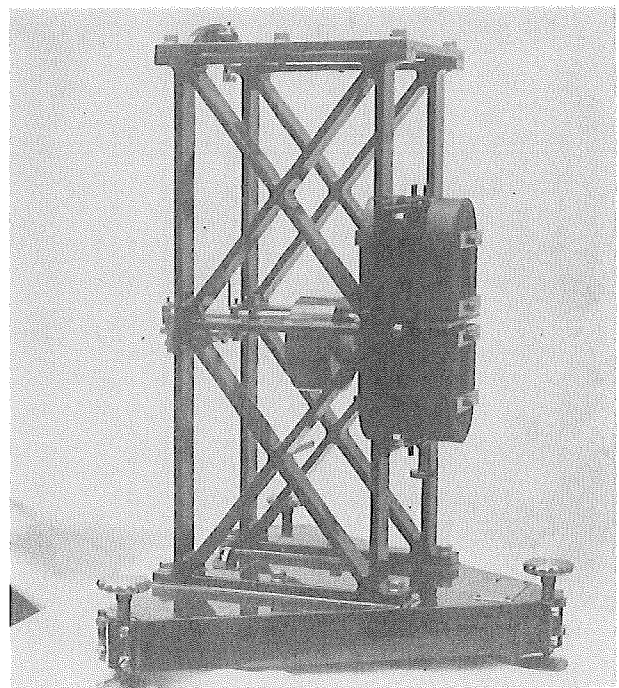
Brother Charles J. Ramage, S. J.
Assistant to Father Tondorf



Reverend Frederick W. Sohon, S. J.
Present Director
of the
Georgetown Observatory



The Mulledy, Ryan and Healy Buildings
The Seismological Station is entered
from the Ryan Building.



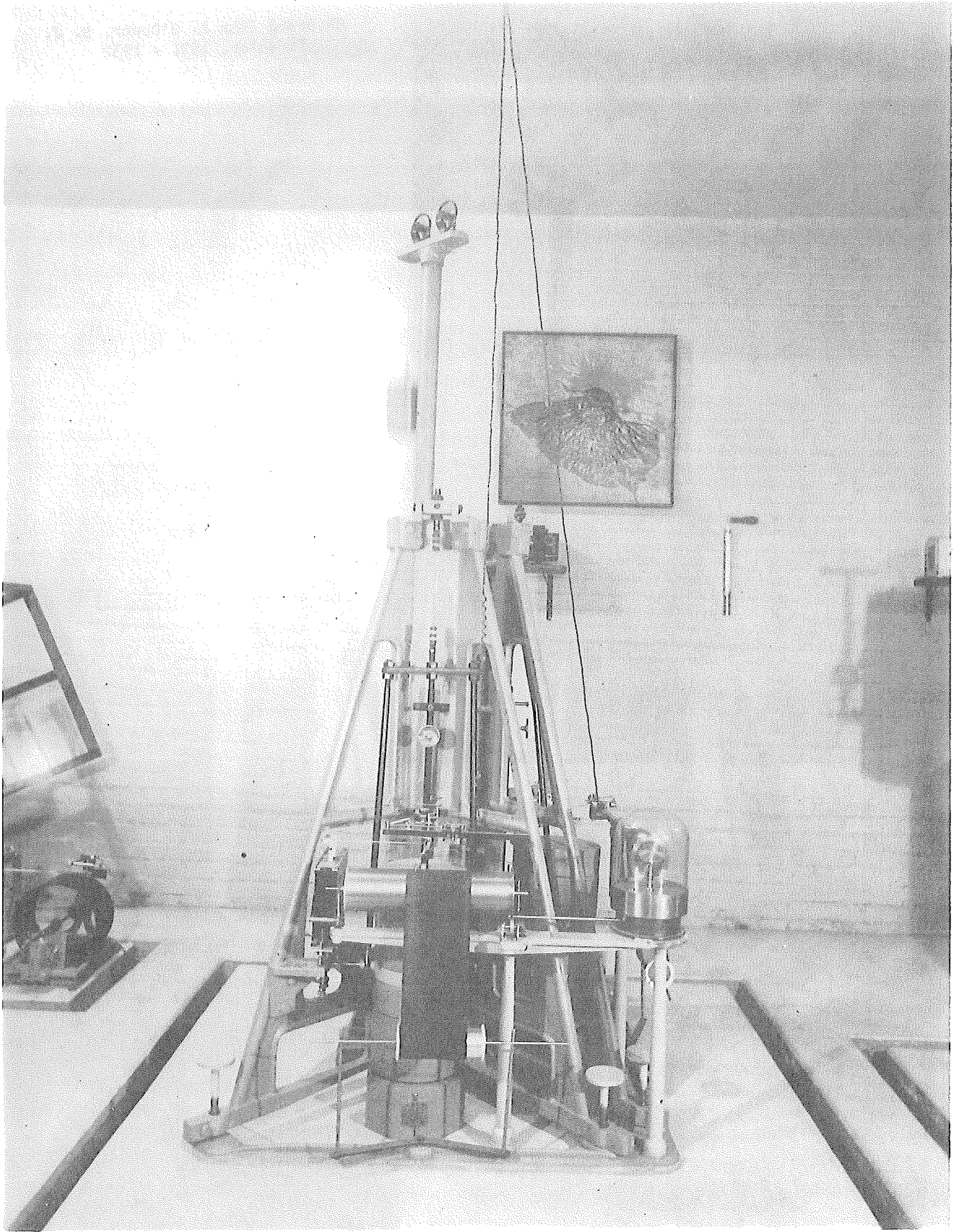
The Horizontal Component Galitzin Seismograph

Reverend John S. O'Connor, S. J.
Director, 1931 - 1932



Reverend Francis X. McFarland, S. J.
Director of the Woodstock College Station, 1942-1944
(Now a Missionary in India)





The Mainka Seismograph

For many years Father Tondorf was ably assisted by Brother Charles J. Ramage, S. J., in the routine care of the instruments. In 1923 a Cambridge-type vertical component Galitzin electromagnetic seismograph was purchased and installed in an especially constructed compartment in the quadrangle vault. Three years later two horizontal component Galitzins of the Cambridge type were imported and housed under the Dahlgren chapel. The two Bosch-Omori 25 kilogram seismographs were donated to Weston College to help inaugurate a seismological observatory there; but before they could be installed Father Tondorf died, November 29, 1929.

Father Frederick W. Sohon, S. J., was appointed to succeed Father Tondorf as Director of the Seismological Observatory. During the summers of 1930, 1931 and 1932 and the entire scholastic year 1931-1932 Father John S. O'Connor, S. J., was in charge during the temporary absence of Father Sohon.

In these and the following years, the horizontal Galitzin seismographs were removed from the Dahlgren chapel vault which had proved quite unsuitable. The quadrangle vault was remodeled. An American Instrument Company triple recording drum was purchased, all three Galitzin components were installed in the quadrangle vault with their galvanometers recording on the triple drum, and the photographic Bosch seismographs were loaned to Woodstock College.

It is hoped that in the near future a new observatory with enlarged quarters will permit the installation of additional equipment including a set of short-period, high sensitivity seismographs.