

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.

Chard's Extra Heavy Machinery Oil. Chard's Anti-Corrosive Cylinder Oil. Chard's Patent Lubricants and Gear Grease. R. J. Chard, Sole Proprietor, 6 Burling Slip, New York.

Now is the best season of the year for painting dwellings, barns, fences, etc., on account of freedom from flies, dust, summer heat, and showers.

LAKE VIEW HOUSE, LIVONIA, N. Y., Feb. 9, 1880. H. W. Johns Mfg. Co., 87 Maiden Lane, New York.

DEAR SIR: We have used your Asbestos Liquid Paint on our buildings, and find one coat goes as far and covers as well as two coats of lead and oil.

For best Indirect Radiators, see adv., page 268. An experienced Die Sinker and Tool Maker, able to build light machinery, and invent if required, is open for an engagement.

Wanted—The address of all Parties interested in the Silk Business, in all its branches. E. Side, B'klyn, N. Y.

Wanted—Second-hand, fifty-inch Lathe, and a large Planer. Perkins & Co., Grand Rapids, Mich.

A profitable business for a person with a small capital. Buy a Stereopticon or Magic Lantern, and an interesting assortment of views.

The E. Stebbins Manuf'g Co. (Brightwood, P. O.), Springfield, Mass., are prepared to furnish all kinds of Brass and Composition Castings at short notice.

4 x 6 Engine and Boiler for sale. Geo. F. Shedd, Waltham, Mass.

The "1880" Lace Cutter by mail for 50 cts.; discount to the trade. Sterling Elliott, 262 Dover St., Boston, Mass.

Hardware Novelty.—Entire U. S. Patent for sale cheap. Address F. A. Heberline, Knox Clarion Co., Pa.

For Sale, on account of increase of power, one 24 x 48 Corliss Engine, with three boilers and equipment complete.

Improved Rock Drills and Air Compressors. Illustrated catalogues and information gladly furnished.

The Eureka Mowing Machine now is acknowledged as the best in the market. It has taken the first premium in nearly every State Fair this year.

The Boomer & Boschert Press Co. have in daily operation at the Am. Inst. Fair, a complete cider mill and cider jelly manufactory.

Packing once tried always used. Phoenix Packing from 1-16 up in spoons or on coils.

Gas Machines.—Be sure that you never buy one until you have circulars from Terrill's Underground Meter Gas Machine, 39 Dey St., New York.

Experts in Patent Causes and Mechanical Counsel. Park Benjamin & Bro., 50 Astor House, New York.

Malleable and Gray Iron Castings, all descriptions, by Erie Malleable Iron Company, limited, Erie, Pa.

Sweetland & Co., 126 Union St., New Haven, Conn., manufacture the Sweetland Combination Chuck.

Power, Foot, and Hand Presses for Metal Workers. Lowest prices. Peerless Punch & Shear Co., 52 Dey St., N. Y.

The Brown Automatic Cut-off Engine; unexcelled for workmanship, economy, and durability. Write for information. C. H. Brown & Co., Fitchburg, Mass.

Recipes and Information on all Industrial Processes. Park Benjamin's Expert Office, 50 Astor House, N. Y.

For the best Stave, Barrel, Keg, and Hogshead Machinery, address H. A. Crossley, Cleveland, Ohio.

Best Oak Tanned Leather Belting. Wm. F. Forepaugh, Jr., & Bros., 531 Jefferson St., Philadelphia, Pa.

Caution to the Public.—The world-wide reputation of H. W. Johns' patent Asbestos Steam Pipe and Boiler Coverings has induced unscrupulous persons to infringe our rights, and also to sell and apply worthless articles.

Wright's Patent Steam Engine, with automatic cut off. The best engine made. For prices, address William Wright, Manufacturer, Newburgh, N. Y.

National Institute of Steam and Mechanical Engineering, Bridgeport, Conn. Blast Furnace Construction and Management.

Wm. Sellers & Co., Phila., have introduced a new injector, worked by a single motion of a lever.

Reed's Sectional Covering for steam surfaces; any one can apply it; can be removed and replaced without injury.

Machine Knives for Wood-working Machinery, Book Binders, and Paper Mills. Also manufacturers of Solomon's Parallel Vise, Taylor, Stiles & Co., Riegelsville, N. J.

Blake "Lion and Eagle" Imp'd Crusher. See p. 269. Apply to J. H. Blaisdell for all kinds of Wood and Iron Working Machinery.

Houston's Sash Dovetailing Machine. See adv., p. 270. The Chester Steel Castings Co., office 407 Library St., Philadelphia, Pa.

Brass & Copper in sheets, wire & blanks. See adv., p. 270. Air Compressors. Clayton Stm. Pump Wks, B'klyn, N. Y.

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

The "Fitchburg" Automatic Cut-off Horizontal Engines. The "Haskins" Engines and Boilers. Send for pamphlet.

Eagle Anvils, 10 cents per pound. Fully warranted. Gear Wheels for Models (list free); experimental and model work, dies and punches, metal cutting, manufacturing, etc.

The best Truss ever used. Send for descriptive circular to N. Y. Elastic Truss Co., 683 Broadway, New York.

For Shafts, Pulleys, or Hangers, call and see stock kept at 79 Liberty St., N. Y. Wm. Sellers & Co.

Ore Breaker, Crusher, and Pulverizer. Smaller sizes run by horse power. See p. 269. Totten & Co., Pittsburg.

Vacuum Cylinder Oils. See adv., page 269. Lightning Screw Plates and Labor-saving Tools, p. 269.

Names and addresses of correspondents will not be given to inquirers. We renew our request that correspondents, in referring to former answers or articles, will be kind enough to name the date of the paper and the page, or the number of the question.

Correspondents whose inquiries do not appear after a reasonable time should repeat them. If not then published, they may conclude that, for good reasons, the Editor declines them.

Persons desiring special information which is purely of a personal character, and not of general interest, should remit from \$1 to \$5, according to the subject, as we cannot be expected to spend time and labor to obtain such information without remuneration.

Any numbers of the SCIENTIFIC AMERICAN SUPPLEMENT referred to in these columns may be had at this office. Price 10 cents each.

(1) H. A. asks: How can I fix a mirror from which some of the quicksilver has been scratched? A. Remove the silverying from the glass around the scratch so that the clear space will be about a quarter of an inch wide. Thoroughly clean the clear space with a clean cloth and alcohol.

English Patents Issued to Americans. From September 28 to October 1, 1880, inclusive. Blacking brush, E. L. Wood, Eastland City, Texas.

Electricity, apparatus for generating, E. Thomson, New Britain, Conn. Electricity, conductors for, T. A. Edison, Menlo Park, N. J.

Electro-magnetic railways, T. A. Edison, Menlo Park, N. J. Engines for locomotives, F. M. Stevens et al., Concord, N. H.

Hoisting machinery, A. E. Brown, Cleveland, Ohio.

Magneto-electric machine, T. A. Edison, Menlo Park, N. J. Mail bag, C. J. Becktel et al., Muncie, Ind.

INDEX OF INVENTIONS FOR WHICH Letters Patent of the United States were Granted in the Week Ending September 28, 1880, AND EACH BEARING THAT DATE.

[Those marked (r) are reissued patents.] A printed copy of the specification and drawing of any patent in the annexed list, also of any patent issued since 1866, will be furnished from this office for one dollar.

Acid from sludge acid, recovering sulphuric, E. Clark, 232,685. Air engine, E. Thuemmler, 232,690. Annunciator for fire alarm telegraphs, F. W. Griswold, 232,707.

Augers, manufacture of mining, D. W. Siprell, 232,767. Axle box, car, W. G. Mitchell, 232,743. Ball trap, Kerstetter & Fagley, 232,728.

Basket, folding, H. H. Cammann, 232,680. Basket, metallic, J. B. F. Page, 232,752. Bath chamber, portable, J. N. Lee, 232,731.

Bed bottom, spring, J. M. Stark, 232,657. Bedstead, folding, S. S. Burr (r), 9,393. Blasting, R. F. L. Hallock, 232,640.

Boot and shoe lining, A. M. Daniels, 232,694. Bosom board, H. S. Foster, 232,606. Bottle stopper, P. Miles, 232,613.

Brick machine, rotary, Smith & Glaze, 232,760. Brush for cleaning castings, J. H. Davis, 232,600. Brush, helical wire, F. F. Field, 232,636.

Bucket bottom, well, Johnson & Eccleston, 232,726. Bumper, spring, R. W. Irwin, 232,723. Bung for beer kegs, faucet, C. H. Shaw, 232,653.

Burglar alarms, indicator for electric, A. Bradford, 232,591. Calendar, F. Ratcliff (r), 9,390. Cant hook, M. Bellanger, 232,627.

Car coupling, D. S. Bailey, 232,538. Car coupling, J. Candy, 232,594. Car coupling, J. Coart, 232,687.

Car door, D. F. Van Liew, 232,662. Car, sleeping, T. Clarke, 232,686. Car, stock, L. Leber, 232,732.

Car, stock, S. H. McGibeny, 232,611. Car, stock, L. D. Smith, 232,770. Cars, etc., grain spout for loading, J. Coleman, 232,597.

Cars, mechanism for propelling, A. Sanford, 232,652. Carpet sweeper, W. J. Drew, 232,698. Carriage bow, E. M. Driscoll, 232,601.

Carving implement, C. Keyworth, 232,645. Chimney ventilator, J. C. Henderson, 232,642. Chisel for wood turning, gauge, T. S. Durgin, 232,634.

Churn, J. H. Holmes, 232,717. Clay digger, C. Bush, 232,674. Coal hod, W. S. Salisbury, 232,618.

Cock, gauge, C. Jenkins, 232,724. Coffee pulper and separator, E. L. Henington, 232,714. Coffee ripening apparatus, J. Bininger, 232,589.

Coin counter and changer, P. Clark, 232,596. Collar fastening, horse, S. J. Bowers, 232,590. Compass, mariner's, W. Thomson, 232,781.

Cooker, steam, E. Gallaher, 232,701. Cornice bracket, H. L. Judd, 232,644. Cotton condenser, F. H. Lummus, 232,736.

Coupling, W. J. Innis, 232,722. Curtain fixture, A. B. Shaw, 232,654. Cutlery handle, folding, H. M. Barrows, 232,626.

Dental plunger, G. M. Renn, 232,768. Desk, accountant's or bookkeeper's, W. W. Underhill, 232,784.

Desk, writing, J. Peard, 232,753. Ditching machine, I. C. Covert, 232,631. Door bolt, double, W. P. Brachmann, 232,672.

Door hanger, L. Terry, 232,659. Drop light gasalter, J. E. Brown, 232,592. Edger, gang, W. J. Perkins, 232,754.

Electric light for burglar alarms, C. E. Buell, 232,678. Elevator, Fitts & Griffin, 232,637. Elevator cages, safety attachment for, P. Hinkle, 232,608.

Fabrics, device for cutting, F. R. Lewis, 232,647. Fare box, G. W. Horne, 232,719. Faucet, J. P. Gruber, 232,709.

Fence, farm, T. W. Owens, 232,750. Fermenting vat, M. V. Monarch, 232,746. Fertilizer, H. M. Pollard, 232,756.

Flyer, B. T. Loomis, 232,735. Firearm, magazine, J. H. Salter, 232,766. Fireplace lining, J. B. Witherspoon, 232,621.

Fish hook wrapper, G. G. Gregory, 232,706. Folding chair, J. T. Mitchell, 232,742. Fruit drier, M. J. Dorsett, 232,697.

Furnace, U. Cummings, 232,690. Game apparatus for lawn bowling, E. W. Haines, 232,606. Gas lighting apparatus, electric, J. P. Tirrell, 232,661.

Gas machine, A. Henning, 232,715. Gate, Harbaugh & Owen, 232,711. Gearing, cog, R. H. McNair, 232,612.

Grain register, W. B. Richardson, 232,759. Grain separators, sieve for, J. A. Olson, 232,751. Grinding mill, J. T. Case, 232,595.

Grinding mill, Swisher & Mershon, 232,779. Harrow, S. Harris, 232,641. Harrow, W. Rucker, Sr., 232,764.

Harvester, W. H. Davis, 232,632. Harvester seats, safety device for, W. J. & A. R. Shaw, 232,655.

Hinge, J. T. Morgan, 232,747. Hoe, F. J. Fischer, 232,700. Hominy mill, C. S. Day, 232,696.

Hydrant, E. Kuching, 232,646. Hydraulic engine, I. C. Smith, 232,656. Insecticide pastille, J. J. Detwiller, 232,695.

Insulators, forming, J. M. Brookfield (r), 9,392. Iron, tool for cutting plate, W. T. Bennett, 232,668.

Jug, covered, I. W. Knowles, 232,730. Label, tobacco, P. J. Sorg, 232,771. Lamp chimneys, mechanism for opening the base of, J. Adams, 232,625.

Lamp, electric, J. C. Jamin, 232,610. Lamp, reservoir, O. Sweeney, 232,778. Lamp supporting device, A. Roelofs, 232,761.

Lead and crayon holder, A. C. Hafely, 232,607. Liquid drawing and measuring device, S. W. Cox, 232,630. Locomotive, F. M. Stevens, 232,776.

Locomotive exhaust apparatus, E. Longstreth (r), 9,389. Locomotive fire box, Taylor & Burgess, 232,780. Mat, J. H. Robertson, 232,760.

Meat, fruit, etc., press, B. A. Stevens, 232,619. Microphone, J. P. Livermore, 232,734. Milliner's steamer and presser, T. Hicks, Jr., 232,716.

Millstone dress, A. D. Farling, 232,608. Mining machine, G. D. Whitcomb, 232,792. Mop head, J. K. Collins, 232,688.

Nail extractor, A. F. Gerald, 232,706. Nickel plating, solution for, C. G. Pendleton, 232,615. Nickel, solution for the electro-deposition of, J. H. Potts, 232,755.

Ore crusher frame, E. S. & H. H. Blake, 232,640. Oyster float, T. McCosker, 232,740. Packing band, J. Z. Gifford, 232,704.

Painting pottery, T. J. Wheatley, 232,791. Paper, machine for waxing or varnishing, J. W. Sutton, 232,777. Peg and peg wood, F. F. Raymond, 2d., 232,617.

Pen, cattle, J. N. Chew, 232,683. Pen, stylographic fountain, C. H. Downes, 232,683. Pencil sharpener, slate, J. W. Hyatt, 232,721.

Pencils, machine for the manufacture of slate, J. W. Hyatt, 232,720. Plaited puffing, machine for making, S. E. Barney (r), 9,391.

Plow and seed planter, combined listing, Cooper & Bostwick, 232,689. Plow attachment, C. E. Worline, 232,796.

Polishing machine, M. R. Chase, 232,682. Printing machines, ink roller attachment for, G. A. Miller, 232,744.

Printing surface, W. C. Walker, 232,786. Pulley, belt, W. J. Fetter, 232,635. Pump, G. S. Bartlett, 232,666.

Pump, W. Burlingham, 232,629. Pump valve, A. K. Rider (r), 9,388. Pumping apparatus, vacuum, Frings & Müller, 232,638.

Reapers, attachment for, G. W. Looney, Sr., 232,648. Rock drill, S. Hussey, 232,609. Rolling mill, C. Erdmann, 232,602.

Roofing, H. W. Hoefft, 232,643. Rope coils, rack and spool for holding, C. J. Le Roy, 232,733.

Rotary steam engine, C. S. Whitney, 232,798. Saddle horn, Rubarts & Dubrulle, 232,763. Saddle, military, J. R. Hastings, 232,712.

Saddle, pack, T. A. Kelly, 232,729. Safe, sectional kitchen, C. Spier, 232,772. Sample exhibitor, G. S. Griffith, Jr., 232,639.

Sash fastener, J. Harley, 232,710. Saw filing machine, gin, D. T. Burden, 232,679.

DESIGNS.

Book, Christmas, H. E. Manchester, 11,970. Door mat, rubber, A. O. Bourn, 11,972.

Sewing machine case, E. Genee, 11,969. Sewing machine case, J. Stephan, 11,971.

TRADE MARKS.

Beer, F. Dittmer, 8,048. Bitters, herbal, W. H. Beasley, 8,050.

Blacking and polish, T. Y. Kelley, 8,047. Cigars, cigarettes, cheroots, and plug, smoking, and chewing tobacco, Kinney Tobacco Company, 8,051, 8,052.

Plow, Gale Manufacturing Company, 8,049.