

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

May 20, 1890,

AND EACH BEARING THAT DATE.

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

Table listing inventions such as Abrasive strips, apparatus for moulding, Q. W. & I. E. Booth, Acid, rosinulmine monosulpho, C. Schraube, Advertising device, H. A. Snyder, Air brake pumps, automatic governor for, G. W. Burbank et al., Air or other gases, apparatus for compressing, E. F. Clarke, Alarm, See Burglar or other alarm. Low water boiler alarm, Armature for dynamos, etc., A. Schmid, Armpit shield, G. M. Sigsbee, Axle, vehicle, W. Jones, Babywalker, A. Burkholder, Bag, See Mail bag, Bangle, J. P. Howard, Barber's appliance, Dugan & Schoff, Bathub, folding, E. H. Grant, Bathub, portable, J. A. Linden, Battery, See Galvanic battery, Bearing, ball, R. T. Torkelson, Bearings, roll for roller, J. W. Hyatt, Bed, folding, F. Bennett, Bed, folding, J. David, Bed, folding, A. E. Jacobson, Bed, sofa, Newhouse & Hansen, Bell, alarm, Allen & Goulden, Belt fastener, Parsons & Brown, Bench, See wash bench, Bit, See Bridle bit, Bituminous rock, etc., apparatus for reducing, J. B. Jardine, Bleaching powder and caustic soda, making, Penock & Bradburn, Blind, J. Naylor, Jr, Block, See Brake block, Board, See Sign board, Boat, B. Jarrrell, Bolt, See Fish plate bolt, Bottle, ink, A. E. Dain, Bottle neck finishing machine, C. Leng, Bottle stopper, Fox & Hegele, Bottle stopper, H. B. Stewart, Box, See Fly paper packing box. Tool box, Box or canister, S. E. Cornell, Bracelet, L. S. Beals, Brake, See Vehicle brake. Velocipede brake, Brake beam connecting rod, C. Feil, Brake block, H. J. Richardson, Brake shoe, C. Herron, Brick machine, H. E. Long, Bridge gate, swinging, P. H. Day, Bridge suspension, J. O. Hill, Bridle bit, S. J. Adams, Jr, Brush, J. R. Lynch, Brush attachment, I. A. Hortman, Brush, electric bath, R. E. Williams, Brush holder, J. M. Riley, Brush holder, palette, J. F. Way, Buckle, S. E. Harsh, Buckle, harness, J. Q. Steele, Burglar or other alarm, L. F. Lamkin, Burner, See Oil burner, Buttonhole strip, A. L. Newman, Cabinet, family bible, J. Melville, Cabinet, physician's, Noll & Lowe, Calendar, H. S. Prentiss, Cam, multiple, H. S. Prentiss, Camera, T. H. Blair, Can closure, A. S. Lambert, Cart attachment, street, W. S. Livengood, Car, coal, E. R. Steinhilber, Car coupling, H. C. Armstrong et al, Car coupling, W. Davids, Car coupling, J. A. Frenzel, Car coupling, Martin & Harris, Car coupling, J. Mutton, Car coupling, J. F. Shannon, Car drawbar and link, railway, G. Leverich, Car, freight, E. F. Hammeken, Car or other dome, S. Strahan, Car, railway, J. A. Brill, Car, sleeping, W. C. Waite, Car stake, A. Morrison, Car step, C. Freese, Car, street, J. W. Evans, Car wheels, flask for moulding, J. R. Whitney, Cars, etc., attachment for street, W. S. Livengood, Cars, center bearing plate for railway, C. T. Schoen, Card grinder, R. Schofield, Card grinding machine, C. H. Foss, Carillon, L. Haberkam, Carrier, See Cash or bundle carrier, Cart, road, J. B. Burroughs, Cartridge loading and unloading tool, combination, G. S. Adams, Carving machines, work holding table, F. R. Potter, Cash car, A. & A. Iske, Cash indicator and register, L. T. Weiss, Cash or bundle carrier, T. Wilson, Jr, Cash recorder and money drawer protector, H. Donaldson, Cash register, T. Carney, Cash register and indicator, Carney & Snyder, Casing head, M. R. Skinner, Caster, F. H. Roedell, Caster, C. Stenzel, Celery hilling machine, M. M. Ranney, Chair, T. H. Speakman, Channel iron, S. Stuart, Check, baggage, F. H. Crump, Check hook, L. Rooney, Chisels, machine for dressing toothed, F. G. Smith, Churn, J. L. Smith, Churn power, W. H. Swogger, Churns, removable strainer for, A. W. McLaren,

Table listing inventions such as Cigar bunch roller, C. Browning, Cigar bunches, apparatus for cutting fillers for long filler, O. Hammerstein, Cigar channel piece, H. W. Hoops, Jr, Cigar wrapping machine, R. A. Bright, Clay grinding mill, H. K. Long, Cloth piling machine, J. Novotny, Clothes drier, A. Smith, Clothes line holder, G. H. Regar, Clover huller, D. Whiting, Clutch, friction, W. H. McConnell, Clutch mechanism, A. E. Brown, Coat hanger, C. V. Doe, Coffin fastener, H. C. Forshay, Coke from ovens, device for removing, W. H. Dinsmore, Collar fastener, horse, W. S. Finney, Collar, horse, C. K. Marshall, Coloring matter, A. Herrmann (r), Combination article, J. B. Mitchell, Commutator brush for dynamos, L. Van Brown, Compass, beam, Welles & Harrison, Composition of matter, A. J. McDaniel, Composition of matter for use in the mechanic arts, E. Andrews, Condenser, W. Stimpkin, Confection moulds, machine for making, C. B. Overbaugh, Cooking apparatus, portable, S. J. McDowell, Coupling, See Car coupling. Pipe coupling. Thill coupling. Wire coupling, Coupling links, die for, N. Kennedy, Crank connection, J. E. T. Bartlett, Crate, Campbell & Cox, Crate, F. E. Spencer, Creel for warping machines, F. A. Whitmore, Crocheting or overseaming machine, J. M. Merrow, Crucible furnace, J. B. Alzugaray, Crupper stuffing machine, B. A. Schuler, Crutch, J. Dobney, Cultivator, W. J. Gohn, Curb, street, H. H. Wainwright, Curry comb rack, A. B. Friedmann, Cut-off gear, engine, N. Chandler, Cut-out, N. P. Stevens, Cutlery polisher and sharpener, M. Siersdorfer, Cutter, See Paper cutter, Cutting machine, wood, J. L. Gage, Damper, stovepipe, D. L. Osborn, Decorticating machine, J. T. Stewart, Dental flask, J. E. Register, Desk, duplex, W. O. Partridge, Digester, lead lined, S. Smith, Digger, See Posthole digger. Potato digger, Door check, pneumatic, J. A. Sherman, Drainage connection, surface water, C. P. K. Kahler, Dredging machine, A. W. Robinson, Dredging machine, spud-actuating device, W. S. Carlin, Dress stays, machine for covering, F. Rockett, Drier, See Clothes drier, Drill swaging stock, Laundry & Warren, Dust collectors, ventilating hood for, J. T. Briggs, Ear muff, C. Moore, Earth, apparatus for raising and moving, R. T. White, Eaves trough beading machine, T. C. Belding, Eccentric rod, W. Wright, Electric current generator regulator, G. Pfannkuche, Electric furnace for melting metals, E. A. Colby, Electric induction device, E. A. Colby, Electric machine or electric motor, dynamo, E. Crossdale, Electric meter, A. Frager, Electric meter, J. F. Mehren, Electric meter, E. W. Von Siemens, Electric motor, W. H. Chapman, Electric motor or generator, H. Groswith, Electric motor regulator, W. H. Knight, Electric signal circuit, O. W. Hart, Electric wires, elevated conduit for, H. N. Rutan, Electrical converter, W. Stanley, Jr, Electrical converters, building, W. Stanley, Jr, Electrical cut-out, W. J. Jenks, Electrical heater, J. I. Ashbaugh, Electro-deposition, D. Garrett, Elevator gates, means for operating, A. Newell, Elevator reversing mechanism, E. T. Young, Engine, See Steam engine, Eraser, blackboard, F. Fanning, Eraser, pencil, M. A. L. Thomas, Evaporating apparatus, A. Miller, Exhibitor, goods, Krause & Wright, Fair leader, W. N. Gesner, Farm gate, J. Stephenson, Fastening device, W. J. Boda, Faucet, M. N. Maloney, Feedwater purifier, Peacock & Reagan, Jr, Fence, D. K. Briggs, Fence post, J. Copenhaver, Fibrous plants, machine for scraping the pulp, etc., from, R. G. Ward, File, paper, A. Dom, File, paper, P. J. Pauly, Jr, Filter, E. Bourne, Fireplace, C. L. Page, Fish plate bolt, Tyzick & Lawton, Flask, See Dental flask, Flue scraper, D. K. Strachan, Flushing tank, A. Rosewater, Flypaper packing box, H. Jarmuth, Food, capsuled condensed, J. Maggi, Foot, extension, E. L. O'Connor, Force, sprinkler, A. Speirs, Fountain, C. P. F. Baillairge, Fuel economizer, R. Newton, Furnace, See Crucible furnace. Electric furnace, Furniture, J. Gramke, Jr, Galvanic battery, A. J. MacDonald, Gas, apparatus for separating liquids from natural, W. Moore, Gas holder, A. Newell, Gas holder, Newell & Kehr, Gas lighter, electric, R. T. Walton, Gas producer, W. J. Taylor, Gate, See Bridge gate. Farm gate, Gate, W. Smith, Glassware grinding and polishing machine, Wood & Snobarner, Glove fastener, R. H. Hutchinson, Glycerine from spent soap lye, recovering, Domeier & Hagemann, Glycerine from spent soap lye, recovering, E. K. Mitting, Glycerine, purifying, O. C. Hagemann, Glycerine recovered from spent soap lye, distilling, Domeier & Hagemann, Governor, stop, Boie & Hamilton,

Table listing inventions such as Graphophone, M. L. Deering, Grinding machine, E. H. Fenton, Grinding twist or other drills, machine for, Storey & Bamford, Guard, See Railway crossing stock guard. Tail guard, Gun carriage, B. B. Hotchkiss, Hame fastener, L. Anderson, Hammer handle attachment, M. E. Reilly, Handle, See Knob handle. Vehicle handle, Hanger, See Coat hanger. Tobacco hanger, Harrow, W. M. Brinkerhoff et al, Harrow, J. H. Hanson, Harrow, D. C. Markham, Harrow tooth holder, reversible, D. C. Troxel, Harvester, G. G. Hunt, Harvester, grain, J. A. Graham, Hat brims, apparatus for heating and softening, H. H. Turner et al, Heater, See Electrical heater. Seed meal heater. Watering tank heater, Heater, C. L. Haight, Heater, W. H. Randall, Hinge, M. A. Morris, Hoisting and conveying device, O. W. O'Dell, Hoisting machine, A. T. Kellier, Hoisting machine, H. B. Tefft, Holder, See Brush holder. Cloth line holder. Gas holder. Paper holder. Plate, cup, and saucer holder. Sash holder. Twine holder. Twine or cord holder, Hook, See Check hook. Singletree hook. Whiffletree hook, Hops, apparatus for extracting, J. Irlbacker, Horse spreading device, Hague & Bolles, Horseshoe, E. & P. Maloney, Horseshoe, W. F. Rice, Horseshoe, J. Russell, Hub, metallic wheel, A. L. H. Messmer, Hydrant, fire, Viney & Dalton, Hydrocarbon oils, apparatus for burning, E. Rogers, Ice cakes, apparatus for planing, J. Kavanagh, Ice cream freezer, E. H. Shaw, Ice cutting implement, C. F. Jarvis, Ink, producing indelible aniline, J. Schiffmann, Inking pad and holder, J. E. Bohac, Insulator, electric, E. Andrews, Insulator for electric railway wires, H. P. Brown, Iron, See Channel iron. Soldering iron, Ironing table, J. Shull, Jack, See Wagon jack, Journal, journal box, and bearing, anti-friction, J. F. Morell, Key instruments, apparatus for playing, P. Ehrlich, Knitting machine, J. P. Harriman, Knob handle, lock, H. Anderson, Knobs to sockets, means for attaching door, E. B. Owen, Labeling apparatus, hand, H. R. Fay, Lace fastening shoe, M. J. Ward, Ladder, step, Coolahan & Fleeman, Ladle and mould for lead hammers, combined, C. H. Field, Jr, Lamp, R. T. Barton, Lamp, alternating current arc, G. Westinghouse, Jr, Lamp, arc, C. P. Breese, Lamp burner attachment, E. S. Crockett, Lamps, device for elevating and lowering electric, Morris & Voll, Landroller and ditcher, combined, P. Veriliff, Latch, J. V. H. Nott, Latch, alarm, M. A. Dibble, Lifter, See Transom lifter, Liniment, S. J. Lancaster, Lock, See Magnetic lock. Time lock, Lock, O. R. Cooke, Locomotive, J. E. Phillips, Locomotive, electric, J. F. McLaughlin, Locomotive or car pilot, A. Komp, Loom, West & Wood, Loom for weaving pockets, J. T. Meats, Loom shedding mechanism, J. Haagenmacher, Loom shuttle changing mechanism, A. Sinclair, Loom smash protector mechanism, Thompson & Crook, Loom temple, J. E. Prest, Low water boiler alarm, O. E. Guss, Magnetic lock, W. W. Fenner, Magnetic lock, J. Schneider, Mail bag and fastener therefor, A. H. Enholm, Mail pouch, W. H. Price, Mailing case for bottles, E. R. Phillips, Matrix making machine, type die holder for, C. L. Redfield, Mechanical movement, J. P. H. Gastrell, Metallic precipitates, treatment of, E. K. Mitting, Metals, melting, refining, and casting, E. A. Colby, Meter, See Electric meter, Mill, See Clay grinding mill, Mill appliance, S. Porter, Mitten, R. F. Levy, Motion, mechanism for transforming reciprocating into rotary, J. P. H. Gastrell, Motor, See Electric motor. Spring motor. Street motor. Wave motor, Mower or harvester cutting apparatus, C. W. Crannell, Mowers, combined grass receiver and dumper for lawn, J. P. Blondeau, Mowers, grass receptacle for lawn, C. Buchmuller, Multiple switch board system, three-wire, E. P. Warner, Nail, J. Haish, Nailing implement, hand, J. Jessop, Nailing machine, Ross & Bilbie, Needle, O. H. Blood, Nut lock, Trimble & Kirkpatrick, Oil burner, M. Hathaway, Oil feeder, R. B. Price, Ordnance, hydraulic brake for, H. Schneider, Ore feeder, G. C. Mueller, Oven, baker's, E. A. C. Petersen, Overdraw loop, S. E. Harsh, Pad, See Inking pad, Pail, dinner, Heckstadt & Moe, Paint vessel and package, H. J. Koempel, Paper bag machines, stripping attachment for, T. R. Troendle, Paper cutter, roll, D. F. Crowder, Paper, frame for coating aristotype, E. A. Gilbert, Paper holder and cutter, roll, L. Ehrlich, Paper holder and cutter, roll, E. S. Knight, Paper holder and cutter, roll, C. K. Pickles, Paper holder and cutter, roll, G. Rein, Paper holder and cutter, roll, E. B. Weston, Paper, machine for applying wax to, Watts & Henry, Pen, ruling, H. H. Hazen et al, Phenylidihydroquinazoline, C. Paal, Photo-mechanical printing plate, O. Dubois,

Table listing inventions such as Pick handle sleeve and head brace, G. J. Schoettle, Pictures, manufacturing transparent relief, W. Hageberg, Pipe connection, flexible, H. Vering, Pipe coupling, A. Cochran, Pipe stopper, W. Baguley, Planer tool attachment, J. Wilkinson, Planter and fertilizer distributor, seed, J. M. Johnson, Planter, corn, K. Buland, Plate, cup, and saucer holder, J. H. Yund, Pliers and calipers, balance wheel, G. B. Widdifield, Plow irons, press for shaping, W. W. Speer, Plow, sulky, C. Anderson, Post, See Fence post, Posthole digger, I. J. Merrick, Potato digger, G. M. D. Pomeroy, Power, See Churn power, Power transmitter, H. R. Knox, Press, See Printing press, Preserving compound, Bates & Owen, Printing attachment for paper bag machines, E. Stanley, Printing press, J. Thomson, Projectiles, detachable gas check for, H. Maxim, Protector, See Tree protector, Pulley, split, E. J. Pennington, Pump, I. Thornton, Pump, steam air, A. P. Massey, Punching machine, J. M. Riley, Puzzle, B. W. Charshae, Puzzle, P. Foy, Rack, See Curry comb rack, Rag duster, Taylor & Bradburn, Railway, cable suburban, C. E. Emery, Railway crossing stock guard, C. O. Davidson, Railway, electric, R. M. Hunter, Railway, electric, Legz & Nile, Railway track drill, A. R. Paulus, Railway trains, electric communication with, T. J. Houck, Railways, horizontal deflecting pulley for cable, G. Leverich, Railways, terminal facility for suburban, C. E. Emery, Railways, trolley arm support for electric, F. B. Rae, Railways, trolley system for electric, H. P. Brown, Rain water conductors, joint for, J. W. Abrahams, Range, D. H. Erdman, Receiving pad and delivering value in exchange therefor, apparatus for, J. Owen, Recorder, See Cash recorder. Time recorder, Regulator, See Electric current generator regulator, Rifle bore sight, Cochran & Bond, Roasting hearth attachment for operating stirrers, I. B. Hammond, Rod, See Eccentric rod. Stair rod, Roller, See Cigar bunch roller. Land roller, Rolling switch points, rolls for, I. D. Weaver, Roof cresting, C. B. Nelson, Roof for factory buildings, shed, L. Kick, Rubber stripping device, N. C. Videto, Sad iron, self-heating, Morrow & Curtis, Jr, Saddle and attachment, harness, P. Donohue, Safe, burglar proof, C. O. Yale, Salt, apparatus for manufacturing, A. Miller, Salt, manufacturing, A. Miller, Sash cord fastener, G. Moebis, Sash cord fastener, Randel & French, Sash fastener, Jenkins & Bishop, Sash holder, W. H. Bennett, Sash holder, G. Kendall, Saw, H. F. Poore, Sawmill dog, P. Payette, Scales, weighing and price, H. C. Hart, Scraper, road, C. Mendenhall, Screen, See Window screen, Screw tap, F. Hoerle, Jr, Seed meal heater, cotton, J. S. Price, Semaphore apparatus, electric, Stitzel & Weindel, Sewer trap, J. A. I. Claudon, Sewing machine feeding mechanism, M. C. Lisle, Sewing machine table, Donn & Cuthbert, Sewing on buttons, machine for, W. E. Bennett, Shade fixture, window, A. B. Dunkle, Shade or reflector, E. Blackman, Shaft bearing, H. Schneider, Shaping machine, J. M. Riley, Ship side scuttle, E. J. Preston et al, Shirt, R. H. Hutchinson, Shirt, M. Penkert, Shirt or vest and suspenders, combined, J. T. Brodnax, Shock compressor and binder, W. T. Parks, Shoe, S. J. Stough, Shoemakers' tools, device for heating, D. A. Brown et al, Sickle driving mechanism, Gibbons & Heaberlin, Sign board, flexible and transparent, C. Galle, Signals, etc., automatic system for operating, Wayland & Baldwin, Singletree hook, A. Scott, Sliding and swinging gate, C. C. Alexander, Soap lye, apparatus for concentrating spent, Domeier & Hagemann, Soap lye, apparatus for the distillation of concentrated, Domeier & Hagemann, Soap shaker, W. T. Russell, Soldering iron, C. W. Shedd, Soldering iron, self-heating, Sundeen & Molander, Sorghum and sugar cake, apparatus for roasting and treating, A. J. Adamson, Spindle bearing, W. F. Draper, Spinning spindle support, W. F. Draper, Spoke socket for vehicle wheels, J. F. Fuss, Sporting trap, W. T. Hill, Spring, See Vehicle spring, Spring motor, A. A. Wood, Sprinkler, See Force sprinkler. Water sprinkler, Stair rod, G. Meisenbach, Jr, Steam engine, E. H. Johnson, Steam muffler, E. A. Leland, Steel by cementations, compound for converting iron into, F. G. Bates, Steel, manufacturing, F. G. Bates, Steering apparatus, E. F. Barnes, Steering gear for ships or boats, W. H. Harfield, Stone sawing machines, saw blade for, J. H. Jacobs, Stopper, See Bottle stopper. Pipe stopper, Store service apparatus, H. E. Woodworth, Stove, gas or oil heating, C. W. Jenks, Stove, oil or gas, J. A. Field, Stovepipe joint, extensible, J. P. Warren, Strainer, water conductor, J. Wock,

