

189. Mr. Russell inquired what was to be done with the thermograph registrations—were they published?

Mr. Ellery and Mr. Todd replied that theirs were not.

Dr. Hector said that he had never taken any

190. The motion was negatived.

#### *Rain-Gauges.*

191. On the motion of Mr. Todd, it was resolved,—LVII. That rain-gauges be of one uniform pattern and size of receiving surface, viz., 8" in diameter, and that the height of the mouth of the receiver above the surface of the ground be stated in the published observations.

192. In the discussion upon this resolution, Dr. Hector mentioned that he was in the habit of causing a small mound of earth to be raised, into which the rain-gauge was sunk up to within 6 inches of the lip.

193. Mr. Ellery disapproved of the artificial knoll.

#### *Atmometer.*

194. Mr. Todd moved, That the form of atmometer adopted at Adelaide be recommended. This consists of an outer tank of brick cemented, 4 feet square internal measurement, and an inner tank of slate or marble, 3 feet square or 3 feet in diameter, both tanks being filled with water to the same level. The amount of evaporation is read off by means of a float carrying a graduated rod and vernier divided into 0.01 inch.

195. Resolved,—LVIII. That the consideration of the best form of evaporator be deferred to the next meeting of the Conference.

#### *Form for Reports on Stations.*

196. Mr. Russell said it had been remitted to him to prepare some form in which the members should furnish a description of their stations. He produced form providing for—(1) A description of the instruments in use at the observatory, or on stations containing recording instruments; (2) the names and positions of stations having barometers and thermometers, &c.; and (3) the number of stations having rain-gauges, or rain-gauges and thermometers.

197. Resolved,—LIX. That the form of return prepared by Mr. Russell for reporting stations and their equipment be adopted.

#### *Defective Maximum and Minimum Thermometers.*

198. Mr. Todd drew the attention of the Conference to a common defect in maximum thermometers received from Messrs. Negretti and Zambra. When these instruments were put into the ordinary approximately horizontal position the column of mercury ran down two or three degrees from the expansion of the air near the bend of the tube.

199. Mr. Russell said he had had much experience with these instruments, and had found that many were sent out in a defective state. He detailed the method of examination applied when thermometers were offered to him for sale, and stated that if they passed that examination they seldom went wrong afterwards. He suggested that Mr. Todd should return imperfect instruments to the makers.

200. Mr. Ellery said that he formerly had much trouble with these instruments, but it had never occurred since he had obtained them through the Kew authorities.

201. Mr. Todd remarked that he got most of his in the same way, but nearly all were similarly defective. To return them was practically impossible, partly because of the distance and partly because the goods were already paid for.

202. After some further discussion, it was agreed that it would be best to draw the attention of the Meteorological Department of the Board of Trade to the facts, in order that the evil might be remedied.

#### *Estimates of Force, &c., of Wind.—Anemometer.*

203. Mr. Russell again drew attention to the question whether the present mode of estimating the velocity of the wind where there was no anemometer should be continued, or whether some better means should be adopted.

204. Dr. Hector considered that, for ordinary weather-reporting stations, the estimates were sufficient.

205. Mr. Todd placed very little reliance upon estimates, but feared that, at most of the stations, the instrument devised by Mr. Russell would be of little use, since the officer would seldom take the trouble to go out of the shelter of the building. At lighthouses and such places he would be quite prepared to place a Robinson's anemometer, and have it registered.

206. Mr. Ellery said he proposed to try Mr. Russell's form of Robinson's anemometer at some of the lighthouses on the coast, in order to test its value for measuring velocity of the wind.

The Conference then adjourned to to-morrow at 10 o'clock a.m.

#### WEDNESDAY, 27TH APRIL, 1881.

The Conference met at the Observatory at 10 o'clock a.m.

*Present:* Mr. Ellery (Chairman), Dr. Hector, Mr. Russell, and Mr. Todd.

The minutes of the last meeting were read and confirmed.

#### *Co-operation of Tasmania.*

207. Mr. Ellery drew attention to the fact that the communication from the Tasmanian Government, which the Conference had been informed would be made before the meetings terminated, had not yet been received.