and zinc paints which are a big feature of the American paint industry, and are obtained by subliming mixed lead and zinc ores, and which contain various proportions of zinc oxide and lead sulphate, are fully described. The preparation also of the oxides of lead and lead chromes is dealt with, and the preparation and properties of zinc sulphide paints.

A very complete account is also given of the elaborate practical tests of various paints which are being made on special experimental stations in the United States at present, with the view of deciding which paints are most durable for outside use. These experiments are giving some very valuable results. For instance, the usual assumption in this country that white lead is the best pigment for protection of outside surfaces has apparently been quite disproved by these results. Zinc white, or mixtures of zinc white with white lead, prove to be more durable. These experiments are still being continued and the results published from time to time, and should be carefully watched by architects and engineers in this country, where similar experiments might well be carried out. The physical and chemical properties of these various whites and their analyses are also thoroughly dealt with; in fact, the whole book contains a great deal of very valuable information written from the American point of view, and should therefore be of special interest to all those connected with the paint industry in this country. A. P. LAURIE.

METEOROLOGICAL TABLES.

Tables for the Reduction of Meteorological Observations. Prepared by Dr. G. C. Simpson, under the direction of Dr. Gilbert T. Walker, F.R.S. Pp. ix+95. (Calcutta: Government Printing Office, 1910.)

THE present revised edition of Blanford's meteorological tables, prepared for the routine work of the Indian meteorological service, contains in all sixteen tables, of which the first and last pairs are for the interconversion of barometric heights and of temperatures in the English and metric systems. The remaining tables are in English units. The relationship 1 metre=39·37079 inches, adopted from the international tables, is an example of fictitious accuracy which might be discarded in view of the values found by Rogers (1893), 39·370155, and Benoit (1902), 39·370113. The same criticism applies to the expressions for the corrections to the barometric height H, for the variation of gravity with latitude (λ), and altitude (h), viz. $0{\cdot}00259 \cos 2\lambda H$ and $5{\cdot}97 \times 10^{-8} h H$. The arrangement in table vii., for reducing the barometer to sea-level, or for finding differences of height, is excellent. The *logarithms* are tabulated, and the temperature and humidity terms have been combined by assuming a constant value for the mean air-pressure occurring in the latter; the result is that the complicated process involved in applying the Smithsonian or international tables has vanished, and the desired value may be obtained by a simple calculation as accurately as the observations ordinarily allow. It is, however, *not* necessary to apply the latitude correction to the barometer readings in finding differences of height.

The major part of the volume is devoted to humidity tables for reducing psychrometric observations for temperatures between −20° and 130° F., and for pressures 29·7, 27·7, 25·8, 23·4, 19·7 inches. Presumably 25·8, 23·4 were retained because they are approximately the mean pressures at altitudes of 4000 and 7000 feet respectively, but it seems inappropriate to determine the increments of the argument, *pressure*, by unequal increments of *altitude*. The tables are strictly applicable to observations taken in light winds only.

A useful little table gives the mean daily range of pressure determined from ten tropical stations.

The tables are well and carefully printed on good paper, but the volume might with advantage be made of a more convenient size. The adoption of the principle, common in logarithmic tables, of neither printing nor allowing space for unnecessary figures, would permit this without sacrificing clearness.

E. GOLD.

PLANTS AND GARDENS.

Sweet Peas. By H. J. Wright. Pp. xi+116. Price 1*s.* 6*d.*

Pansies, Violas, and Violets. By Wm. Cuthbertson, J.P., and R. Hooper Pearson. Pp. xi+116. *Present-Day Gardening,* edited by R. Hooper Pearson. (London and Edinburgh: T. C. and E. C. Jack, n.d.) Price 1*s.* 6*d.*

Die Hiede. By W. Wagner. Pp. 200. (Leipzig: Quelle and Meyer, n.d.) Price 1.80 marks.

Niedere Pflanzen. By Dr. R. Timm. Pp. 194. (Naturwissenschaftliche Bibliothek für Jugend und Volk.) (Leipzig: Quelle and Meyer, n.d.) Price 1.80 marks.

Das Holz. By H. Kottmeier and F. Uhlmann. Pp. iv+143. (Leipzig: Quelle and Meyer, 1910.) Price 1.25 marks.

Der Pflanzengarten, seine Anlage und seine Verwerkung. By Prof. F. Pfuhl. Pp. 152. (Leipzig: Quelle and Meyer, 1910.) Price 2.50 marks.

THE dictum as to the endless making of books may be applied with particular force to works relating to gardening and nature study at the present day. To such an extent has the gardening fashion seized the country that every class of plants must now have its own special treatise. The two books first on the list are the opening volumes of a series entitled "Present-day Gardening," produced under the editorship of the editor of the *Gardener's Chronicle,* and they appear to be excellent alike in their coloured illustrations and in the letterpress. The illustrations are remarkably good examples of colour printing, and it is only in the case of some of the lilac shades that some criticism might be made. The text is both interesting and practically useful, and the plan followed is similar in both volumes, opening with some historical notes, general culture, the value of the plants for decoration, an account of standard varieties, &c. If forthcoming volumes maintain the level of those