for the purpose of investigating the bottom of the Ocean by means of deep-sea soundings, will be entertained whilst embarked on board the 'Porcupine' at the Government expense.

"I am, Sir,

"Your obedient servant,

"W. G. ROMAINE."

"*The President of the Royal Society.*"

June 17, 1869.

Read the following Report:—

"The Committee appointed Feb. 18, 1869, to consider the Scientific Apparatus it will be desirable to provide for the proposed Expedition for Marine Researches, beg leave to lay before the Council the following Report:—

"The chief subjects of Physical Enquiry which presented themselves as interesting on their own account, or in relation to the existence of Life at great depths, were as follows:—

"(1) The temperature both at the bottom and at various depths between that and the surface.

"(2) The nature and amount of the dissolved Gases.

"(3) The amount of Organic matter contained in the water, and the nature and amount of the Inorganic salts.

"(4) The amount of Light to be found at great depths.

"Among these subjects the Committee thought it desirable to confine themselves in the first instance to such as had previously to some extent been taken in hand, or could pretty certainly be carried out.

"The determination of Temperatures has hitherto rested chiefly upon the registration of *minimum* Thermometers. It is obvious that the temperature registered by minimum thermometers sunk to the bottom of the sea, even if their registration were unaffected by the pressure, would only give the lowest temperature reached *somewhere* between top and bottom, not *necessarily* at the bottom itself. The temperatures at various depths might indeed, provided they nowhere increased on going deeper, be determined by a series of minimum thermometers placed at different distances along the line, though this would