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on page 97. Some week you will be likely to find an inquiry for something that you manufacture or deal in. A prompt reply may bring

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the air. These draps always fall as do any other drops, but they may evaporate and disappear before they reach the earth. They may be kept up by currents of air under the clouds, raising them and keeping them from coming through to the earth. Otherwise it would rain every time a cloud passes overhead. 7. Steam circulating in pipes condenses and again becomes water They why is it that steam escaping into the cold atmosphere rises and finally becomes invisible? Why don't it con-Engine and Foot Lathes

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### NEW BOOKS, ETC.

THE MODERN WOOD FINISHER.  $\mathbf{B}\mathbf{y}$   $\mathbf{F}$ Maire. Chicago: The Western Painter, 1904. 16mo.; pp. 159. Price, 50 cents.

The author has written a series of articles on wood finishing in all its branches. These embody his observations of the practice of wood finishing as it exists in all the leading furniture factories and large paint shops in the country. There exists a great deal of ignorance among the craft of the simplest principles of wood finishing. To all such, and also for those who forget and need a work of this kind as a manual of reference, this little volume will prove useful.

SYNCHRONOUS AND OTHER MULTIPLE TELE-GRAPHS. By Albert Cushing Crehore, Ph.D. New York: McGraw Publishing Company, 1905. 8vo.; pp. 124. Price, \$2.

The subjects included in this book are divided into three parts. The first part is devoted to the general subject of methods of obtaining independent telegraph circuits by the use of direct and alternating currents on the same The arrangements of circuits through •ut the book, almost without exception, have been successfully operated either in the laboratory or under service conditions. Parts second and third relate to methods of obtaining circuits by means of the synchronous rotation of two bodies at distant points, the second part concerning the means of obtaining the synchronous rotation, and the third part the means by which the rotation may be utilized for securing independent telegraph circuits. The book is written to assist the reader to •btain a clear conception of the subject from a practical and experimental point of view.

PROCEEDINGS OF THE AMERICAN FOREST CONGRESS. American Forestry Association. Published for the Association by the H. M. Suter Publishing Company, Washington, D.C., 1905. 8vo.; pp. 474. Price, \$1.25.

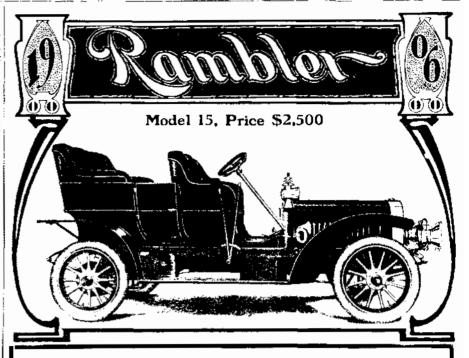
This book is a record of the meeting of the American Forest Congress, held in Washington, 1905, the object of the congress being to establish a broader understanding of the forest in its relation to the great industries depende ing upon it; to advance the conservative use of forest resources for both present and future needs of these industries, and to stimulate and unite all efforts to perpetuate the forest as a permanent resource of the nation. The volume is divided into seven parts, under the following heads: Forestry as a National Question: Importance of the Public Forest Lands to Irrigation; the Lumber Industry and the Forests; Importance of the Public Forest Lands to Grazing: Railroads in Relation to the For est; Importance of Public Ferest and Lands to Mining; National and State Forest Policy.

RAILWAY PROVIDENT INSTITUTIONS IN ENG-LISH-SPEAKING COUNTRIES. By M. Riebenack. Philadelphia, Pa.: Pennsylvania Railroad Company, 1905. 8vo.; pp. 349.

This book, which is written by the Comptroller of the Pennsylvania Railroad Company, embodies the substance of two reports which the author submitted during the year 1904 t● the International Commission of the International Railway Congress at Brussels for use at the session held at Washington May 3 to 13, 1905. It deals with most important economic conditions, and gives a mass of detail relative to insurance and relief provisions, nespital service, saving funds, ce-operative capital stock purchasing schemes, Y. M. C. A. railway branches, literary study, etc. The book is a highly commendable •ne, and must have been a most difficult one to compile.

STEAM BOILERS: THEIR HISTORY AND DE-By H. H. Powles, A.M.I. VELOPMENT. C.E., M.I.M.E. London: Archibald Constable & Co., Ltd. Philadelphia: J. B. Lippincott Company, 1905. 4to.; pp. 336, 15 plates. Price, \$6.50.

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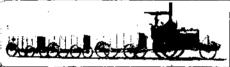
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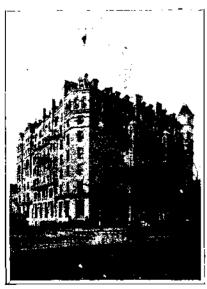
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THE COMMERCIAL TRAVELLER IN SOUTH AMERICA. By Frank Wiborg. New York: McClure, Phillips & Co., 1905. 12mo.; pp. 159. Price, \$1.

This book gives the experiences and impressions of an American business man on a trip through Panama, Ecuador, Chili, Peru, the Argentine Republic, and Brazil. The author met many business men in these countries, and had favorable opportunities to find out why so little of the South American trade comes to the United States instead of to foreign countries. The book is concisely written, and will doubtless convey to our manufacturers considerable information beneficial to them. It is illustrated by a number of half-tone plates and a map showing the route taken by the author.

### INDEX OF INVENTIONS

For which Letters Patent of the

United States were Issued

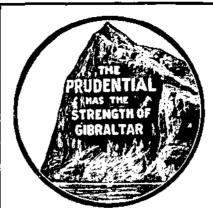
for the Week Ending

January 16, 1906.

AND EACH BEARING THAT DATE

[See note at end of list about copies of these patents.]

|     | Absorbent material, W. R. Green,  |                                    |
|-----|---|------------------------------------|
|     |   | 810,138                            |
|     | Absorbent material and fiber stock therefor, W. R. Green Amusement apparatus, S. M. Friede Annusement device, C. H. Jacger Andron. J. T. McLain Automatic brake. G. W. Shem Bait, artificial. J. L. Ackerman Baie-binder and ther, W. C. Morgans & Gillom   | 810,139                            |
| •   | Amusement apparatus, S. M. Friede   | 809,937                            |
| •   | Andreon J. T. McLain  | 809,956<br>809,975                 |
| 1   | Automatic brake, G. W. Shem   | $810,227 \\ 810, \bullet 17$       |
| ĺ   | Bait, artificial. J. L. Ackerman  | 810,017                            |
|     | Gilloon   |                                    |
|     | Bale-tie machine. A. M. Griffin   | 809,943<br>809,931                 |
|     | Baling-press. C. E. Bower   | 810,029                            |
|     | Baling-press brake, W. S. Bradshaw  | 810,102                            |
|     | Gilloon Bale-tie machine, A. M. Griffin. Baling-press, J. L. Coldiron. Baling-press brake, W. S. Bradshaw. Baling-press brake, W. S. Bradshaw. Bandage, absorbent, W. R. Green, W. R. Green, W. R. Green, W. R. Green.  | 810,371                            |
|     | Bandage and material therefor, absorbent,<br>W. R. Green  | 810,115                            |
|     | Baskets or other receptacles, machine for   |                                    |
|     | Baskets or other receptacles, machine for<br>use in making, Eklund & Walker<br>Bean cleaning and polishing machine, E.<br>E. Wenn   | 810,270                            |
| ĺ   | E. Wemp   | 810,009                            |
|     | E. Wemp Bed, folding, J. E. Chatem Bin. See Screen-bin.   | 810,036                            |
| . ' | Binder, temporary, F. B. Jordan   | 810,338                            |
|     | Bit-brace jaw, R. C. Ellrich  | 809,936<br>810,230                 |
|     | Bin. See Screen-bin. Binder, temporary, F. B. Jordan. Bit-brace jaw, R. C. Ellrich. Bit-extender, W. B. Swan. Block or tile making machine, D. I. & J. E. Petti.  |                                    |
|     | Pettit Blowpipe, W. M. Bradley. Book support, Halsell & Campbell. Bookense, F. W. Tobey. Boots and shoes, cushion-tread and the like  | 810,300<br>810,257                 |
|     | Book support, Halsell & Campbell  | 810.141                            |
|     | Bookcase, F. W. Tobey   | $810,141 \\ 810,233$               |
|     | for Luchterhand & Newton  | 809,964                            |
|     | for, Luchterhand & Newton Boring machine, cylinder, J. II. Goulds-  | ,                                  |
|     | Boring machine, cylinder, J. II. Gouldsberry<br>Bottle, non-refillable, J. F. Connell<br>Bottles, jurs, and similar vessels, closure<br>Bodevice for, E. A. Matthias<br>Box-tray-forming machine, J. II. & J. II.<br>Bracellet, A. II. Bliss  | $810,114 \\ 809,932$               |
|     | Bottles, jars, and similar vessels, closure   |                                    |
|     | Box R. S. A. Moore  | 810,164 $810,341$                  |
|     | Box-tray-forming machine, J. H. & J. H.   |                                    |
|     | Birch<br>Bracelet A. H. Bliss   | $809,93 \bullet 810,183$           |
| ı   | Braiding machine, H. Janssen  | 810,056                            |
| 1   | Breast-strap slide, E. M. Wightman<br>Breast-strap slide and attachment, J. S.  | 810,014                            |
|     | Rirch Rirch Rirch Riraclet, A. H. Bliss. Braiding machine, H. Janssen Breast-strap slide, E. M. Wightman. Breast-strap slide and attachment, J. S. Anderson Rick tile and various shapes, producing   | 809,927                            |
|     | Brick, tile, and various shapes, producing vitrified. R. Baggaley   | 810.022                            |
|     | Brilge-guard whip, J. H. Donaldson  | 810,041                            |
|     | Brooms, dustless attachment for, F. Sher-   | 809,991                            |
|     | Brick, the, and various shapes, producing vitrified. It. Baggaley.  Brilge-gard whip, J. H. Donaldson.  Brooms, dustless attachment for, F. Sheridan  Building construction, interior, W. D.  |                                    |
| . ' | Building construction, interior, W. D. Mann   | 810,291<br>810,380                 |
|     | Burial-case, L. V. Rathbun  | 810,172                            |
|     | Cable-hanger, F. C. Tabler  | <b>80</b> 9,993<br><b>810</b> ,004 |
|     | Caisson air-lock. W. McIlvrid   | \$10,298                           |
|     | Cam, variable, Salzer & Walther   | $810,090 \\ 810,353$               |
|     | Can, J. F. Ross   | 809,983                            |
|     | Can-heading machine. Adriance & Calleson.   | $810,034 \\ 810.245$               |
|     | Cane-loading device, sugar, G. D. Luce<br>Canopy support and chandelier, J. O.  | 810,290                            |
|     | Canopy support and chandelier, J. O. Mick   | 810,068                            |
|     | Car-coupling, E. C. Washburn  | 810,008                            |
|     | Car-fender, J. B. Connor  | 810,326                            |
|     | Car, railway. Sullivan & Renshaw  | 810,000                            |
| ,   | Cars, automobiles, and the like, locking de-  | 800,014                            |
| į   | Canopy support and chandelier, J. O. Mick Car-coupling, E. C. Washburn Car-coupling, S. P. Bush. Car-fender, J. B. Comor. Car, railway, Sullivan & Renshaw. Car truss-frame, W. R. McKeen, Jr. Caro, automobiles, and the like, locking device for motor, I. W. Heysinger. Carbureter, S. P. Sanders. Carding machine, J. J. Rae. Carriage and cradle, folding baby, I. Andrews | 810,206                            |
|     | Carding machine, J. J. Rae  | 810,171                            |
|     | Carriage and cradle, folding baby, I. Andrews   | 810,247                            |
|     | Carrier. See Egg-carrier.   | 014,241                            |
|     | Cartridge-clip, O. M. Lissak<br>Cartridge-clip assembling machine, O. M.  | 810,161                            |
|     | Lissak  | 810,065                            |
|     | Lissak<br>Cash indicator and recorder, McCormick &  | 810,376                            |
|     | Morrison  |                                    |
|     | Morrison  | 810,377<br>810,088                 |
|     | Morrison Casket-hanoe, E. R. Sargent Cattle-guard, W. D. Linscott. Cattle-guard, A. Devan   | 810,064                            |
| ł   | Cattle-guard, A. Devan  | 810,328                            |
|     | Cattle-guard, A. Devan. Cellulose acetate, Elchengrun & Becker. Cement-block machine, G. J. Apgar. Cement construction block mold, M. M. Robertson  | 809,935<br>810, <b>●</b> 19        |
|     | Cement construction block mold, M. M.   |                                    |
|     | Cementing machine, W. F. Lautenschlager   | 810,382<br>810,373                 |
| į   | Ceramic ware, burning, B. E. Eldred   | 810,044                            |
| i   | Chair, J. E. Hanger<br>Chair attachment, V. M. Hollyday   | 809,944<br>810,277                 |
| 1   | Checkrein, P. J. Higgins  | 810,277<br>810,336<br>810,214      |
|     | Checkrein attachment, J. A. McCombs<br>Cheese cutter, E. P. Dunn  | 810,043                            |
| į   | Cleaning compound, J. Callahan  | 810,105                            |
|     | Climbing apparatus, H. Borneman   | 810,254                            |
| 1   | Closet and sink fitting, combined, J. L.  | 809.038                            |
| ı   | Cheese entter, E. P. Dunn. Cheese entter, E. P. Dunn. Cleaning compound, J. Callahan. Clevis irons. making, W. S. Ward. Climbing apparatus, H. Borneman. Closet and sink fitting, combined, J. L. Fruin Cloth-steaming machine, G. B. Gerlach.  | 810,271                            |
|     |   |                                    |



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