Geostatics

RECENTLY, at King's College, Newcastle upon Tyne, more than seventy engineers and architects studied the subject of 'soil mechanics'. A week of lectures and drawing office practice under the direction of Mr. A. W. Skempton, of the Building Research Station, resulted in considerable discussion of the various aspects of the problems involved. In such discussions, the name given to this rapidly developing science was the subject of criticism on the following lines:

(1) The word 'soil' has, for centuries, signified that extreme upper layer of the earth's crust which can support plant life. In 'soil mechanics' the word is forced out of its usual connotation to include any of the unconsolidated or partially consolidated geological sediments existing to any depth likely to be of interest to the engineer or architect.

(2) Even if the meaning of 'soil' be extended to include sands, gravels, silts, and clays of any depth, it cannot, logically, be applied to harder materials such as shales, to which the methods of 'soil mechanics' do apply.

(3) The term 'mechanics' is misleading and covers a field which is too wide to identify the specialized statical problems involved. The methods of 'soil mechanics' are not, for example, extended to include dynamical problems.

(4) The term 'soil mechanics' is clumsy, and not self-explanatory.

'Soil mechanics' is the science of applying the methods of statics to data deduced from the measured properties of geological sediments. The results obtained indicate the static forces involved in earthworks or in foundation design. For this reason, and since there is no collective term to indicate the loose sediments of the earth's crust, we suggest that the term 'Geostatics' should be employed. This suggestion forms a constructive reply to the well-founded criticisms of the present name, and covers adequately and neatly all possible aspects of 'soil mechanics'.

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May 15.

Wordsworth and Science

THE important question is surely not whether Wordsworth should now and again have scoffed at men of science with or without provocation, but whether the poems as a whole suggest that he felt at heart that it were incumbent upon poets to give recognition to scientific knowledge. Now I submit and, indeed, tried to show in an article published in NATURE of November 28, 1942, that the very strength of Wordsworth's unique Nature mysticism depends on the tacit acceptance of science in principle discernible in the poems. This must be precisely why the forerunners of this journal so wisely selected a now time-honoured Wordsworthian motto, and why ever to discard it would be a most foolish blunder.

I should like to quote a few lines from "The Excursion" as exemplifying with peculiarly solemn power the depth of this great poet's philosophical outlook upon Nature:

"He, many an evening, to his distant home
In solitude returning, saw the hills
Grow larger in the darkness; all alone
Beheld the stars come out above his head,
And travelled through the wood, with no one near
To whom he might confess the things he saw."

That lad returning from school over the wild Perthshire hills shows himself a "visionary of the first water"—of the finest calibre with the making both of a man of science and a poet; for he is seeking to peer behind the natural scene and to capture a hidden meaning in the grand and impressive phenomena of the landscape. Here we certainly have flights of poetical imagination properly disciplined by scientific caution and faith in the "solid ground of nature". Such great moments as were vouchsafed to the Wanderer will repeatedly and often unexpectedly come to everybody who cultivates the requisite outlook.

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Patent Law and Procedure in Austria

IN view of the present interest in the reform of the patent law and procedure in Great Britain (see NATURE, May 6, p. 553), it may be worth while to refer briefly to the manner in which the Austrian Patent Act, 1925, has tried to cope with one of the most intricate problems concerned, namely, the treatment of the scientific worker in his quality as inventor. Under this Act—which seems to be the most progressive legislation in this field of law—the employee is considered the owner of his inventions, even if they had been made in the course of his employment. He may assign his invention and the patent applied or granted therefor to his employer or may grant him a licence, and is bound to do so if agreed upon in either an individual or collective agreement; but he is entitled to claim an adequate compensation for such assignment or grant of licence, a right which he cannot validly waive in advance. Failing an agreement between employer and employee, the Court has to assess the compensation, taking into consideration the importance of the invention, the possibilities of utilizing the same and the part which facilities provided by the employer and his experience have played in arriving at the invention. Such a decision may be altered by the Court on application of either side if circumstances have essentially changed.

Experience has shown in Austria that the question of compensation has nearly always been solved by agreement, so that resort to the Court was necessary only in very few exceptional cases.

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Petrological Microscopes

A SMALL committee has been formed, including representatives of the Mineralogical and Geological Societies, with the object of furthering the manufacture of petrological microscopes in Great Britain. The committee would welcome comments from any persons interested with whom they are not already in touch, to be addressed to the Secretary, Petrological Microscope Committee, Geological Survey Office, Exhibition Road, S.W.7.

A. BROUGHTON EDGE.
A. F. HALLIMOND.
(Acting Secretaries.)