

ENGINEERING INVENTIONS.

A car coupling has been patented by Mr. Milton W. Coddington, of Rutherford, N. J. It is designed as an automatic coupler...

A car coupling has been patented by Mr. George J. Ferguson, of Greenville, Tex. This invention covers a novel construction and arrangement of parts...

A gate valve has been patented by Mr. William Jackson, of Allegheny City, Pa. Combined with a valve casing having guiding recesses...

A lubricator has been patented by Messrs. Thomas Davis and Henry H. McDonough, of East Boston, Mass. It is of that class used to supply oil to the valves of locomotive or hoisting engines...

An automatic continuous rail frog and switch has been patented by Mr. Casper Buhrer, of Cambridge City, Ind. A curved wing rail is elevated above the main track...

A compound locomotive engine has been patented by Messrs. William B. and John A. Johnson, of Wigan, Lancashire Co., Eng. It has two cylinders on each side...

AGRICULTURAL INVENTIONS.

A hay carrier has been patented by Mr. Edwin Woodward, of Stryker, O. The invention consists of a novel construction and combination of various parts...

A corn harvesting and husking machine has been patented by Mr. John A. Hillbert, of Carroll, Iowa. Combined with a stalk cutting mechanism and an open endless stalk carrier...

A corn planter has been patented by Mr. Ernest H. Korsmeyer, of Evansville, Ind. In connection with a suitable frame and various novel features of construction...

A seed planter has likewise been patented by the same inventor, with various novel features of construction and arrangement of parts...

MISCELLANEOUS INVENTIONS.

A funnel stand has been patented by Messrs. James and John C. Colburn, of Altoona, Pa. It is to be placed upon the counters in groceries...

A hub attaching device has been patented by Mr. Walter A. Clark, of Chicago, Ill. It is applicable to the ordinary form of vehicle wheel axle...

A pendant stem for watches has been patented by Mr. Fredrick W. Schimmel, of Murray, Idaho Ter. Combined with an internally threaded pendant is an externally threaded collar...

A camera obscura has been patented by Messrs. Frank Sharpe and Harry E. Blake, of North Adams, Mass. It is designed for the use of artists in taking from small pictures correct outlines...

NEW BOOKS AND PUBLICATIONS.

TABLES and FORMULÆ for RAILROAD ENGINEERS. By B. H. Hardaway. New York: E. & F. N. Spon.

This is a convenient pocket-book, furnished in conjunction with a transitman's blank note-book, intended to present formulæ and tables convenient for the civil engineer...

ACCIDENTS in MINES. By Arthur Robert Sawyer. New York: John Wiley & Sons.

This book relates especially to accidents arising from falls of roofs and sides in mines of the North Staffordshire (England) coal field...

Business and Personal.

The charge for insertion under this head is One Dollar a line for each insertion; about eight words to a line.

The Railroad Gazette, handsomely illustrated, published weekly, at 73 Broadway, New York. Specimen copies free.

Wanted—To sell patent for cigar bundling machine, issued Sept. 7, 1886. Address F. Theo. Karsch, 706 Spring Garden St., Philadelphia, Pa.

Concrete patents for sale. E. L. Ransome, S. F., Cal. For Sale—Patent No. 315,652, cock for house service and street washer connections.

Wanted—Competent draughtsmen, experienced in blast-furnace and steel works construction. State experience. Address G. S. L., P. O. box 773, New York.

Small Metal Goods of every description made to order. Die work, etc. E. C. Ivins, 538 N. 10th St., Phila., Pa.

Machinist Foreman wanted who can handle fifty men to advantage and increase their production by latest improved ways of doing work.

Friction Clutches from \$2.25 on. J. C. Blevney, Newark, N. J.

Haswell's Engineer's Pocket-Book. By Charles H. Haswell, Civil, Marine, and Mechanical Engineer. Giving Tables, Rules, and Formulas pertaining to Mechanics, Mathematics, and Physics...

Woodworking Machinery of all kinds. The Bental & Markedant Co., 116 Fourth St., Hamilton, O.

A Catechism on the Locomotive. By M. N. Forney. With 19 plates, 27 engravings, and 600 pages. \$2.50. Sent on receipt of the price by Munn & Co., 361 Broadway, New York.

Guild & Garrison's Steam Pump Works, Brooklyn, N. Y. Pumps for liquids, air, and gases. New catalogue now ready.

The Knowles Steam Pump Works, 44 Washington St., Boston, and 93 Liberty St., New York, have just issued a new catalogue, in which are many new and improved forms of Pumping Machinery...

Presses & Dies. Ferracute Mach. Co., Bridgeton, N. J. Nickel Plating—Sole manufacturers cast nickel anodes, pure nickel salts, polishing compositions, etc.

Iron Planer, Lathe, Drill, and other machine tools of modern design. New Haven Mfg. Co., New Haven, Conn.

Supplement Catalogue.—Persons in pursuit of information of any special engineering, mechanical, or scientific subject, can have catalogue of contents of the SCIENTIFIC AMERICAN SUPPLEMENT sent to them free.

Planing and Matching Machines. All kinds Wood Working Machinery. C. B. Rogers & Co., Norwich, Conn.

Beach's Improved Pat. Thread Cutting and Diamond Point Lathe Tool. Billings & Spencer Co., Hartford, Ct.

The Improved Hydraulic Jacks, Punches, and Tube Expanders. R. Dudgeon, 24 Columbia St., New York.

Friction Clutch Pulleys. D. Frisbie & Co., N.Y. City.

Tight and Slack Barrel Machinery a specialty. John Greenwood & Co., Rochester, N.Y. See illus. adv., p. 28.

Barrel, Keg, Hogshead, Stave Mach'y. See adv. p. 366.

Catarrh Cured. A clergyman, after years of suffering from that loathsome disease, catarrh, and vainly trying every known remedy, at last found a prescription which completely cured and saved him from death.

For weak lungs, spitting of blood, shortness of breath, consumption, night sweats, and all lingering coughs, Dr. Pierce's "Golden Medical Discovery" is a sovereign remedy.

Iron and Steel Wire, Wire Rope, Wire Rope Tramways. Trenton Iron Company, Trenton, N. J.

Lick Telescope and all smaller sizes built by Warner & Swasey, Cleveland, Ohio.

Wrinkles and Recipes. Compiled from the SCIENTIFIC AMERICAN. A collection of practical suggestions, processes, and directions for the Mechanic, Engineer, Farmer, and Housekeeper.

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...

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.

(1) G. W. T. asks for a proper formula for making solid blue ink, or marking paste, to be used with a brush for stenciling. A. Try the following: Shellac 2 ounces, borax 2 ounces, water 25 ounces...

(2) H. S. McC. asks for a receipt for refining lard. A. The process for purifying lard commercially requires a complicated apparatus. In an ordinary way lard may be purified by heating the melted fat with some sulphuric acid...

(3) J. W. P. asks how to polish amber mouth pieces of cigar holders, which have been scraped with a knife blade. A. By rubbing with whiting and water, and finally with a little olive oil well rubbed with a piece of flannel.

(4) F. J. K. asks for a short receipt for reducing gold of different degrees of fineness to a mass of a single carat throughout. A. Melt the gold in a covered crucible and stir or shake well.

(5) A. T. P. asks: 1. What is the best, or a good, cement for tabulating writing paper? A. Try either of the following: a. The highest grade transparent glue is soaked 10 minutes in water and melted to a thin solution, and 9 lb. of glycerine added to every 50 lb. of glue...

(6) W. J. F. asks for a receipt for cleaning black silk. A. See the "Removal of Stains and Grease Spots," in SCIENTIFIC AMERICAN SUPPLEMENT, No. 158.

(7) H. M. G. asks: 1. Where can I get asphaltum solution, spoken of in the article "Phototypes and Other Photographic Printing Methods for the Printing Press," published in the SCIENTIFIC AMERICAN of July 24, 1886, page 49?

(8) J. G. P. asks for a recipe by which he can cause India ink to remain liquid, keep from spoiling, and be waterproof, in a word, a recipe for waterproof drawing ink. A. We know of no means by which, if any material be added to India ink, it can be made waterproof...

(9) F. K. asks what coloring matter to mix with silicate of soda in order to obtain a white colored paint? A. Try oxide of zinc. It will mix readily with silicate of soda.

(10) E. S. A. S. asks for a receipt for making hair oil that is not injurious to the hair. A. Try the following: Castor oil 1/2 pint, 95 per cent alcohol 1/2 pint, tincture cantharides 1/2 ounce, oil of bergamot 2 drachms. Color a pale pink with alkanet root.

(11) E. W. M. writes: I have made a very good ink as follows: Water 1/2 pint, extract of logwood 60 grains, yellow chromate of potash 5 grains, but after standing a few days it gets rosy, so that I cannot use it. Can you tell me how to overcome the difficulty? A. It is one of the peculiarities of the inks made with chromate of potash.

(12) M. E. W. asks: 1. What kind of oil is best for oiling paper? Oil that is least liable to heat, and which will dry quickest? A. Use a boiled linseed oil that is rebolled with litharge, lead acetate, zinc sulphate, and burnt umber, one ounce of each per gallon.

(13) E. O. E asks the best method of repolishing artificial eyes after being roughened by use. A. The glass can be made smooth by the use of moist emery, after which it is polished with fine colcothar or rouge moistened with water, with rubbers of hat felt, finishing with a little moistened putty powder.

TO INVENTORS.

An experience of forty years, and the preparation of more than one hundred thousand applications for patents at home and abroad, enable us to understand the laws and practice on both continents, and to possess unequalled facilities for procuring patents everywhere.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

November 2, 1886,

AND EACH BEARING THAT DATE.

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

Abdominal protector, L. J. Wing... Alarm. See Burglar alarm. Door alarm. Fire alarm. Ammoniacal liquor, concentrating, C. W. Isbell... Animal trap, J. Kemp... Auger, earth, C. A. F. Peters... Axle and hub, vehicle, J. N. Harris... Axle boxes, dust guard for car, D. S. Stimson... Axle lubricator, J. N. Harris... Axle skeins, making, R. Gracey... Bar. See Folding clothes bar. Bath rubber, J. B. Loughton... Beading tool, O. E. Hildebrand... Belting, B. L. Stowe... Bench dog, F. M. Fairchild... Bicycle, Gibbons & Meneely... Blackboard and map support, combined, H. E. Hayes... Blasting earth, H. H. Bourne... Boa holder, S. Simmons... Board. See Wash board. Boiler. See Steam boiler. Boneblack drier, S. M. Lillie... Boot or shoe, J. J. Snyder... Boots or shoes, half sole for, D. Banks... Boots or shoes, inner sole for, H. Buckingham... Boots or shoes, revolving pad for cleaning the soles of, F. P. Buzzell... Bottle cleaner, R. Robinson... Bottle stopper, L. Atwood... Bottle stopper, Hentschke & Brown... Bottles, alarm for poison, M. Fulda... Box. See Change and fare box. Fare box. Brake. See Car brake. Brake rod handle, J. A. Brill... Brick machine, Koch & Then... Brick mould, T. W. Corby... Bristle bunching machine, A. C. Estabrook... Brooder, E. S. Packard... Broom shield, S. Kellogg... Brush, commutator, C. J. Van Depoele... Brush, fountain or hydraulic, T. F. Seery... Bucket, conveyer, H. W. Avery... Buckles, locking device for, S. L. Waldman... Buildings, combined land anchor and lightning conductor for, G. Stites... Burglar alarm, J. W. Hoffman... Button, C. A. Penning... Cable grip, C. A. Howe... Car brake, automatic, A. P. Massey... Car coupling, J. A. Brill... Car coupling, M. W. Coddington... Car coupling, J. H. Earles... Car coupling, G. J. Ferguson... Car coupling, P. Frank... Car coupling, W. V. Reed... Car coupling, J. P. Wilson... Car seat, G. Harvey... Car spring, R. Vose... Car, stock, B. F. Williams... Cars, draw hook for street, A. Rapp... Carriage, child's, O. Unsicker... Carriage top, F. C. Zanetti... Carrier. See Hay carrier. Cartridge loading machine, W. Hill... Cartridge shell trimming machine, C. A. E. Dimon... Cartridge shells, apparatus for reloading, G. G. Greenough... Chain, G. W. McGill... Chair. See Opera chair. Chair and cot, convertible, W. H. Phillips... Chair, convertible, H. H. De Pew... Change and fare box, automatic, Mangan & Wilson... Chopper. See Cotton chopper. Cigar bunching machine, F. C. Smalstig... Cigar cutter, G. R. Pohl... Circuit closer, H. B. Cox... Clamp. See Trousers clamp. Cleaner. See Bottle cleaner. Clock, electric alarm, Derrick & Brott... Clotheline, frame, C. L. Williams... Coffin, Crane & Jewett... Coffin handle, H. W. Morgan... Color or ink pad, J. B. Loughton... Conveyer, Conger & Henderson... Cotton chopper and cultivator, J. K. P. Shelton... Cotton opener, R. Kitson... Coupling. See Car coupling. Thill coupling. Crystals, composition to attract dissolved, W. Kornacher... Cuff hasp, J. W. Hollingsworth... Cultivator, G. P. Heberling... Cultivator, P. Kaiser... Cultivator and pulverizer, H. F. Jones... Cutter. See Cigar cutter. Heel lifter. Meat cutter. Dental engine hand piece, A. Weber... Ditching machine, J. D. McAnlis... Doll, speaking and singing, W. J. Lynd... Door alarm, N. J. Busby... Door hanger, W. C. Wahl... Door lock, sliding, C. J. Whitmore...