enthusiasm. Elevation perhaps comes nearest to a solution, but fails to account for world-wide cooling. The conclusion is that no single cause suffices, and atmospheric conditions seem to be necessary to produce such catastrophic events in the world's history.

The difficulty of the problem is increased by the apparently
hand, for even if it is known at present, the Antarctic ice sheet reached lower latitudes than anywhere else, has suffered glacial
and atmospheric conditions have to be necessary to produce such
problem of glacial anticyclones. In this relatively small
enough for the ice to spread out as a single cause suffices.
which the glaciers. It almost seems as if, given certain conditions, and especially a
increase; the Antarctic ice sheet may hide traces of many older glaciers. In the moist equatorial regions the
The work is divided into eight districts, for each of which it is hoped to have complete data before the spring of 1927. In summarizing the work for the Redlands-San Bernardino district, Mr. A. W. Cook, of the Weather Bureau, writes as follows (California Citrograph, July, 1928):
amount of ice in the bordering zone and to a lesser extent in the interior. During the maintenance of anticyclonic conditions there is some indication of a pulsation, from calm to blizzard. Mr. Sandford believes that on New Friesland, on the mainland of Spitsbergen, there is a similar but modified system. Other parts of Spitsbergen have an insufficient ice covering for its development. Up to the present there are no winter observations available from North-East Land.—Repr. from Nature (London), September 6, 1926.

EXTENT OF ORCHARD HEATING IN SOUTHERN CALIFORNIA

The fruit-fruit service of the Weather Bureau, in charge of Mr. Floyd D. Young, is compiling data on this subject, which when completed will form the first authoritative information with regard to it. The work is divided into eight districts, for each of which it is hoped to have complete data before the spring of 1927.

There are 29,691 acres of citrus trees in the entire Redlands-San Bernardino fruit-fruit district, of which 5,789 acres, or 19.5 per cent, are equipped with heaters. The increase in acreage protected is expected to spread over the remainder of the state. In the spring of 1926, 51.4 per cent of the total area was protected.

A ONE-MAN THEODOLITE

The August, 1926, issue of Meteorologische Zeitschrift contains a description, with illustration, of this device, which appears to be new in the field of aerology. The advantages of a one-man instrument for use on meteorological expeditions or other situation where reduction of personnel is essential are obvious.

In the new instrument the horizontal circle is retained in the form hitherto used, but the vertical circle is ingeniously incorporated within the field of vision of the telescope. The operator with his right eye not only follows the balloon with the aid of the cross hairs, but, aided by their lower vertical member as an index, he with the same eye reads the vertical angle upon an engraved glass circle. Set off at interpupillary distance to the left of the main eyepiece is the ocular of a microscope through which the observer looks, via a prism, upon the scale engraved on the horizontal circle.

Both horizontal and vertical circles are divided into whole degrees. Reading to tenths of a degree is accom-