pire, special attention being given to Australia, the United Kingdom, Canada, and India, which are the principal British sources of supply; next come references to the more important deposits in foreign countries; then follow sections dealing with the valuation, concentration, and smelting of the ores, the various types of the commercial metal (spelter), with references to impurities, grades, and prices; the final section deals with the properties and utilisation of the metal, whether as such, in the form of alloys, or pigments.

There is an obvious misprint on p. 54 where it is stated that the distillation retorts are "about 8 ft. in diameter." *For* "feet" *read* "inches."

THE DECLINE IN THE BIRTH-RATE.

IN a judicial way Dr. Millard discusses, in the paper before us,[1] the problem of the fall of the birth-rate in its relation to social welfare. He does not share the orthodox view that the decline of the birth-rate is in itself a deplorable fact, or that deliberate birth-control is necessarily to be regarded with disapprobation. On the contrary, he advances substantial arguments in support of the following conclusions. The fall in the birth-rate is a general phenomenon among civilised nations. It is due, not to diminished natural fertility, but to deliberate birth-control. It is not in itself an evidence of national decadence; it may be an expression of advancing civilisation—of a more conscious control of life. Birth-control is the civilised substitute for those natural checks to the rapid growth of population—scarcity, disease, and war—which have always operated in the past. Rapidly growing populations in countries with circumscribed territories are apt to give rise to political unrest and to serve as provocatives to war. International competition in birth-rates is correlated with a competition in armaments, and both are undesirable.

The prosperity of Britain is at present wrapped up with the abundant supply of cheap coal, and the more rapidly the population of this country increases, the sooner will the beginning of the end of our coal-fields manifest itself. To postpone the approach of what the author calls the dark and gloomy epoch (who knows what other stores of energy may not be tapped before the coal is exhausted?), an increased birth-control may usefully operate. But there are more immediate reasons for advocating birth-control. It is far from being race-suicide; it is a natural ally of the maternity and child welfare movement. A low birth-rate is closely correlated with a low rate of infantile mortality. A high birth-rate usually means great infantile mortality. "Birth-control is an essential factor in the campaign against poverty. It is calculated to reduce the supply of unskilled labour, to increase efficiency, to raise wages, and to encourage a higher standard of life." It seems almost as sure a panacea as Prohibition!

[1] "Population and Birth-Control." Presidential address to the Leicester Literary and Philosophical Society, 1917. By Dr. C. Killick Millard. Pp. 48. (Leicester, 1917.) Price 1*s*.

We think, indeed, that Dr. Millard is altogether too enthusiastic over birth-control as we know it at present. Perhaps its methods are improving; but there seems more than a touch of irony in the statement that married people, if in doubt as to the best methods of birth-control to be adopted, "will naturally look to the medical profession for advice." How abundant and helpful that expert advice has been during the last quarter of a century!

The author has a fine passage on the joy and discipline of parenthood, and we agree with him that the availability of trustworthy counsel will encourage early marriages, which are on the victory side, we hope, in the campaign against "immorality" and venereal diseases. In any case, there is much to be said for Dr. Millard's summing-up, that "properly used, and not abused, birth-control is a valuable eugenic instrument, capable, by restricting the multiplication of the least fit, of greatly raising the quality of the race."

SIR ALEXANDER PEDLER, F.R.S.

THE announcement of the sudden death of Sir Alexander Pedler, while attending a Committee meeting at the Ministry of Munitions on Monday, May 13, came as a shock and great surprise to his many friends. There had been, among the majority of them, no suspicion of weakness, and to all appearance he was a man who might confidently look forward to many more years of useful work.

Pedler received his early education at the City of London School. The present writer made his acquaintance in October, 1866, when, at the age of seventeen, he won a Bell scholarship and began work as a student in the laboratory of the Pharmaceutical Society. Here he went through the usual course of analytical work, and at the end of the session was awarded a certificate of honour in practical chemistry. Before leaving, he began a piece of research suggested to him by the writer, who was then demonstrator in the school. It was with great regret that he parted with the promising young student, who had, by this time, decided to leave the comparatively narrow field of pharmacy and proceeded to place himself under Prof. (afterwards Sir Edward) Frankland at the Royal College of Chemistry, then in Oxford Street. There he soon entered on research and carried out the separation of the amylic alcohols by Pasteur's process. From the optically active and inactive alcohols thus obtained he prepared the corresponding valeric acids, and gave an account of the work to the Chemical Society in 1868 (J. Chem. Soc., N.S. 6, 74). Further work in this direction was interrupted by his taking part in the solar eclipse expedition of that year.

From 1871 Pedler served for two years as lecture demonstrator to Sir Edward Frankland in the Royal College of Chemistry in succession to Mr. Herbert McLeod, who had been appointed to the professorship of chemistry in the then newly instituted Royal Engineering College at Coopers