

Dunn dismisses Russegger's views as based on "extravagant optimism."

The bulletin includes the reports of fourteen syndicates; but of these companies thirteen have allowed their concessions to lapse, and the only mine at work is that of Om Nabardi.

The prospecting has no doubt been superficial and hurried, and it is possible that mining may yet prove profitable in some of the goldfields; but the evidence is not sufficiently promising to tempt private enterprise to spend more money in prospecting. A geological survey of the country is now the best chance of ultimate success, for it should indicate the best sites for more detailed research, and the prospects are sufficient to justify the expenditure by the Government. The collected reports will be very useful, but might have been accompanied by some editorial notes, for though the preface contains the warning that the director is not responsible for the statements quoted, the bulletin gives currency to many which are certainly erroneous. Thus one report states that the district described contains "nearly every class of volcanic rocks," yet it mentions none in the detailed account, and apparently no volcanic rock is present in that area. The repetition of such statements without warning in the official bulletins of a geological survey is apt to lead to subsequent mistakes.

J. W. G.

#### JEFFERSON PHYSICAL LABORATORY.<sup>1</sup>

THE previous volumes of the series of publications from the Jefferson Physical Laboratory, which have been published annually, have contained a reprint of the original publications contributed during the year by the staff and students of the Jefferson Physical Laboratory, Harvard University. The volume before us differs somewhat in scope and intention from its predecessors, for it is dedicated to Prof. John Trowbridge on the occasion of his retirement from the directorship of the laboratory. An excellent photograph of Prof. Trowbridge is given in the frontispiece, and the following dedication is included:—"To John Trowbridge, who projected a great physical laboratory for Harvard University and found the means to build and equip it, who by his foresight, invention, and care has kept this laboratory among the foremost in opportunities for scientific achievement, and by his magnanimity has made it a place proverbial for good feeling, this volume is gratefully and affectionately dedicated by those who have profited by his labours and enjoyed his friendship."

The volume, which is twice or thrice as bulky as the previous numbers, contains the reprint of twenty-six papers contributed by past and present students of the Jefferson Physical Laboratory. Most of the papers have been published in other journals before the appearance of the present volume. Among the contributors are Prof. Kennelly and Mr. Alexanderson, who give an

<sup>1</sup> "Contributions from the Jefferson Physical Laboratory and from Colleagues and former Students, dedicated to Prof. John Trowbridge, S.D., for the Year 1910." Vol. viii. (Cambridge, Mass., U.S.A., n.d.)

account of some experiments on the physiological tolerance of alternating-current strengths for frequencies up to 100,000 cycles per second; Prof. B. O. Peirce, with several papers on magnetism; Prof. Lyman, on the spectra of some gases in the Schumann region; Prof. Duane, on the heat generated by radio-active substances; and Prof. Richards and J. H. Mathews, on a method for determining heat of evaporation as applied to water. The last paper in the volume is a short one by Prof. Sabine, and gives an account of some interesting experiments on the relative sense of loudness of sounds of different pitch shown by different observers.

It will be seen that the contents of the volume are very varied in character, covering the greater part of the domain of physics. The list of the distinguished contributors to this volume and the character of the papers contained in it afford a striking illustration of the great influence of the physical laboratory of Harvard University on the development of physical science in America. Not only has the laboratory been responsible for the training of a number of men of science who have gained great distinction, but it has always taken a leading place in the promotion of scientific research and in its original contributions to physics.

E. R.

#### NOTES.

THE Court of Inquiry into the loss of the *Titanic* was on May 22 occupied with a consideration of the warnings as to ice received by wireless telegraphy by the vessel before the disaster. From the evidence as reported in the Press, it would appear that during the course of the *Titanic's* voyage six vessels communicated definite information as to the position of ice. Five of the warnings, it is reported, were received on the day of the wreck—the last some two hours before the collision with the iceberg. As to whether all the messages were communicated to the captain and officers there would seem to be doubt, and, in view of the death of the chief telegraphic operator, this may never be known. The court will, however, report on such matters. The only bright point in this sorrowful subject relates to the services rendered by science through wireless telegraphy. By it were the warnings given, and when these were disregarded, with terrible consequences, the call for help which went vibrating through the æther brought rescue to the survivors in the boats. No patrol system could have given more particulars of the positions of the ice than is contained in the advices communicated by various vessels, and no method which may be devised of detecting ice at a distance can prevent disaster if its predictions have to be neglected on account of the exigencies of rapid transit. After everything has been done by science to avoid calamity, there is still need for care and foresight in making full use of the warnings offered.

AMONG the recommendations of the American Committee of Inquiry into the circumstances of the *Titanic* disaster are that there should always be some-