

ENGINEERING INVENTIONS.

An apparatus for raising water has been patented by Mr. Thomas Arthur, of Bangor, Pa.

A car coupling has been patented by Mr. Luther B. Owen, of Cedartown, Ga.

A driving belt has been patented by Mr. Gilman Jaquith, of Maysville, Ky.

A compensator for wire ropes or cables has been patented by Mr. Richard B. Ireland, of Trenton, N. J.

AGRICULTURAL INVENTIONS.

A plow has been patented by Mr. Donald M. McAlpine, of Savannah, Ga.

A harrow has been patented by Mr. Phillip Hense, of Dyersville, Iowa.

A combined gang and subsoil plow has been patented by Mr. William S. Haven, of Shreveport, La.

A combined seed planter and cultivator has been patented by Mr. Thomas B. Shannon, of Huntsville, Tex.

An attachment for cultivators has been patented by Mr. Frederick Albrecht, of Ohio, Ill.

A plow attachment has been patented by Mr. William P. Brown, of Zanesville, O.

MISCELLANEOUS INVENTIONS.

A metallic cap for corks has been patented by Mr. Alfred L. Bernardin, of Evansville, Ind.

A machine for cutting glass has been patented by Mr. Price C. Claffin, of Stevens Point, Wis.

A churn power has been patented by Mr. Fredrick F. Williams, of Salado, Texas.

A combined folding chair and bath tub has been patented by Scott J. Beach and Sarah A. Beach, of Norfolk, Conn.

A lady's bicycle has been patented by Mr. Louis P. Valiquet, of New York city.

A tile ditcher has been patented by Mr. Oscar Booth, of Creston, Iowa.

A fire escape has been patented by Mr. Augustus H. Terwilliger, of Newburg, N. Y.

A wedge shaped air balloon has been patented by Mr. George Wellner, of Brunn, Austria-Hungary.

cone shaped projection on its belly to which the car is fastened, the balloon being calculated to ascend and descend obliquely.

A bag fastener and holder has been patented by Mr. John W. Rickart, of Quincy, Ill.

A device for suspending hogs has been patented by Mr. William G. Reed, of Avon, Ind.

An apparatus for tanning hides has been patented by Mr. Emile de Solminiac, of Lorient, France.

A dynamo electric machine has been patented by Mr. Elisha B. Cutton, of Kingsbridge, N. Y.

A wheel for vehicles has been patented by Mr. Alonzo E. Butler, of Leipsic, O.

A still for the manufacture of brandy has been patented by Mr. John M. Foy, of San Francisco, Cal.

A device for sharpening machine knives has been patented by Mr. Robert O. Owen, of Lynchburg, Va.

An apparatus for making Roman candles has been patented by Messrs. Otto A. Minch, Hermann Minch, and Frank Minch, of Newark, N. J.

A churning device has been patented by Mr. Alexander Cairns, of Mount Hope, Wis.

A bone black drier has been patented by Mr. Edward P. Eastwick, of New York city.

A marine record preserver has been patented by Mr. Duncan Sinclair, of Wai-Nui Omata, Wellington, New Zealand.

A polarized telegraphic relay has been patented by Mr. Wirt B. Harvey, of Memphis, Tenn.

An axle gauge has been patented by Mr. Hector McQuarry, of Allandale, Ontario, Canada.

A printing press has been patented by Mr. Thomas Forknall, of Manchester, Eng.

A photographic camera has been patented by Mr. Walter Clark, of New York city.

A device for holding and exposing the sensitive plate, a focusing glass in the top or side of the camera box, a reflector, adjustable into or out of line with the lens, for throwing the image on the focusing glass and afterward exposing the sensitive plate, with other novel features.

Special.

LIFE IN SIAM.

In 1841 a young man, named Jno. H. Chandler, felt it to be his duty to go to Burmah and join in the work of Baptist missions in that country.

One of the almost inevitable results of mission work is the breaking down of the health of those engaged in it. And this is especially the case in such a debilitating climate as that of Siam.

"After coming to this country in 1876 I returned to Siam with somewhat improved health, intending to stay six years. Such was my condition, however, and that of my wife, that we were compelled to return in three. I was a complete wreck."

"While thus a sufferer, the Rev. Dr. MacFarland, a Presbyterian missionary at Bangkok, called my attention to 'Compound Oxygen.' He had tried it for indigestion and general debility, and had found it very beneficial."

"To what extent are you able to perform such labors as you formerly could?" was asked. "You may judge of my strength and health when I tell you that I was with the Siamese Embassy in New York and Washington a few months ago, traveling with them and going about as freely and energetically as any of them."

"From my early girlhood I had been ambitious to attain the highest degree of knowledge and of usefulness. I wanted to go as a missionary to some heathen country, and labored to be prepared for it."

"On arriving here I at once sought Starkey & Palen, procured a home treatment and faithfully followed the directions. Has it done me good? Look at me now. I am restored to my old good health. There could have been no severer test than in my case."

In concluding a very pleasant conversation, the Rev. Mr. Chandler and his excellent lady both remarked that with gratitude to God for their restoration, they are at all times free to speak of what Drs. Starkey & Palen

have done for them with Compound Oxygen. Considering the remedy completely adapted to their cases and to similar ones, they have no hesitation in making their recovery known, for the benefit of the great army of invalids who are seeking relief and who may be happy in thus finding it.

A "Treatise on Compound Oxygen," containing a history of the discovery and mode of action of this remarkable curative agent, and a large record of surprising cures in Consumption, Catarrh, Neuralgia, Bronchitis, Asthma, etc., and a wide range of diseases, will be sent free. Address Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia.

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 at least as Thursday morning to appear in next issue.

Steam Heater.—Wanted, party or parties to sell the American Steam Heater in N. Y. and Eastern States. State Rights for sale. Description of Heater found in SCIENTIFIC AMERICAN, Sept. 6, page 147. Address H. Arden, 35 Vesey Street, New York.

Inventors or dealers having patented articles, for physicians' use, and desiring to have them introduced directly, address Dr. W. Molesworth, 69 Gold St., New York.

\$15 Telephone Magneto Bells. W. E. Lewis, Corry, Pa. Signs.—How to prevent boards from splitting, bulging, and opening at the joints, free. Address J. G. Jory, Baltimore, Md.

Cheap, cheap, cheap. Best Popular Science Works. J. Fitzgerald, 20 Lafayette Place, N. Y. Catalogue free.

A first-class mechanic, with good executive capacity, with some of his own inventions of articles that can be sold readily to hardware or house-furnishing goods trade, can learn of an advantageous opening as partner and superintendent of another established business having more power, machinery, and room than needed at present, by addressing Box 158, Buffalo, N. Y.

Experimental Machinery Perfected, models, patterns, etc. Tolhurst Machine Works, Troy, N. Y.

Wanted.—To correspond with works, corporations and cities desiring first-class, and at the same time low cost, electric light plants, with or without engines and boilers. "S. C. Forsyth Machine Company, Manchester, N. H."

Brush Electric Arc Lights and Storage Batteries. Twenty thousand Arc Lights already sold. Our largest machine gives 65 Arc Lights with 45 horse power. Our Storage Battery is the only practical one in the market. Brush Electric Co., Cleveland, O.

The Cyclone Steam Flue Cleaner on 30 days' trial to reliable parties. Crescent Mfg. Co., Cleveland, O.

For Steam and Power Pumping Machinery of Single and Duplex Pattern, embracing boiler feed, fire and low pressure pumps, independent condensing outfits, vacuum, hydraulic, artesian, and deep well pumps, air compressors, address Geo. F. Blake Mfg. Co., 4 Washington St., Boston; 97 Liberty St., N. Y. Send for Catalogue.

Quinn's device for stopping leaks in boiler tubes. Address S. M. Co., South Newmarket, N. H.

Mills, Engines, and Boilers for all purposes and of every description. Send for circulars. Newell Universal Mill Co., 10 Barclay Street, N. Y.

Wanted.—Patented articles or machinery to manufacture and introduce. Lexington Mfg. Co., Lexington, Ky. "How to Keep Boilers Clean." Book sent free by James F. Hotchkiss, 88 John St., New York.

Stationary, Marine, Portable, and Locomotive Boilers a specialty. Lake Erie Boiler Works, Buffalo, N. Y.

Presses & Dies, Ferracute Mach. Co., Bridgeton, N. J.

For Power & Economy, Aicott's Turbine, Mt. Holly, N. J. The Hyatt filters and methods guaranteed to render all kinds of turbid water pure and sparkling at economical cost. The Newark Filtering Co., Newark, N. J.

Steam Boilers, Rotary Bleachers, Wrought Iron Turn Tables, Plate Iron Work. Tippet & Wood, Easton, Pa. Send for Monthly Machinery List to the George Place Machinery Company, 121 Chambers and 103 Reade Streets, New York.

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

If an invention has not been patented in the United States for more than one year, it may still be patented in Canada. Cost for Canadian patent, \$40. Various other foreign patents may also be obtained. For instructions address Munn & Co., SCIENTIFIC AMERICAN Patent agency, 361 Broadway, New York.

Guild & Garrison's Steam Pump Works, Brooklyn, N. Y. Steam Pumping Machinery of every description. Send for catalogue.

Nickel Plating.—Sole manufacturers cast nickel anodes, pure nickel salts, polishing compositions, etc. Complete outfit for plating, etc. Hanson & Van Winkle, Newark, N. J., and 92 and 94 Liberty St., New York.

Supplement Catalogue.—Persons in pursuit of information on 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.

Machinery for Light Manufacturing, on hand and built to order. E. E. Garvin & Co., 139 Center St., N. Y. C. B. Rogers & Co., Norwich, Conn., Wood Working Machinery of every kind. See adv., page 350.

Curtis Pressure Regulator and Steam Trap. See p. 390. Woodwork's Mach'y. Rollstone Mach. Co. Adv., p. 390. Drop Forgings. Billings & Spencer Co., Hartford, Conn. Brass & Copper in sheets, wire & blanks. See ad., p. 406.

The Chester Steel Castings Co., office 407 Library St., Philadelphia, Pa., can prove by 20,000 Crank Shafts and 15,000 Gear Wheels, now in use, the superiority of their Castings over all others. Circular and price list free.

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

Hoisting Engines. D. Frisbie & Co., Philadelphia, Pa. Tight and Slack Barrel Machinery a specialty. John Greenwood & Co., Rochester, N. Y. See illus. adv. p. 404.

Cotton Belling, three, four, five, and six ply, for elevator and driving belts. Greene, Tweed & Co., New York.