fully was the work done，that the first edition which he has labored，the great number of
was exhausted in a year，and the second interesting by－paths revealed as he started arger one in a few years more．The present along his chosen road which his he started third edition includes the improvements in pation prevented his following，and does not brewing and malthouse operations due to the＇ recent developments of electrical machinery and gives a new chapter on electricity and $\mid$
magnetism．A new chapter is also included to cover recent botanical studies of barley， rewritten，while only the tables have been retained from the chapters on Arithmetic and Algebra．The printing and general appear－ of have been much improved by division the division being so arranged that few indi viduals in the brewing trades requiring the all they need，each for his particular specialty in one volume of the allied processes dis cussed，refrigeration is better treated than in any pocket book we know of the same scope， and in a general way the work retains its character as a model handbook in its line． Dynamo，Motor，and Switchboard Cir cuits for Electrical Engineers．By
William Rushton Bowker．Second
Edition．New York：D．Van Nos
trand \＆Co．，1908．8vo．；pp．168；
130 figures．Price，$\$ 2.50$ ．
The special object of this book is to present the subjects indicated by the title in a non－ mathematical way，and as viewed from the practical standpoint．The author originally for the City and Guilds of London examinations in electrical engineering，and for this reason the Syllabus of the Ordinary and Honor Grades． However，this would make it no less valuable to the American student and practical en gineer．In the present second edition two new
sections have been added to furnish information in regard to central－station layouts．This ren ders the book particularly useful to central tation engineers and their assistants．
Elektrische Uhren．Von Dr．A．Tobler，
Dozent am Eidg．Polytechnikum in
Zürich．Zweite Aulage，bearbeite
von Johannes Zacharias，Ingenieur
Mit 120 Abbildungen
Since the publication of the first edition of Zacharias＇＂Electrical Clocks，＂the technique
of the art has advanced to such a degree that a new edition seemed necessary．Wall clocks，and even timepieces in which great accuracy is demanded，are now electrically driven．In order that the art might be fully covered it was necessary to omit electrical firm alarm apparatus which found a place in
the first edition．In this volume，therefore， the first edition．In this volume，therefore attacking the subject，the author has described attacking the subject，the author has described sary to drive a clock train．He then passes to time telegraphs，recording apparatus，and inally discusses important inventions which have made their appearance in the last thirty years．Inasmuch as the data here presented have been collected largely as a result of per sonal intercourse with manufacturers，engi neers and scientists，the book may be taken
as an authoritative presentation of an inter－ esting technical subject．

Practical Concrete Block Making．By
$\begin{array}{ll}\text { Charles } & \text { Palliser．New York：} \\ \text { dustrial } & \text { In－} \\ \text { Publishing Company，} & 1908 .\end{array}$
75 pp ．；12mo．；fully ill．Price， 50 cents．
The author，though obviously somewhat prejudiced in favor of the concrete block from facture，tells a convincing story going to show that much of the criticism applied to the block should more properly belong to the careless maker or the inadequate machine．The book out any chemical or engineering formulx，and explaining every technical term，so that any can understand every step of the operation of making good substantial concrete blocks，
The author tells how to select molds and ma terials，how to find the right proportions cure， wall，giving various methods of facing and practical hints on how to secure the best archi－ tectural effects．
The Problem of Age，Growth，and Death．By Charles S．Minot，D．Sc 1908． 280 pp ．； 8 vo. ；ill．Price，$\$ 2.50$ Whereas this book deals with a series of
biological problems，it is，as the author points out，essentially a study of a single phenome－ non，the increase in the amount of protoplasm． The increase to be considered is not that dis－
tributed through the system of the growing organism，but that which occurs within the
limits of a single cell．The ultimate object of all biology being the discovery of the na－ most promising opportunities for the attack of the problem lay in the study of observable cence being a qualification of living matte having no apparent parallel in the inorganic．
It is an essential feature of life and therefore a useful guide to the proper aim of biology If genius is properly defined as＂an infinite capacity for taking pains＂Mr．Minot＇s study
may certainly be described as genius．He explains the limitations under
at all claim his book to be a complete treatise on the subject，but so far as it goes and within the limits indicated by the title the of reasons convincingly explained by the au－ thor but too long to be quoted，the guinea－pig as selected as the most convenient organism age typical of its growth as a function of organism，and some idea of the painstaking nature of the study will be obtained from he statement that for long periods as many most carefully coornea－pigs，kept under the personally examined twice every day
results obtained are by no means confined to uinea－pigs，the evidence obtained from them eing compared with changes in the higher and to including man．The language is clear rom Greek and Latin scientific terms，making it as interesting to the layman as to the iological student
a Sinthese des Pierres Precieuses Par Jacques Boyer．Paris Gauthier－ Villars，Imprimeur Librairie du Bureau des Longitudes de l＇Ecole Polytechnique， 1909.
This little monograph on the synthetie roduction of precious stones is one of the orm to present a general review of the manufacture of gems artificially．Mr．Boyer detail the processes of Verneuil，Paquier，Paris， Moissan，and Hannay．The little book gives one a fairly good popular idea of the work which is being done in a
field of physical chemistry
Hfdraulic Tables．Second edition，re vised and enlarged．New York：John
Wiley \＆Sons，1909． 104 pp．；8vo． Price，$\$ 1.50$ ．
This new edition contains little alteration irst edition and could hardly contain any im－ rovement，being already well known as the ished．An interesting explanation of the derivation of the formula known by the name charge from high weirs is added in respons o requests from users of the former edition． Automatic Screw Machines and Their
 Machine Expert Pratt \＆Whitney Company，and F．A．Stanley，Asso－
ciate Editor of the American Ma－ chinist．New York：Hill Publish－ ing Company， 505 Pearl Street； 6 American Machinist，The Engineer－
ing and Mining Journal，Power and The Engineer．Octavo；pp．255；il－ lustrated．Price，$\$ 2$ net．
The subject matter of this book naturally divides itself into two parts．One devoted to
various types of machines and their construc－ ion，general tool equipments，methods of cam－ and containing specific information on detail and using these tools，the speeds and feeds at which they should be operated，and other par ticulars which will be of service to mechan－ ics interested in screw machine work．In the
chapters on camming，the book illustrates and describes in detail the different makes of auto－ matic screw machines and turret lathes，in cluding single－spindle，double and multiple spin－ ing machines，magazine feed，and other types of machines for finishing castings，forging，etc．， ferent kinds of stock and for all classes of utting tool

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