

with an index. We have seen few books in which the absence of this feature is more to be regretted.

CAMBRIDGE NATURAL SCIENCE MANUALS. Physical series. Light. An elementary text book, theoretical and practical, for colleges and schools. By R. T. Glazebrook. Cambridge: University Press, 1894. Pp. 213. Price \$1.

This little work claims to embody the teaching of the physics of light by experiment. This, however, does not prevent from presenting a very valuable treatment of the subject, in which the laws of light are well stated, and the use of simple experiments and not their abuse is given. It is designed for medical students at the Cavendish laboratory, but this really operates as a very minor restriction on its scope.

TELEPHONE LINES AND THEIR PROPERTIES. By William J. Hopkins. New edition, revised and enlarged. New York: Longmans, Green & Co. 1894. Pp. xvi, 268. Price \$1.50.

The production of a adequate work on the subject of telephones, more especially on the lines and circuits, seems really to have filled a want existing in technical literature. We are convinced that in its practical details, as well as its examination of induction and the properties of telephone lines, it will be of great use to the practical man, as well as of interest to the student. It is very fully illustrated and can be confidently recommended to electricians.

SCIENTIFIC AMERICAN BUILDING EDITION.

MAY, 1894.—(No. 103.)

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- 1. Elegant plate in color showing a handsome residence recently erected for William H. Bartlett, Esq., at Evanston, Ill. Two perspective views and floor plans. Mr. J. L. Silsbee, architect, Chicago, Ill. A very picturesque design.
2. Plate in color showing a cottage at Mt. Vernon, N. Y., recently completed for E. J. Walther, Esq. Two perspective views and floor plans. Mr. L. H. Lucas, architect, Mt. Vernon, N. Y. An excellent design.
3. Cottage at Morgan Park, Ill., recently erected for G. F. Patterson, Esq., at a cost of \$3,000 complete. Two perspective views and floor plans. Mr. H. H. Waterman, architect, Chicago, Ill.
4. A summer house at Southampton, Long Island, N. Y., recently completed for H. M. Day, Esq. Two perspective views and floor plans. A model design. Messrs. G. E. Harney & W. S. Purdy, architects, New York.
5. A residence at Portchester, N. Y., recently erected for Walter S. Haviland, Esq. Two perspective views and floor plans. A very pleasing design. Mr. Louis Mertz, architect, Portchester, N. Y.
6. Floor plans, interior view, and two perspectives of a residence recently completed at Hackensack, N. J., for George A. Vroom, Esq. An excellent design and unique plan. Cost complete \$6,850. Mr. Christopher Meyer, architect, New York City.
7. The Barnum Institute of Science and History, of Bridgeport, Conn., donated by the late Phineas T. Barnum. A one-half page perspective view. Cost for building and grounds \$100,000. A fine example of the Romanesque style of architecture.
8. A residence at Stamford, Conn., recently erected for Oliver G. Fessenden, Esq., at a cost of \$5,199. Two perspective views and floor plans. Mr. Wm. H. Day, architect, New York City. A very pleasing design.
9. A cottage of moderate cost recently completed for Hiram R. Smith, Esq., at Randall Park, Freeport, Long Island, N. Y. Cost complete \$3,900. Two perspective views and floor plans. Mr. Wm. Raynor, Freeport, Long Island, N. Y., architect. A very attractive design.
10. "Otter Cottage," recently completed for Henry H. Adams, Esq., at Belle Haven Park, Greenwich, Conn. Mr. H. W. Howard, architect, Greenwich, Conn. An attractive design in the colonial style of architecture. Two perspective views and floor plans.
11. A colonial cottage at "The Bluffs," Mt. Vernon, N. Y., recently completed for E. A. Hunt, Esq. Two perspective views, an interior view and floor plans. Mr. Louis H. Lucas, architect, Mt. Vernon, N. Y.
12. Half-page engraving showing hall and staircase of a London dwelling.
13. Miscellaneous Contents: Clients' right of replicating design.—Shop and mill construction.—Seasoning oak.—Beautiful designs in parquetry work, illustrated.—The effect of fire on concrete.—Water-proof cellars.—Embossing wood.—Steel butt with ball-bearing washers, illustrated.—"T e Holland" radiators, illustrated.—Graphite paint.—Sand-papery machines.—The Van Wagoner & Williams Hardware Company.—Window screens and screen doors.—Maple flooring.—The Pullman sash balance, illustrated.—Portland cement walks.—Subterranean London.—An alloy which adheres to glass.—A saw clamp and filing guide, illustrated.

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Notes & Queries

HINTS TO CORRESPONDENTS.

Names and Address must accompany all letters, or no attention will be paid thereto. This is for our information and not for publication. References to former articles or answers should give date of paper and page or number of question. Inquiries not answered in reasonable time should be repeated; correspondents will bear in mind that some answers require not a little research, and, though we endeavor to reply to all either by letter or in this department, each must take his turn. Buyers wishing to purchase any article not advertised in our columns will be furnished with addresses of houses manufacturing or carrying the same. Special Written Information on matters of personal rather than general interest cannot be expected without remuneration. Scientific American Supplements referred to may be had at the office. Price 10 cents each. Books referred to promptly supplied on receipt of price. Minerals sent for examination should be distinctly marked or labeled.

(6049) H. D. says: Not long since a man was traveling through this section selling a preparation to remove warts, corns, etc. It only required two or three minutes to remove them. Of what substances and proportion was his preparation, and is there any danger in its use?

- A. Salicylic acid.....30 grm.
Cannabis Indica (Indian hemp)..... 5
Castor oil..... 1/2 drm.
Collodion..... 1/2 oz.

Mix and apply morning and evening for four days. Then soak the feet in warm water. If this be done faithfully, the corns are removed without any difficulty. The result is a clear light green solution. There should be no difficulty in its preparation. To prevent it from evaporating, keep the solution in a stoppered bottle. Be sure and use the Indian hemp, and not the American article; the latter is not easily soluble. We would not advise the use of any such preparation as you describe, as it is probably harmful. The formula given above is harmless.

(6050) J. C. asks for a negative varnish:

- A. Try Sandarac..... 4 ounces.
Alcohol..... 28 "
Oil of lavender..... 3 "
Chloroform..... 5 drachms.
Another is Methylated spirit.....12 ounces.
Light amber shellac..... 1 1/2 "
Sandarac..... 1 1/2 "
Canada balsam..... 1/2 drachm.
Oil of lavender..... 1/2 ounce.

Before varnishing the film should be perfectly dry, and it will be well to heat it a little. Before printing from the varnished negative, warm the surface to evaporate all moisture that may adhere there. If these precautions are taken, there should be no staining of the film. 2. What will remove the silver stain caused by the film of aristo paper adhering to the surface of the negative? A. Usually the stain can be removed by rubbing it lightly with a tuft of absorbent cotton wetted with a weak solution of cyanide of potassium, previously soaking the negative for 10 minutes in a solution of iodide of potassium, 20 grains to 1 ounce of water. Gihon's opaque, we think, is made similar to water colors cakes usually sold to artists and others. A cheap substitute would be a mixture of alcohol, shellac, and lampblack, which may be

thinned or thickened as desired, with alcohol, and applied with a brush.

(6051) E. & M. ask: 1. Does the plane or convex side of a single plano-convex lens go next the sensitive plate in the "Photoret"? A. The convex. 2. Will the same answer apply to a single achromatic Waterbury lens? A. Yes. 3. Will you be kind enough to give us a formula for metal developer? A. Metal 5 grains, sodium sulphite 3 grains, water 1 ounce, add carbonate of potash 2 grains. 4. What is metal? A. The chemical name is monomethylparamidometacresote. It is a derivative from coal tar. 5. What is hydroquinone? A. A derivative of cinchona bark. 6. Is para-amidophenol hydrochlorate injurious to use? A. No.

(6052) A. H.—1. Electrotypes of half tone blocks are used for printing from. 2. Carbon tissue can be had of the photo. dealers in different colors and is printed in the same manner as other photos.

(6053) J. E. W. asks: What is the largest number of shots on record fired by a Gatling gun per minute, and where was it done? A. The Gatling gun at the trials at Shoeburyness, England, was fired 400 rounds per minute. Later by improvements it is claimed to have been fired 100 rounds per minute, in each of its 10 barrels, or 1,000 rounds per minute. About 600 rounds per minute is the average practice of the best machine guns.

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INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

May 15, 1894,

AND EACH BEARING THAT DATE.

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

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