

electros. Chromium "is five times harder than steel," and a plate that has been printed from every day for months shows by microscopical examination that each chromium-topped dot retains its original perfection. An impression from a Pantone block made with a 175 to the inch screen printed simultaneously with type on a rough surfaced paper shows how perfect the dot formation is.

The editor gives his usual summary of the year's progress, in which he points out the great advances being made in rotogravure colour printing now that the process is thoroughly practical, and at the end of the volume adds his "Note Book," dealing chiefly and critically with apparatus. "The Work of the Private Presses, VI., Essex House Press, 1898-1909," is treated of by Mr. Chas. T. Jacobi, with examples. A new system of music printing, "The Isotonic Notation," which is claimed to be simpler to learn as well as simpler to print than the usual notation, is described by Dom John Stéphan. There are other articles of technical interest and importance, besides the usual batch of illustrations to demonstrate the present degree of perfection to which the modern reproductive processes have attained.

*English Life in the Middle Ages.* By L. F. Salzman. Pp. 287. (London: Oxford University Press, 1926.) 7s. 6d. net.

This is an attractive, sensible, and useful book. Mr. Salzman has already published a similar work on the industries of England in the Middle Ages, and in this second volume he takes up the wider subject and does it even better. It is full of interesting and significant facts, well selected and well presented, with such an abundance of excellent illustrations as we may expect from the Oxford University Press.

Mr. Salzman's book is an admirable and more popular companion to "The Legacy of the Middle Ages" which the Oxford Press also published a few months since. The keynote of the two volumes is similar and a welcome sign of the new spirit in history teaching. The new point is the constant realisation of the fact that history is important to us just in proportion as we understand that we are ourselves a part of it and that the past has made us what we are. Mr. Salzman has this truth in view throughout, and when he talks either of literature, education, warfare, or law and order, is at pains to show, both how the work of our forefathers seven hundred years ago laid the foundations of our present life, and in what respects it has altered in the interval.

The chapters on education and literature are particularly good in this respect. In the former, Mr. Salzman makes clear the reason for the puzzling difficulty in the early study of mathematics. Why was arithmetic, which we now regard as the foundation of all exact intellectual discipline, then relegated to the Quadrivium or second stage in education, and only attempted by the few? The answer is that the Arabic system of numeration had not yet made its way into the schools, itself a historic fact of high social and intellectual import.

In treating of language and literature Mr. Salzman brings out, with equal prominence and usefulness, the value of the contact of Anglo-Saxon and Norman French in the three centuries after the Conquest. To this we owe the simplification of English grammar, the wearing away of genders and inflexions, which has made our speech the universal and adaptable thing which it now is.

The illustrations have been ransacked from the libraries of western Europe, and are a striking proof of the wealth to be gained from the study of medieval illustrated manuscripts. F. S. M.

*Transactions of the Institution of Chemical Engineers.* Vol. 3, 1925. Pp. 137. (London: Institution of Chemical Engineers, 1926.)

THOSE holding the opinion that chemical engineering is as distinct and important a study as are the other better-known branches of engineering might well point to the contents of this volume in justification of their views. There is a series of papers on industrial water supply and steam pollution, an authoritative discussion of filtration, a description of the machines used in magnetic separation, and a couple of lectures on petroleum distillation and steam jets. The latest developments in steam generation are also considered, for the volume includes a good account of the Brunler internal-combustion boiler, which employs a flame burning continuously under water, and an interesting description of the Benson generator, in which water is converted into steam without ebullition by heating it under the critical conditions of temperature and pressure. These brief references will suffice to indicate the wide range of technological interest covered during the year. Of the papers themselves, it need only be stated that their general merit testifies to the vitality of this youthful Institution.

*The Chemical Age Year Book, Diary and Directory,* 1927. Pp. 155 + Diary. (London: Benn Bros., Ltd., 1927.) 10s. 6d. net.

In addition to a very convenient diary, this book contains information of special interest to the chemist. Short notices are given of such subjects as research organisations, chemical and allied societies, patenting of invention, use of industrial chemicals, trade name of dye-stuff intermediates, certain stock-exchange prices, etc. Various tables of constants and chemical data are included. A chemical directory and a number of trade advertisements form a large part of the volume. At the present time there are so many excellent collections of physical and chemical constants available that the advisability of including such information, especially in an abridged form as in this diary, may be doubted. On the whole, however, the material selected for inclusion takes up only a small portion of the book, and the data may have definite value in special circumstances. The binding and general appearance of the book are excellent. This may partly justify the price, which is rather high compared with that of diaries generally. J. REILLY.