supersedes the original Board, which was formed only of the leading officials of the Lands and Survey Department. The first meeting of the new Board was held on the 3rd April, 1901. During the financial year ending the 31st March last thirteen meetings and two examinations of candidates for licenses as surveyors were held; twelve candidates passed the examinations satisfactorily and obtained their licenses.

In compliance with the arrangements entered into with the Surveyors' Boards of the Australian States, uniform and simultaneous examinations were conducted throughout Australia and New Zealand. The principal subjects for which papers are set comprise mathematical computations; principles and practice of surveying; levelling; construction, adjustment, and use of instruments; field astronomy; geodesy; compilation and draughting of plans; physics; and geology; and the survey regulations and statutes relating to the survey and administration of land. A candidate who succeeds in passing the examination obtains a certificate and license which enables him to practise his profession in the particular State or colony in which he was examined. In the event of a surveyor taking up his residence in another State, upon his producing a certificate from the Board of the State or colony he came from, and complying with other reasonable requirements of the Board of the State in which he proposes to practise, a license is issued to him.

A National Survey.

The question of whether New Zealand should undertake a general survey of the principal islands of the colony, with the object of contributing data for the better determination of the exact figure of the earth, is a subject which has frequently been dealt with by such authorities as the late Mr. J. T. Thomson, F.R.G.S., Major Palmer, R.E., and Messrs. Theophilus Heale and James McKerrow, F.R.A.S. The difficulties to such a survey which presented themselves in the early days of the colony have now disappeared. New Zealand is wealthy and prosperous; the greatest facilities are afforded for communication; the tedious and expensive process of base measurements have generally been superseded by metallic bands; theodolites or altazimuth instruments are lighter, and therefore more portable; we possess a full knowledge of the whole of the country; and we have capable and energetic officers eager to undertake the work. It is submitted for favourable consideration that a beginning at least might be made, so that New Zealand, which stands otherwise prominent in progress and up-to-date methods, should take its part amongst the nations and fulfil its obligations to the world by completing an important addition to the solution of the all-important problem of the precise form, or, more strictly speaking, the variations of the form, of the earth from that so far accepted.

Magnetic Survey of the Colony.

This magnetic survey of the colony, which was commenced on the 15th February, 1899, by Mr. (now Dr.) C. Coleridge Farr, assisted by Mr. W. T. Neill, Assistant Surveyor, and subsequently by Mr. H. F. Skey, B.Sc., is still unfinished, and has been in abeyance for a year owing to the staff being continually engaged at the permanent observatory, and partly because the instruments could not be spared from there.

The number of stations visited and observed at is as under: In 1898–1899, twenty-seven stations; in 1899–1900, fifty-eight stations; and in 1900–1901, eighty stations: a total of 165 stations, extending along the eastern coast of the Middle Island, the northern and western coasts of the Middle Island to Makawhio, south of Hokitika, whence the chain was connected with the east coast series *viâ* Haast Pass. Stations were also observed in the North Island from Wellington *viâ* the west coast northwards, and along the east coast to the Bay of Plenty. These stations were selected by Dr. Farr so as to afford a general outline of the isomagnetic lines crossing the Middle and North Islands, and included complete determinations of the declination, dip, and horizontal intensity of the earth's magnetic field. The survey will be resumed now that the new magnetometer has arrived from England. The work still to be executed includes part of the east coast of the North Island, the inland districts of the colony, and a detailed examination of the magnetically disturbed districts which have been discovered.

Under the authority of the Hon. Minister of Lands buildings have been erected in Hagley Park, Christchurch, and equipped with standard up-to-date instruments for the observation and recording of the three magnetic elements. In Dr. Farr's report for the year will be found full information upon this and other subjects, which are his speciality; but I may mention that Dr. Farr expresses fear that the introduction of the electric-traction system on the Christchurch tramways may very seriously, if not disastrously, affect the working of the instruments at the Observatory.

The Observatory is, I understand, one of the only four permanent observatories south of the equator, the other three being at Mauritius, Melbourne, and San Fernando. The Northern Hemisphere contains some sixty stations, of which five are in Japan and four in the British Isles. A temporary observatory has been established by the German Government at Kerguelen Island; and a similar one at Staaten Island by the Argentine Government, thus increasing the number in the Southern Hemisphere to, it is believed, six in all.

In addition to the magnetic field-survey, the staff includes in its duties terrestrial magnetism, seismology, and atmospheric electricity. The outlay on the observatory and equipment has been very heavy, but the maintenance thereof will be comparatively light. The Government and Department are to be congratulated upon the additional evidence the undertaking manifests of New Zealand's interest in and desire to encourage advancement in scientific and practical knowledge.

Dr. Farr and his assistant have confined their attention solely to the observatory work, which has so far completely occupied their time. As it is of the first importance that the magnetic survey of the colony be resumed and carried to a conclusion, it is hoped that arrangements will be made to keep one of the observers constantly in the field till this desirable end is accomplished.