

Beam not collaborating in this edition. A thorough understanding of the methods laid down for the analysis of water will enable any chemist to judge of the potability of a water. Unfortunately, examinations of water are frequently not performed in the most thorough manner, so that any work which tends to assist the chemist to make more accurate determinations is a desirable addition to chemical literature. Dr. Leffmann says: "There can be no question that many of the published results as to bacteriologic examinations of water samples are without value. . . . Whatever may be the shortcomings of the standard analytic examinations, it seems probable that for some years to come at least, the results will remain the most satisfactory basis for judgment as to the potability of a water." The section devoted to the purification of water for technical purposes is valuable, and it is only to be regretted that this subject was not treated more at length.

A HANDBOOK OF GARMENT DYEING AND CLEANING. By George H. Hurst, F.C.S. London: Charles Griffin & Company, Limited. Philadelphia: J. B. Lippincott Company, 1895. Pp. 180. 12mo. 32 illustrations. Price \$1.75.

This book gives details of the methods used in large establishments in cleaning and dyeing garments. It deals with the technology of the textile fibers, the dry process of cleaning, the wet process, job dyeing of fabrics of all kinds, dyestuffs, mordants, dyeing machinery, finishing cleaned or dyed fabrics, scouring and dyeing of skin rugs and mats, cleaning and dyeing of feathers and straw bleaching and dyeing. In the appendix is described the curious process of "dry dyeing" in which water as the vehicle in which the dyes are dissolved is done away with, thus preventing shrinking. The vehicle employed in the new system is benzine or petroleum spirit in which coal tar colors are soluble. The goods are immersed in the bath until they have become dyed to the right shade, they are then wrung out and dried. Coal tar colors not originally soluble in the petroleum vehicle are described as being treated with some agent to make them soluble.

THE HEART OF A BOY. By Edmondo de Amicis. Translated by Professor G. Mantellini. Chicago: Laird & Lee, 1895. Pp. 290. 12mo. Illustrated.

"Cuore" is a classic in the literature of education. Pupils, teachers, and parents are alike held and taught by its expressive story. The present edition is from the 166th Italian edition. Signor Edmondo de Amicis is one of the most charming writers of the modern Italian school and his "Holland and Its People" is one of the most delightful books of travel which have been written.

SCIENTIFIC AMERICAN BUILDING EDITION.

SEPTEMBER, 1895.—(No. 119.)

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- 1. An elegant plate in colors of a residence at Edgewater, Chicago, Ill. Three perspective elevations and floor plans. Mr. J. L. Silbee, architect. A pleasing design, with many good features.
2. A residence in the Colonial style, recently erected in Tennis Court, Flatbush, L. I., at a cost of \$7,500 complete. Perspective elevation and floor plans, also an interior view. Messrs. Stevenson & Greene, architects, New York City. An attractive design.
3. A dwelling at Bronxwood Park, N. Y., recently erected at a cost of \$6,000 complete. Two perspective elevations and floor plans. Mr. J. M. Lawrence, architect, Mt. Vernon, N. Y.
4. A residence at Mt. Vernon, N. Y., recently erected at a cost of \$8,000 complete. Perspective elevation and floor plans. Mr. Walter F. Stickles, architect, Mt. Vernon, N. Y. An attractive design in the Colonial style.
5. A cottage at Bergen Point, N. J., recently erected at a cost of \$4,200. Mr. Wesley J. Havell, architect, New York City. Perspective elevation and floor plans. A neat design, showing some original and pleasing features.
6. A dwelling at Bedford Park, New York City. Two perspective elevations and floor plans. Mr. Edgar K. Bourne, architect, New York City. An attractive design in the English Gothic style.
7. A two-family dwelling recently erected at New Haven, Conn. Two perspective elevations and floor plans. Cost complete, \$5,080. Architects, Messrs. Stillson & Brown, New Haven, Conn.
8. St. Ann's Episcopal Church, Kennebunkport, Me. Perspective view and ground plans, also an interior view. Mr. H. P. Clark, architect, Boston.
9. A residence at Williamsport, Pa., recently erected for J. F. Fredericks. Architect, David K. Dean. Perspective elevation and floor plans. An attractive design.
10. A Colonial house at Far Rockaway, N. Y. Architects, Messrs. Child & De Goll. Perspective elevation and floor plans. A model design.
11. Miscellaneous contents: The Hayes metallic lathing, illustrated.—Neolith as a paint and decorative medium for relief work, illustrated.—Gas radiators, fire grates, etc., illustrated.—Improved heaters, illustrated.—Improved sash lock, illustrated.—American homes and the cabinet or parlor organ, illustrated.—The Laurie steel lath, illustrated.—The Austin & Eddy sash hanging attachment, 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.

(6619) W. H. B. asks: 1. A steamboat is going 20 knots through the water, with a 5 knot tide; how much will her log register—will it register over 20 knots? A. Will register only 20 knots. 2. Will tide running against an 8 knot boat affect her speed any more than it would a 20 knot boat going against the same tide? If the tide was running 5 knots against each, would they not each make 5 knots less per hour? A. No. The log only registers the speed of the boat through the water. The amount of the current must be subtracted from the boat's speed when running against the current, and added when running with the current, for their running time by land measure.

(6620) J. M. says: I have a building 10 feet by 12 feet; it is sided outside and ceiled inside, and has a floor in it; can I keep ice in it by using plenty of sawdust, or will I have to take the floor out? A. The floor should be taken out and a good drain made; outside of house should be banked up with earth as much as possible to prevent circulation of air, and with a foot of sawdust all around the sides, and 2 feet on top of the ice, you will make a fair ice house. 2. What kind of starch do the Chinamen use, or do they use anything else to get the fine gloss on linen goods? A. The Chinese use ordinary starch, with a weak solution of borax and gum Arabic.

(6621) F. W. F. asks if there is any way, and how, that you can tell how far a stream of water can be thrown through 50, 100, 200, or any number of feet of hose when the hydrant pressure is given, the hose being 2 1/4 inches and the nozzle pipe 1 1/2 inches diameter? A. The principles and rules for computing the distance and height of fire streams and the friction in fire hose for various pressures and velocities are explained and illustrated in Sci. Am. SUP. No. 792, 10 cents mailed.

(6622) H. B. C. asks how to destroy aphides. A. To destroy common plant lice (Aphides) and other insects in the greenhouse and garden, the following remedy has been recommended by M. Cloetz, of the Jardin des Plantes, in Paris: 3/4 ounces quassia chips, 5 drachms of stavesacre seeds, powdered and placed in 7 pints of water, and boiled until reduced to 5 pints. Dr. Hull recommends dusting slaked lime on the trees or bushes when the foliage is wet; syringing with soapsuds or tobacco water, or a strong decoction of quassia with soapsuds; also a weak solution of chloride of lime is said by Mr. Andrews to preserve plants from insects, if sprinkled over them. The following recipe is also highly recommended in an English horticultural journal as being almost infallible for mildew, scale, mealy bug, red spider, and thrips: 2 ounces flour of sulphur worked into a paste with water, 2 ounces washing soda, 1/4 ounce of common shag tobacco, and a piece of quicklime about the size of a duck's egg. Pour them all into a saucepan with 1 gallon of water, boil and stir for a quarter of an hour, and let the whole settle until it becomes cold and clear. It should then be poured off, leaving the sediment. In using it add water according to the strength or substance of the foliage. It will keep good for a long time if kept closed.

(6623) W. M. T., Jr., asks how to put titles on photographs. A. To print the name on the photograph, several methods may be adopted. The simplest

is to write the title of the subject on a slip of paper with aniline copying ink, or with ordinary copying ink mixed with gamboge or vermilion. Then slightly dampen the surface of the negative near the bottom right or left hand corner in an unobtrusive and unimportant portion of the picture as possible. Press down the paper with the writing upon it. Leave for a few minutes and then remove the paper, when the writing will be found to have adhered to the negative. When printed, the name will print out white. Another way is to write backward on the negative, while another and better plan is to write the name in Indian ink on the surface of the paper before it is printed on. The ink will wash off in the after operations and leave the name in white where the surface of the paper has been protected by the ink.

(6624) B. T. M. asks for information concerning perry. A. A fermented liquid, prepared from pears in the same way as cider is from apples. The drecud pulp must not be allowed to remain long without being pressed. In the cask, perry does not bear changes of temperature so well as cider. It is therefore advisable, if at the end of the succeeding summer it be in sound condition, to bottle it, when it will keep perfectly well. The red, rough-tasted sorts of pears are principally used for making perry. They should be quite ripe, without, however, approaching to mellowness or decay. The best perry contains about 9 per cent of absolute alcohol; ordinary perry, from 5 per cent to 7 per cent.

TO INVENTORS.

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INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

September 17, 1895,

AND EACH BEARING THAT DATE.

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

Table listing various inventions such as Acid and making same, amido-tetrazotic, J. Thiele; Aed, process of and apparatus for making sulphuric acid, N. P. Pratt; Adjustable joint, O. C. White; Air brake, T. J. Hogan; Air brake, railway car, D. Dunn; Asphalt heating and mixing machine, J. C. Charn; Ale, etc., under pressure, apparatus for coloring, G. W. Robinson; Amalgamator and separator, G. A. & D. C. Blinn; Annealing furnace, Prust & Watkins; Anode for electrolytic apparatus, C. Hoepfner; Asphalt heating and mixing machine, J. C. Charn; Atomizing and burning apparatus, fluid fuel, H. C. Fellenbaum; Auger, earth, E. Harper; Autographic register, G. A. Norcross; Automatic gate, D. M. Everton; Baby walker, S. Kell; Bag fastener, N. Brown; Band cutter and feeder, J. L. Barker; Banjo tailpiece, E. Jacoby; Barrel support, H. S. Covey; Bat, ball, A. H. Kennedy; Bath tub, T. J. Reid; Bed bottom, spring, A. E. Beall; Bedclothes holder, R. T. Joy; Beer, apparatus for pasteurization of, W. 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