A.M. for each day, and the three intermediate lighter lines the hours of 10 A.M., 4 P.M., and 10 P.M. respectively. The spaces between the transverse lines have the value of $\frac{1}{20}$th of an inch on the barometer scale referred to a column on the left side of the diagram, and to $\frac{1}{20}$th of a degree centigrade referred to a corresponding scale on the right. The black curved line indicates the variations in atmospheric pressure reduced from bi-hourly observations taken with a mercurial barometer. Later in the cruise, we had out from Messrs. Elliott, of London, a self-registering aneroid barometer, a beautiful instrument, but somewhat too delicate in its construction for use on board a ship. Owing probably to a trace of friction, the aneroid was usually very slightly behind the mercurial barometer in its indications, but otherwise the close correspondence between the two curves was most satisfactory as an evidence of the care and accuracy with which the barometrical observations were taken.

The red line gives the variations of the temperature of the air projected from observations of a standard mercurial thermometer housed in the usual way. An instrument devised by Mr. Thomas Stevenson, of Edinburgh, with a view of eliminating any transient and accidental changes of temperature, and thus arriving at a more natural mean for the day, was observed twice daily, at 6 A.M. and at 6 P.M., by Mr. Tizard. A maximum and a minimum registering thermometer have their bulbs immersed in a small flask filled with brine, and suspended on gimbals. The whole of the contents of the flask must thus be affected by a change of temperature before that change can be registered by the thermometers. The size of the flask is so adjusted that there is ample time for this to occur with the gradual and normal cycle of daily temperature, while spasmodic oscillations are neutralized before they are recorded.

The general result of this arrangement is, that the maximum stands somewhat higher in Stevenson's than in the ordinary maximum thermometer, while in the minimum there is very