

ENGINEERING INVENTIONS.

A boiler flue has been patented by Mr. David Purves, of Ferro Dene, Green Lane, North Dulwich, Surrey County, England. The plate is formed with thickened bands on one side and channels on the opposite side, the thickened bands being rolled into stiffened ribs, making a boiler flue with a band or rib formed integrally therewith.

A car coupling has been patented by Mr. Jonathan H. Davis, of Natchez, Miss. The draw-head has a central chamber, with latches pivoted each side the link opening, having engaging curved arms, in connection with a spring-actuated pawl, and other novel features, making a coupler with which cars can be readily coupled upon a curve or with an opposing coupler of unequal height.

A car frame has been patented by Mr. Peter Matthews, of Escanaba, Mich. This invention relates to locomotive tender frames, and provides a construction designed to effectively resist longitudinal transverse strains of both tension and concussion, while the timbers will be strongly jointed without having to mortise or cut away the main longitudinal timbers of the frame.

A submarine excavator has been patented by Messrs. John and Peter Wagner, of Atchison, Kansas. The buckets are made to be used inside of a cylinder, and to be hung in such manner that they may be reversed upon their hinges to present either a plane edge or a toothed edge to penetrate the material to be excavated, the invention also providing a simple construction and combination of parts for opening and closing the buckets.

AGRICULTURAL INVENTIONS.

A corn planter and check rower has been patented by Messrs. John W. McMahan and Edwin S. Whittemore, of Huntingdale, Mo. This invention covers a novel construction and arrangement of various parts and details designed to afford a machine that will be simple and durable and very effective in operation.

A grain separator has been patented by Mr. William C. Buchanan, of Belleville, Ill. The construction is such that the rake or picker fingers are advanced at different rates of speed through paths of different length, so that the straw and grain acted upon are more fully torn apart, the invention being an improvement on a former patented invention of the same inventor and another.

MISCELLANEOUS INVENTIONS.

A top prop has been patented by Mr. William R. Moore, of Unionville, Pa. This invention provides an improved means for securing the bow iron to the seat iron or top prop stud, to provide an anti-rattler for carriages and top buggies.

A pocket hand brush has been patented by Mr. Charles B. Schroeder, of Brooklyn, N. Y. It consists of a hollow case provided with a silk hat pad or pads, and two brushes of different styles sliding in opposite ends of the case, making a compact and portable combined clothes and hat brush.

A fly screen has been patented by Mr. Julius Neifing, of Crown Point, Ind. It is for a window or other opening of a room, and is of such construction that the screen serves to exclude flies from entering an apartment, while also providing for the exit of any that may be in the room.

A dumping wagon has been patented by Mr. Thomas Hill, of Jersey City, N. J. This invention relates to carts or wagons for common road use, having shafts to adapt them to horse or cattle draught, and the bodies supported by side pivots or journals for tilting them, the invention covering various novel features of construction and combinations of parts.

A sewerage system for buildings has been patented by Mr. Charles H. Shepherd, of New York City. This invention relates to devices for securing the ventilation of the sewerage receiver, and to electro-magnetic appliances for releasing the discharge valve of the sewer pipe, covering various novel features of construction and arrangement of parts.

A composition for mineral wool has been patented by Mr. Richard D. A. Parrott, of Greenwood Iron Works, N. Y. It consists of one-third felspar and two-thirds lime, combined by fusion and discharged in a small stream from a furnace, when it is subjected to a jet of steam or compressed air to blow it out into a fibrous mass.

A binder has been patented by Mr. Nehemiah Hawkins, of Brooklyn, N. Y. Combined with a pair of apertured covers and a binding cord is a flexible, transversely slotted back and retaining strips formed with projections through which the binding cord passes, with other novel features, making a ready binder for manuscripts, newspapers, sheet music, etc.

A machine for ironing linen fabrics or other materials has been patented by Mr. Henri C. Chasles, of Paris, France. Combined with a chamber which has perforations in its polished ironing side, this side working in sliding contact with the fabric to be ironed, is a vacuum-producing device connected with the chamber, whereby vapor is removed and the fabric left completely dry.

A car bell has been patented by Mr. William H. Hudson, of New York City. This invention covers a novel combination and arrangement of parts, whereby the car bell may be rung by pressing upon a foot piece in the platform, the ringing being stopped when the pressure is removed, and the invention is an improvement on a former patented invention of the same inventor.

A circular sawing machine has been patented by Mr. David Arkin, of Manistee, Mich. This invention relates to the construction and arrangement of the carriage of a shingle-jointing machine, and also to the arrangement of a novel system of safety attachments or guards to protect the sawyer, the invention covering certain novel constructions and combinations of parts.

A tube expander has been patented by Messrs. Jacob Nebergall and Charles E. Schofield, of Waller, Ohio. Combined with a slotted tapering plug are two oppositely arranged jaws having projections for forming a bead in the tube inside of the tube sheet, and for turning the flange on the end of the tube outside of the tube sheet, with a cam lever for simultaneously operating the two jaws.

A combination tool has been patented by Mr. William H. Mitchell, of Horse Cave, Ky. It is an implement combining in itself a monkey wrench and pipe cutter and tongs, designed to be adapted for use upon varying sizes of pipe and fittings, and which may be changed from tongs to cutter or cutter to tongs, while not being any more bulky than either of the single implements it takes the place of.

A folding paper box has been patented by Mr. Joseph T. Crow, of Jersey City, N. J. The box body consists of an inner part creased and folded to form the bottom, side, and ends, with a rib about the bottom, and a frame constituting the outer walls and paste flap, the invention being more especially applicable in making shallow paper boxes, of which the blanks may be stored in small space.

A hair curler has been patented by Mr. John T. Stansbury, of Elkhart, Ind. A heating iron or core is combined with an outer curling shell which has means for taking hold of the hair, and is adapted to revolve, a spring being so arranged that the curling shell may be wound up and held under tension, and when the spring is liberated the shell will revolve and automatically curl the hair.

A washing machine has been patented by Messrs. John P. Caldwell and Joseph C. Wolfe, of Gainesville, Ga. This invention provides for rapidly operating a pounder in a suitable tub containing the washing fluid and clothes, and at the same time causing a rapid circulation of air through the contents of the tub, while the driving power may also be utilized to operate the dasher of a churn or do other similar work.

A pistol or mace holder has been patented by Mr. James P. Wintz, of Charleston, West Va. This invention covers an attachment to a belt consisting of a support and clip, one end of the latter being spring-actuated, and curved to fit a police club, pistol, or other article, the arrangement being such that the object secured can be removed laterally as well as in the ordinary manner, or it can be pushed back at the handle end and thus freed from its support.

SCIENTIFIC AMERICAN BUILDING EDITION.

NOVEMBER NUMBER.

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1. Elegant Plate in Colors of Three Frame City Dwellings, costing Two Thousand Five Hundred Dollars each, with floor plans, sheet of details, etc.
2. Plate in Colors of a Frame Dwelling, situated at Belleville, N. J., costing Two Thousand Five Hundred Dollars, with full specifications, floor plans, sheet of details, etc.
3. Page Engraving of Holbrook Hall, New York City, an Eight Story Apartment House, lately condemned for dry rot.
4. Plans for a School House costing between Eight and Nine Thousand Dollars.
5. Half page Engraving of a Residence at Battenhall Park, Worcester, England.
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12. A Thirty-five Hundred Dollar Dwelling. Perspective and floor plans.
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19. Miscellaneous Contents: Putting Water Heating Pipes in Cook Stoves, illustrated.—Cedar Shingles.—The Trade Unions.—Some Data on Steam Heating.—Plastering.—The Rumbling Sound in Closed Carriages, how prevented.—Pipes and Joints.—Jack Frost in Water Pipes.—The Effect of Freezing on Cement.—The Wood of Thuja Gigantea.—A Dutch Interior.—Spontaneous Combustion.—Cement Apparatus.—How to Repair Stone Steps.—Insulated Air Coverings for Steam, Water, and Gas Pipes, illustrated.—The New Era Radiator, illustrated.—Shingle Stains.—Effects of Snow on Marble.—"Alert" Hand Force Pump, illustrated.

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Special.

THE HEROISM OF WOMEN.

The number is legion who are chronic invalids, and are extremely puzzled to tell what ails them. They are miserable, extremely miserable. Especially may this be said of a very large class of females. They have a heavy, weighty feeling, as if being dragged to the earth; a misery in their back; an all-gone feeling. Scarcely able to put one foot before another, and yet seeing the work must be done, they go on, a tread-mill life from early morn till late at night, keeping about from the mere force of will. Arising in the morning but little refreshed by the few hours of broken sleep; no one but themselves knowing that incessant aches and pains had robbed them of that much needed rest.

The following is a brief statement taken from one of many letters received of similar import:

"CULPEPER, Va., May 31, 1886.

"DRS. STARKEY & PALEN: I wrote you my symptoms one year ago last February, when I was taking the Compound Oxygen, then given me by a friend, but I was so very weak and nervous at that time I doubt if it was sufficiently legible.

"My doctor treated me for catarrhal consumption, and gave me all kinds of medicines for suppression, but they only seemed to increase my pain. At last he concluded there was some organic derangement, and gave me surgical treatment, which instead of relieving me, increased my agony, producing inflammation that reached the brain, making me utterly sleepless and delirious for months.

"One day a friend came to see me who had a part of a Home Treatment of Compound Oxygen at her house, and persuaded me to try it. She sent it to me, and I commenced using it, but I must say with very little faith. After using it about a week my nose bled very profusely, and I felt great relief from the brain pressure that had kept me crazed for months. I began to sleep. My mind came back to me, though my doctor had said if I ever got better, or lived, I would never recover my mind. He seemed surprised that I had. He recommended surgical treatment, but I had suffered so much by that from him I would not trust it again. This was about a year ago, and I was an invalid until a month or so since, when I commenced to drag around a little, becoming so tired I could not rest. But since using Compound Oxygen I can rest and walk about, and the cold I had when the Compound Oxygen arrived soon disappeared. I am stronger and better than for years. Have resumed my old Sunday-school class, and played on the organ last Sunday."

There are very many people interested in the treatment which has done so much for this lady in Virginia. If you wish fuller information, send to Drs. Starkey & Palen, 1529 Arch Street, Philadelphia, Pa., for their treatise, which is sent free.

Business and Personal.

The charge for insertion under this head is One Dollar a line for each insertion; about eight words to a line. Advertisements must be received at publication office as early as Thursday morning to appear in next issue.

For Sale—A \$50.00 lathe, with extra attachments, for \$30.00. B. Mitchell, 301 1/2 Second St., Jersey City, N. J.

Twenty per cent saving and a large increase of steam supply. U. S. Rocking Grate Bar Co., Chicago.

A good agency wanted, mechanical or process. Muller & Sieghortner, 319 Broadway, room 10, New York.

Drawings for machinery and factories, including buildings. J. H. Muller, Mech. and Civ. Engineer, 319 Broadway, room 10, New York.

Telegraph Instruments cheap. W. E. Lewis, Corry, Pa.

Wanted—New invention or novelty for the English market by a first-class London house, having a large connection among shippers, warehousemen, drapers, etc. Address "Everclean," 100 Wood St., London, England.

Lacquers.—Japan, Brilliantine, Brassoline, Opaline, and other lacquers and special varnishes. Brilliant, hard, durable. Send for catalogue. The Fred'k Cram Chemical Co., Short Hills, N. J. N. Y. agent, Horace Van Sands, 733 Broadway.

Lathes for cutting irregular forms a specialty. See ad. p. 285.

For the best and cheapest 4 Horse Engine, address Peter Walrath, Chittenango, N. Y.

Perforated metals of all kinds for all purposes. The Robert Atchison Perforated Metal Co., Chicago, Ill.

For the latest improved diamond prospecting drills, address the M. C. Bullock Mfg. Co., 138 Jackson St., Chicago, Ill.

The Railroad Gazette, handsomely illustrated, published weekly, at 73 Broadway, New York. Specimen copies free. Send for catalogue of Railroad books.

The Knowles Steam Pump Works, 113 Federal 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 of the single and duplex, steam and power type. This catalogue will be mailed free of charge on application.

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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. THE SUPPLEMENT contains lengthy articles embracing the whole range of engineering, mechanics, and physical science. Address Munn & Co., Publishers, New York.

The Holly Manufacturing Co., of Lockport, N. Y., will send their pamphlet, describing water works machinery, and containing reports of tests, on application. Curtis Pressure Regulator and Steam Trap. See p. 301.

Power, 113 Liberty St., N. Y. \$1 per yr. Samples free. Gardner & Miller's Patent Belt Clamps, 8 sizes. Billings & Spencer Co., Hartford, Conn.

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

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For best leather belting and lace leather, including Hercules, see Page Belting Co.'s adv. p. 318.

We are sole manufacturers of the Fibrous Asbestos Removable Pipe and Boiler Coverings. We make pure asbestos goods of all kinds. The Chalmers-Spence Co., 419 and 421 East 8th Street, New York.

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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. A synopsis of the patent laws of the United States and all foreign countries may be had on application, and persons contemplating the securing of patents, either at home or abroad, are invited to write to this office for prices, which are low, in accordance with the times and our extensive facilities for conducting the business. Address MUNN & CO., office SCIENTIFIC AMERICAN, 361 Broadway, New York.

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