

RECENTLY PATENTED INVENTIONS.

Railway Appliances.

SECTIONAL JOURNAL BEARING.—William J. Tripp, New York City. This is an improvement on a formerly patented invention of the same inventor, providing a revoluble bearing more specially designed for car wheels and axles, reducing the friction and taking up lateral thrust.

CAR BRAKE.—Russell W. McKee, Clifton, N. J. An emergency brake has been designed by this inventor, adapted for use in connection with other brakes, especially on trucks of trolley and cable cars.

Mechanical.

INDICATOR.—Joseph H. Scott, Aspen, Col. This invention is especially designed to indicate accurately at all times the position of a cage in the shaft of a mine. The indicator consists of a traveling chain belt driven from the hoisting drum through the medium of sprocket wheels.

SHAFT TUG.—Arthur Edwin Hart, Broken Hill, New South Wales. This invention is designed to supply a more durable and ornamental shaft tug than those already in use. It consists of a tug body which is formed of two outside pieces of leather joined and stitched externally, and packed internally with scrap leather.

THRILL COUPLING.—Daniel Parker, Calvert, Texas. This improvement comprises an axle clip having forwardly projecting lugs and a base plate having its front end projecting beneath the lugs and a resilient block whose lower end rests on the base plate between the lugs.

TRANSMITTING GEAR FOR WINDMILLS.—Frank J. Brown, Alfred Allen and Solomon Allen, of Halstead, Kansas. To the driving shaft is secured a pinion. Fastened to the rod which transmits the power to the ground are parallel vertical guideways provided with an elongated internal rack and with an adjustable auxiliary segmental rack at top and bottom.

BUGGY TOP ATTACHMENT.—John D. Axline and James L. Baillie, Shawnee, Ohio. The object of this invention is to provide a new and improved buggy top attachment which is comparatively simple and durable in construction and is arranged to permit of conveniently raising or lowering the buggy top without the operator leaving the seat and without much exertion on the part of the person in the buggy.

PACKING DISPLACER.—Joseph Matthews, New Bedford, Mass. This invention relates to packings contained in glands and abutting on a fixed sleeve supported in a bonnet. The object of this device is to provide an improved packing displacer which is durable and which is arranged to be used without the use of hooks and similar devices.

Agricultural.

CORN HARVESTER.—Henry M. Cox, Palmer, Nebraska. The object of this improved corn harvester is to provide a harvester which, when driven between two rows of corn, will cut the corn from each row and whereby further the cut stalks may be placed upon a shock platform and be bunched or held in a bunched position while the platform is tilted to dump the shock upon the ground and also to provide a means whereby the binding twine will be carried by the machine and be near at hand for use by the operator tying the shocks.

Miscellaneous.

COAL AND GAS BURNING STOVE OR RANGE.—Albert Stecke, of Osnabrück, Germany, assignor to Walter C. Eymann, of Anaheim, Cal. The object of this invention is to provide a cooking stove adapted to be heated by either coal or gas or both. The gas burners are arranged at various openings in the stove, as the ovens, and are provided with means for protecting the same when solid fuel is used.

PAPER FOR BANK NOTES, BONDS, CHECKS, ETC.—David N. Carvalho, New York City. The object of this invention is to provide a safety paper for checks, bonds, etc., so that when any chemicals which will remove ink are applied they will instantly and permanently discolor the paper, producing thereon a stain wherever the chemicals have touched it.

ANIMAL TRAP.—Victor J. Scherb, North Pasadena, Cal. The object of this invention is to produce a trap which is of such open structure that it does not resemble a trap. It has a pair of jaws to catch the animal, the jaws being arranged in such a way that the animal enters between them without fear.

INHALER.—Edmond Souhon, New Orleans, La. This invention relates to an improvement in devices for injecting an anesthetic vapor into an orifice of the head in such a manner that nothing but the vapor can be introduced into the head and which can be operated with one hand and which shall also be cheap and durable.

MAGAZINE OR BOOK HOLDER.—Frank Barwick, of Honolulu, Hawaii. This is a magazine or book holder adapted for use in libraries or public places where magazines may be read but not removed. The device may be quickly adjusted to hold books or papers of varying thicknesses.

TROUGH.—Adam W. Haag, Fleetwood, Pa. The object of this invention is to provide an improved metallic trough which shall be of a light and strong construction without sacrificing durability. It is also less costly to manufacture, and is less liable to be broken in transportation than a cast iron trough.

Designs.

DESIGN FOR A NUT.—John G. Lane and George Lane, Poughkeepsie, N. Y. The leading feature of this design consists in a nut having two parallel ornamental flanges, the lines of which depart laterally from the body at the bottom and near the top respectively and present each a many-armed figure.

NOTE.—Copies of any of the above patents will be furnished by Munn & Co., for 25 cents each. Please send name of the patentee, title of invention, and date of this paper.

NEW BOOKS AND PUBLICATIONS.

A DISCUSSION OF THE PREVAILING THEORIES AND PRACTICES RELATING TO SEWAGE DISPOSAL. By Wynkoop Kiersted. First edition. New York: John Wiley & Sons. 1894. Pp. xiv, 182. Price \$1.25.

The subject treated by our author is one of great importance at the present day, when so many of the smaller towns and villages throughout the country are introducing sewage systems. The work, in a certain sense, is discouraging, as the author points out the faults and weaknesses of the different systems in use and does not devote the book to taking an optimistic view of any one of them.

general gist of the book, as far as we have seen it, and it is characterized by a general advocacy for the adoption of one or the other of the methods or of combined methods according to circumstances.

CLOUDLAND: A STUDY ON THE STRUCTURE AND CHARACTERS OF CLOUDS. By Rev. W. Clement Ley. With numerous colored plates, photographs, charts, and diagrams. London: Edward Stanford. 1894. Pp. xiv, 208. Price \$3.

This very pretty book with colored illustrations, as well as very fine half tones in black and white, treats of the meteorology of the clouds and of the relation of their forms to atmospheric movements, such as cyclones. The ground covered is one certainly not satisfactorily treated up to the present, and it is believed that this work does adequately describe the phenomena it relates to and the atmospheric movements producing such.

THE CENTURY ILLUSTRATED MONTHLY MAGAZINE. May, 1894, to October, 1894. New York: The Century Company. London: T. Fisher Unwin. Vol. XLVIII. New series, Vol. XXVI. Pp. viii, 960. Price \$3.

ST. NICHOLAS: AN ILLUSTRATED MAGAZINE FOR YOUNG PEOPLE. Conducted by Mary Mapes Dodge. Vol. XXI. Part I. November, 1893, to April, 1894, and Part II. May, 1894, to October, 1894. New York: The Century Company. London: T. Fisher Unwin. Pp. viii, 1104. Price \$4.

Among the scientific books of more or less dry aspect which we have to review in this column, the Century and St. Nicholas may seem out of place. We are however glad to have a chance to notice them, to observe the elegance of their make up, and testify to the excellence of the matter they contain.

SCIENTIFIC AMERICAN BUILDING EDITION.

JANUARY, 1895.—(No. 111.)

TABLE OF CONTENTS.

- 1. An elegant plate in colors, showing a Colonial cottage at Williamsbridge, N. Y., recently erected for Chas. H. Love, Esq. Two perspective elevations and floor plans. Cost complete \$4,250. Mr. Arthur C. Longyear, architect, New York City. A pleasing design.
- 2. A Colonial residence at New Rochelle, N. Y., recently erected for J. O. Noakes, Esq., at Iselin's Park. Two perspective elevations and floor plans. Cost \$5,000 complete. Mr. Manly N. Cutter, architect, New York City. An attractive design.
- 3. Colonial residence at Montclair, N. J., recently erected for Sylvester Post, Esq. Two perspective elevations and floor plans. Messrs. W. S. Knowles & A. H. Thorp, architects, New York City. A pleasing design.
- 4. A seaside cottage recently erected for C. H. Manning, Esq., at Kennebunkport, Me. Two perspective elevations and floor plans. A picturesque and unique design after the "New England" lean-to roof order. Mr. H. P. Clark, architect, Boston, Mass.
- 5. A residence at East Orange, N. J., erected at a cost of \$7,000. Architect Mr. W. F. Bower, Newark, N. J. Perspective elevation and floor plans.
- 6. The First Presbyterian Church at Stamford, Conn. Two perspective elevations and ground plan. A design of great architectural beauty, treated in the Romanesque style. Mr. J. C. Cady, architect, New York.
- 7. A residence at Scranton, Pa., erected for E. B. Sturges, Esq., at a cost of \$5,000 complete. Architect Mr. E. G. W. Dietrich, New York City. Perspective elevation and floor plans.
- 8. A summer residence at Cushing's Island, Me., recently erected at a cost of \$3,100 complete. Two perspective elevations and floor plans, also an interior view. Mr. John C. Stevens, architect, Portland, Me. An excellent example for a summer home.
- 9. View of the Armory of the Seventy-first Regiment, New York City. Architect Mr. J. R. Thomas, New York City.
- 10. Perspective view and floor plans of the fourteen story Reliance Building, Chicago.
- 11. Miscellaneous contents.—Buff brick popular.—Ceiling and cornice tinting.—Home ground arrangement of plants, illustrated.—Stone dressing by compressed air, illustrated.—Brick dust mortar.—Interesting ruin of cliff dwellers.—Removing the front wall of a warehouse, with sketches.—Improved wood working machine, illustrated.—Buff brick in New York.—Ceiling paper.—"Decore-o," a new material for decorative purposes, illustrated.—Improved gutter hangers, illustrated.—Draughtsman's supplies, illustrated.

The Scientific American Architects and Builders Edition is issued monthly. \$2.50 a year. Single copies, 25 cents. Forty large quarto pages, equal to about two hundred ordinary book pages; forming, practically, a large and splendid MAGAZINE OF ARCHITECTURE, richly adorned with elegant plates in colors and with fine engravings, illustrating the most interesting examples of Modern Architectural Construction and allied subjects.

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The best book for electricians and beginners in electricity is "Experimental Science," by Geo. M. Hopkins. By mail. \$4; Munn & Co., publishers, 361 Broadway, N. Y.

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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.

(6345) A. L. asks: 1. Where can I get chloride of silver sticks with silver wire fused in? A. Address Queen & Co., Philadelphia, or other of our advertisers. 2. How many cells, one volt each, or say about two volts each, and in what way connected, will light up an incandescent lamp, 50 volts, and if one lamp can be lit up, can more lamps be applied to the same current at the same time, and how many? The lamps should be 16 candle power. A. It depends on the resistance of the cells. Probably 10 will supply a single lamp. 3. If I had enough of Leclanche batteries, could they be used for electric light purposes? I mean so that the batteries would furnish strong enough current to last four or five hours? A. They could, but a very large number would be required and some special device would be required to compensate for polarization, with consequent reduction of current.

(6346) G. T. asks: 1. What is the best kind of carbon to use on an electric telephone lead out of a large pencil or carbon they use in electric lights? A. Carre electric light carbons are very good; if you cannot get these, use common lamp carbons. 2. I am making a telephone, but I have to use two wires; how can I do away with one of these? A. Use a single wire and ground the ends by soldering to gas or water pipes. 3. Which is the best for short distance—a carbon or magneto transmitter? A. The carbon transmitter. 4. Where can I get iron for diaphragms? A. Get ferrotype plate from a photographer.

(6347) C. E. L. writes: 1. How can I get instructions on electrical calculations? A. Consult our advertising columns for correspondence schools. We also recommend Sloane's "Arithmetic of Electricity," which we can supply for \$1 by mail. 2. I am trying to learn how to figure out induction coils to produce certain voltages. If you can give me any light on this, let me know. A. For induction coils divide the number of turns in the secondary by the number in the primary and multiply the original voltage by the factor thus obtained.

(6348) F. E. B. says: 1. I want to make an induction coil for a telephone transmitter. How many layers, and what size wire shall I use, and how long to make the spool? A. Wind the secondary of your induction coil to 80 ohms with No. 35 wire; the primary to 1/4 ohm with No. 20 wire. Make it two inches long on a quarter inch diameter core of pieces of thin iron wire. 2. If I coat the inside of wooden battery cells with common yellow beeswax, will it make them acid proof? A. Coat cells with a mixture of 4 parts resin, 1 part gutta percha, melted together with a little boiled oil. Apply with a hot iron. 3. Why is it that they use finer wire to wind an armature than they do to wind the fields of a dynamo? A. The armature wire works in parallel, and would be much shorter than the field wire, if of same size. A definite ratio of resistances must obtain. 4. I have some small articles that I want to nickel plate. I have four gravity batteries. How can I do it? A. See our SUPPLEMENT, Nos. 310, 436, and many others.