APPENDIX I.

HEAD OFFICE, DRAUGHTING BRANCH.

REPORT BY H. E. WALSHE, CHIEF DRAUGHTSMAN.

Map-publication.—During the year 103 maps, not including sale poster maps, were printed, at a cost of £938. Of these, fourteen were large-scale town maps, twenty 40-chain survey-district maps, sixty one-mile maps, and the balance small-scale general maps of the Dominion. The publication of our principal standard maps, those on a scale of one mile to an inch, is falling into arrears, and unless the printing of these is pushed ahead more rapidly it will be impossible to keep these maps in print. There are about eight hundred of these maps, which cover the whole of the Dominion on that scale, so that, allowing for an average of seven years before revising and reprinting, giving a range of from four to twelve years, at least 112 of these should be reprinted yearly. As stated above, of this class only sixty or practically half of the minimum required, were printed this year.

The cash sales of maps amounted to £869 4s. 3d., showing a steady though small increase over previous years. This is satisfactory, as it shows the growing demand for the standard maps only, no new map of general interest being published during the year. Other Departments were supplied with maps to the value of £455, this being about the usual amount for a year in which no extra-ordinary demands, such as for census, or electoral maps, have arisen.

Several large wall-maps, illustrating the products, climatic conditions, sport, scenic wonders, and various statistical information of the Dominion, were drawn and sent forward for exhibition at the British Empire Exhibition.

Town Plans.—The number of these plans received during the year, three hundred, is still increasing, and calls for considerable work in examining and recording them. The use of the photostat has enabled the time occupied in making our records to be considerably cut down, and the approved plans are now returned much more quickly. There is still much public agitation directed against the requirements of the Department, which shows that modern town-planning legislation is urgently required.

Draughtsmen's and Computers' Examination.—This examination was held in December, when thirteen candidates for the Draughtsmen's examination and two candidates for the Computers' examination presented themselves. Of these, Mr. N. P. Brinsden obtained a first-grade certificate and Mr. C. T. Brown a second-grade certificate in draughting, and Messrs. H. R. Holt and S. W. Hodgson a second-grade certificate each in computing.

This examination has now been in force for the past seven years, but has not achieved the object for which it was instituted. It was primarily intended as an incentive to the staff to improve themselves through the practice in and study of the best examples of their craft. This it has failed to do except with a comparatively small proportion, most of the staff viewing it with disfavour or suspicion. The preparation of the papers and the subsequent examination of the answers has proved a considerable task to those officers who undertook the work in their own time. Steps will be taken during the present year to simplify the requirements, while still keeping the high standard previously required.

Standard of Length.—The comparison of surveyors' bands with the standard band is regularly carried out, there being about 107 chains compared this year. This work is carried out under difficulties, there being no accommodation for housing the comparator. This accounts for the delay in a few cases in returning surveyors' bands, as the condition of the ground may prohibit the use of the official standard.

HEAD OFFICE, COMPUTING BRANCH.

REPORT BY E. J. WILLIAMS, TIDE-COMPUTER.

Tidal Operations.—The operations for the year under report comprised the reduction by harmonic analysis of the hourly heights of the self-registering tide-gauge diagrams of the following standard ports—Wellington, for 1922 and 1923; Auckland, for 1921 and 1922; Bluff and Westport, for 1922. The values of H and K derived from these analyses have been combined with the "harmonic constants" published last year, and the mean value accepted as giving the best result. These values will be used in preparing the tide-tables for the year 1927, and are tabulated in Table C.

A diagram graduated to scale for time and height has been drawn, proved, and a supply printed for use with the automatic tide-gauge installed during the year at Gisborne.

During the coming year the diagrams from the new self-registering tide-gauges installed at Lyttelton and Dunedin—which have been in operation continuously for over twelve months—will be available for reduction by harmonic analysis.

During the year a six-figure Monroe calculating-machine was added to the equipment of the computing division for testing as to its suitability for certain portions of the tidal computations. The machine has proved to be reliable and rapid in action, and will shortly be replaced by an eight-figure machine, that type, owing to its greater keyboard capacity, being far more suitable for the work of the division.