tains particulars of 850 steam and power yachts, and 1,939 sailing yachts, or a total of 2,789 yachts, all of which are owned in the United States or Canada. The addresses, clubs, and yachts of upward of 2,500 owners are given in a separate list arranged alphabetof 94 American and Canadian yacht clubs, this fact is easily demonstrated by this very with the names of their officers, in the book, and 1,973 private signals of yacht owners. A list of the yacht builders and designers of the United States also appears, with the names of the yachts built or designed by them, and lists of signal letters, and of late names of yachts.

THE NATURE STUDY IDEA. By Prof. L. H. Bailey. New York: Doubleday, Page & Co. 1903. 12mo. Pp. 159. Price, \$1.00.

This interesting volume is an illuminating and suggestive study of the new movement, originating in the common schools, to put the foundland, as well as foreign countries. The child into sympathy with Nature and his environment, to the end that his life may be stronger and more resourceful. The movement relates education directly to the life that the pupil is to live. It is a fundamental, epoch-making movement. It is a revolt from mere science-teaching in the grades and from all perfunctoriness in school work. It is the full expression of personality. It is not the mere addition of certain studies to a curriculum, but the inspiration of a new point of view in education. More than any other recent movement, it will touch the masses with a new educational impulse.

DISCOURSES ON WAR. By William Ellery Channing. Boston: The International Union. 1903. 12mo. Pp. 229.

Those who are opposed to the present militant spirit of the world will find much that will interest them in the volume before us.

VENTILATION IN MINES. By Robert Wab-1903. 8vo. Pp. 240. 30 plates. Price, \$4.50.

A thoroughly modern work which deals with one of the most difficult problems known to the mining engineer—the supply of a uniform quantity of fresh air so that the workers can perform their task safely, at least, if not in comfort.

MUNICIPAL PUBLIC WORKS: THEIR INCEP-TION, CONSTRUCTION AND MANAGE-MENT. By S. Whinery. New York: The Macmillan Co. 1903. 12mo. Pp. 241. Price, \$1.50.

This book is intended for the inexperienced city official and for the urban citizen. Numbers of good and earnest men are elected or appointed to official positions in our municipal governments whose interests and previous business experience and training have not been of such a character as to lead them to study the principles controlling and the problems that will be met with in conducting municipal public works, and who, upon assuming the duties and responsibilities of office feel that they are deficient in the special knowledge necessary to enable them to discharge intelligently and efficiently the duties of their nev positions. To all such persons the book will commend itself.

PHOTOGRAPHIC LENSES. A Simple Treatise. By Conrad Beck and Herbert Andrews. New York: Tennant & Andrews. New York: Tennant & Ward. 1903. 12mo. Pp. 288. Price

The book before us is the first work of its kind to be written by a lens manufacturer of repute. The work is not intended to give a very scientific explanation of the laws which underlie the construction of the photographic lens. It explains, for the benefit of the photographer, what he ought to know about his lens; how it should be used; how its efficiency should be judged, and how some of its scientific principles may be understood. The treatise, as the title page indicates, is simplesimple, indeed, that any photographer should be able to grasp its explanations easily.

Possibilities of Small Lathes. James Lukin, B. A. London: Guilbert Pitman. 1903. 16mo. Pp. 130. Price, 60 cents.

The author is a well-known amateur mechanic and his instructions are always thoroughly practical. The book is an excellent one and will appeal to many of our readers. It is unfortunate that the illustrations are so poor.

THE SOLAR SYSTEM. By Percival Lowell. Boston: Houghton, Miffiin & Co. 1903. 12mo. Pp. 134. Price, \$1.25.

The author has written an excellent book which will appeal to all astronomers, although it is hardly adapted to the use of those who are not familiar with a certain amount of mathematics.

A TREATISE ON BEVERAGES: Or, THE COM-PLETE PRACTICAL BOTTLER. By Charles Herman Sulz. New York: Dick & Fitzgerald. 1903. 8vo. Pp. 818. 428 illustrations. Price, \$7.50.

The volume before us is one of the most satisfactory technical books which has come to the editor's table in some time. The subare given up to water, its examination and fil-which enter so largely into the equipment of tration. The instructions for doing all kinds the briquetting plant. are given up to water, its examination and fil-

of bottling of aerated and other beverages are very full, and all the best types of apparatus are shown. The section devoted to mineral waters is particularly full and the analyses are most complete. Americans have carried the manufacture of artificial mineral waters ically according to the names of the owners, and aerated beverages to a higher state of per-There are illustrations in colors of the flags fection than has hitherto been known, and satisfactory book.

THE COPPER HAND BOOK. A Manual of the Copper Industry of the World. Vol. III. of the year 1902. Compiled and published by Horace J. Stevens, Houghton, Mich. 8vo. Pp. 600. Price, \$5.

This is the third annual issue of the "Copper Hand Book," and includes the history of copper, the geology of copper, the chemistry and mineralogy of copper, its metallurgy and its uses. It also deals with the copper deposits of the United States and Canada and Newstatistics relative to copper are most valuable.

LENKBARE BALLONS: RÜCKBLICKE UND Aussichten. Von Hauptmann Hoernes. Leipzig: Wilhelm Engelmann. 1902. 8vo. Pp. 359.

Capt. Hoernes has produced one of the most thoroughly scientific and scholarly treatises on aerial navigation which has ever come before our notice. He has exhaustively discussed the history of the airship, carefully reviewing the construction of and the results obtained with the Giffard, Dupuy de Lome, Haenlein, Baumgartner, Woelfert, Tissandier, Renard and Krebs, Schwarz, Zeppelin, Santos Dumont and Deutsch airships. Through six chapters he discusses elaborately the principles of aerial dynamics and their influence upon the structure of the airship, basing his conclusions upon the results obtained with airships and balloons of widely different design. His concluding chapter is of a more theoretical nature and treats of the possibility ner. London: Scott, Greenwood & theoretical nature and treats of the possibility.
Co. New York: D. Van Nostrand Co. of finally solving the problem of aerial naviga tion and the form which the solution may be expected to assume. Not the least valuable portion of Capt. Hoernes' admirable work is comprised of meteorological tables to which the aeronaut may refer for wind velocities during each month of the year for different years. An excellent bibliography and exhaustive index are provided.

> PRACTICAL FARM DRAINAGE: WHY, WHEN AND HOW TO TILE DRAIN. By C. G. Elliott. New York: John Wiley & Sons. 1903. 16mo. Pp. 92. Price,

A thoroughly practical book by a drainage engineer. The methods have been well tested and are now in constant use.

GAS ENGINE TROUBLES AND REMEDIES. By Albert Stritwatter. Cincinnati, n. d.: The Gas Engine Publishing Co. 16mo. Pp. 112. Price, \$1.00.

The care of gas engines is dealt with only to a limited extent in works on the subject. so that the present eminently practical book will be a welcome addition to the literature of this modern power.

WIRELESS TELEGRAPHY AND TELEPHONY Compiled by Dr. Maurice Ernst. London, n. d.: Electricity Office. 12mo. Pp. 32. Price, 40 cents.

This undated book on wireless telegraphy is unfortunate, in view of the strides which wire less communication is making. It is largely devoted to the Orling-Armstrong system. contains a serviceable bibliography.

THE RESTORATION OF THE ANCIENT IRRIGA-TION WORKS ON THE TIGRIS: OR, THE RE-CREATION OF CHALDEA. By Sir William Willcocks, K.C.M.G., M.I.C.E. 8vo. Pp. 71, ten plates.

BRITISH STANDARD SECTIONS. New York: D. Van Nostrand Co. 1903. 9 charts. Price, \$1.00.

These charts of British standard sections are issued by the Engineering Standards Committee, which is supported by the various engineering societies. Each subject, as T-bars or bulb-plates, has a drawing of the section and is accompanied by a table of dimensions and remarks. The tables should find their way to the drawing offices of all constructing engineers.

THE ART OF LIVING LONG. Milwaukee: W. F. Butler. 1903. 8vo. Pp. 214.

his volume is a new and improved Enversion of the Venetian centenarian Louis Cornaro, who was born in 1464 and died in 1566. Essays by Joseph Addison, Lord Bacon, and Sir William Temple are included. The work has been compared with ancient documents preserved in Italian archives. The book is an Italian classic and is worthily presented, and an example of good humanist literature.

DIE BRIKETT-INDUSTRIE UND DIE BRENN-MATERIALIEN. Von Dr. Friedrich Juenemann. Vienna: A. Hartleben. 1903. 12mo. Pp. 320. Price, \$1.75.

It must be confessed that the Germans have far outstripped us in the invention and manufacture of artificial fuels. In the briquetting of various substances they have certainly made marked advances. Dr. Juenemann has collected in this book all those methods which have in Germany proved themselves of practiject is dealt with in a thoroughly adequate cal value. He describes not only the processes manner, as is shown by the fact that 116 pages

LIMITS TO SEEING AND HEARING; OR, THE GREAT SCALE. Supplementary Reading in Physics. Prepared by J. A. Culler. Columbus, Ohio: O. T. Corson. Pp. 16.

THE STOURBRIDGE LION. A compilation of Machinery for Model Steamers. Lonauthorities proving the claim made don: Dawbarn & Ward, Ltd. 1903. 16mo. Pp. 64. Price, 20 cents. been the first locomotive to turn a wheel on the Western Hemisphere. Together with a brief biographical sketch of Horatio Allen, the first locomotive engineer in America. By Edward A. Penniman. Honesdale; Pa.: Citizen Print. 1903. Pp. 17.

DIE ENDGÜLTIGE LÖSUNG DES FLUGPROB-RIKS-DIREKTOR IN ARAD. Mit drei in den Text gedruckten Abbildungen und einer Figurentafel. Leipzig: Verlagsbuchhandlung von J. J. Weber. 1903. Pp. 23.

THE JOURNAL OF THE DEPARTMENT OF AGRICULTURE OF VICTORIA. Published For and on Behalf of the Govern-INDEX OF INVENTIONS ment by Direction of the Hon. J. W. Taverner, M.L.A., Minister for Agriculture. Edited by D. McAlpine.
Melbourne. 1902. Pp. 731, 835. Vol.
1, Part 8. August, 1902.

THE JOURNAL OF THE DEPARTMENT OF AGRICULTURE OF VICTORIA. For and on Behalf of the Government by Direction of the Hon. J. W. See note at end of list about copies of these patents. Taverner, M.L.A. Edited by D. Mc. Alpine. Melbourne. 1903. Pp. 837, 921. Vol. 1, Part 9. September,

JANET CHARLES: OBSERVATIONS SUR LES GUEPES. Paris: C. Naud, Editeur. 1903. Pp. 85.

CALORIMETRY. By Frank H. Bates. Phila-Philadelphia Book Co. delphia: 1902. 16mo. Pp. 127.

THE TRAP NEST TEXTBOOK. By F. O. Welcome. 8vo. Pp. 129.

REPORT OF THE LIBRARIAN OF CONGRESS FOR THE FISCAL YEAR ENDING JUNE, 1902. 8vo. Pp. 278.

THIRTY PICTURES OF TUBERCULOSIS. Addison W. Baird, M.D. New York: James T. Dougherty. 1903. 8vo. Pp. 24. Price 25c.

CRIMINAL RESPONSIBILITY OF THE EPILEP-TIC. By John Puton, M.D. New York: William Wood & Co. 1903. 16mo. Pp. 11.

NINETEENTH ANNUAL REPORT OF THE BUR-EAU OF AMERICAN ETHNOLOGY TO THE SECRETARY OF THE SMITHSONIAN INSTITUTION. By J. W. Powell, Director. In Two Parts. Part II. Pp. 5771, 1160.

UNITED STATES GEOLOGICAL SURVEY: MIN-ERAL RESOURCES OF THE UNITED STATES, CALENDAR YEAR 1900. David T. Day. Chief of the Division of Mining and Mineral Resources of the United States Geological Survey. Washington: Government Printing Office. 1901. Pp. 927.

SUBJECT LIST OF WORKS ON GENERAL SCI-ENCE. PHYSICS, SOUND, MUSIC, LIGHT. MICROSCOPE, AND PHILOSOPHICAL IN-STRUMENTS IN THE LIBRARY OF THE PATENT OFFICE. Published at the Patent Office, 25 Southampton Building, Chancery Lane, London, W. C. Pp. 183. Price 25c.

MODERN MEXICO: STANDARD GUIDE TO THE City of Mexico, Mander Vicinity. By Robert S. Barrett. Third Edition. Modern Mexico, 2a Independencia 8, City of Mexico, Mex., and 116 Nassau Street, N. Y. 1902-3.

GEOLOGIC ATLAS OF THE UNITED STATES-MASONTOWN-UNIONTOWN FOLIO: PENN-SYLVANIA; INDEX; MAP. Washington, D. C.: Engraved and printed by the United States Geological Survey.

GEOLOGIC ATLAS OF THE UNITED STATES-CHICAGO FOLIO: RIVERSIDE, CHICAGO, DESPLAINES, AND CALUMET QUAD RANGLE; ILLINOIS-INDIANA. Washington D. C. Engraved and printed by the United States Geological Survey 1902.

THE PROOFS OF LIFE AFTER DEATH. A Twentieth Century Symposium. An Assembly and Collation of Letters and Expressions from Eminent Scientists and Thinkers of the World, Giving the Strongest and Best Reasons Known to the World To-day, as Substantial Evidence of the Continued Existence of the Soul After Death. Compiled and edited by Robert J. Thompson. Chicago: Robert Thompson. London: C. D. Gazenove & Son. 1902. Pp. 318. 12mo. Pp. 365.

MONOGRAPHS OF THE UNITED STATES GEO-LOGICAL SURVEY. Volume XLII. Department of the Interior. Washing-Government Printing Office. 1903. Pp. 316.

MINERAL RESOURCES OF THE UNITED STATES. Calendar Year 1901. David

T. Day, Chief of Division of Mining and Mineral Resources of the United States Geological Survey. Washing-Government Printing Office. 1902. 8vo. Pp. 996.

Compressibilité des Gaz Reels. Par L. Décombe. Paris: C. Naud. 1903. 16mo. Pp. 99. Price 50 cents.

A SYSTEM OF PHONOSCRIPT AND PHONO-TYPE. By Charles Morrell. Chicago: Phonic Institute. 1903. 16mo. Pp. 106. Price 25 cents.

LEMS DURCH EMIL NÉMETHY, FAB- ANNUAL REPORT OF BRIGADIER-GENERAL WILLIAM LUDLOW, U. S. ARMY. Military Governor of Habana and Commanding the Department of Habana for the period July 1, 1899, to May 1, 1900. Washington: Government Printing Office. 1900. Pp. 426.

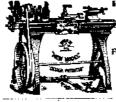
For which Letters Patent of the United States were Issued for the Week Ending

July 14, 1903,

Published AND EACH BEARING THAT DATE.

	Adhesive applying mechanism, J. C. F.	733,361
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		733,503
3	obtaining, H. H. Dow	733,465
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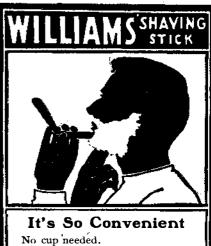
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