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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.

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Correspondents sending samples of minerals, etc., for examination, should be careful to distinctly mark or label their specimens so as to avoid error in their identification.

(1) J. F. asks: 1. What is the best cement to make leatherstick to iron pulleys? I have tried several with poor success. A. The following is said to be excellent: Soak equal parts of common glue and isinglass for ten hours in just water enough to cover them. Bring the whole to nearly the boiling point, and add pure tannin until the whole mixture becomes ropy, or appears like the white of eggs. Buff off the surfaces to be joined, apply the cement, and clamp firmly. The belt must not be used before the cement is thoroughly dry. 2. I have lagged the pulley which runs our electric light machine (the Edison), which is 46 inches diameter, driving the pulley on the machine, which is 10 inches diameter, 1,300 turns. What is the reason the lagging will not stay on the pulley? Is it the fault of the cement, or on account of the difference of diameters of the pulleys? A. It might be well to roughen the pulley, for it is probable that the speed at which it is run is too great, producing too much friction. Perhaps an endless rubber belt would be more serviceable.

[OFFICIAL.]

INDEX OF INVENTIONS

FOR WHICH

Letters Patent of the United States were Granted in the Week Ending

February 20, 1883,

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 25 cents. In ordering please state the number and date of the patent desired and remit to Munn & Co., 261 Broadway, corner of Warren Street, New York city. We also furnish copies of patents granted prior to 1866; but at increased cost, as the specifications, not being printed, must be copied by hand.

Table listing inventions with names and page numbers, including: Adding machine, W. H. Beasley; Advertising device, W. De Meza; Air compressing apparatus, J. J. Lawler; Alarm, See Railway crossing alarm; Alcohol and other crude spirits, rectifying, Rousan & De Barbeyrac; Amalgamating machine, ore, E. R. Lucas; Amalgamator, W. E. Harris; Amalgamator, S. G. Lindsey; Amalgamator, W. Moiler; Ammonia, apparatus for the manufacture of sulphate of, J. Coates; Animal trap, T. B. Zeller; Assay furnace, J. C. Tappeler; Automatic double gate, Austin & Chamberlain; Awning, J. L. Rieger; Axle box, car, R. Zeppenfeld; Bag, See Filtering bag; Mail bag; Baking pan, I. H. Graham; Bar, See Chain bar; Grate bar; Railway rail splice bar; Battery, See Voltaic battery; Bed bottoms, device for stretching, I. Lorenzen; Bed, folding, C. Williams;

Table listing inventions with names and page numbers, including: Belt fastener, H. C. Hart; Belts on shafting, mechanism for preventing the lapping of, W. Hayes, Jr.; Belting, device for joining the ends of leather, J. J. Brillin; Berth guard for sleeping cars, H. S. Billings; Bessemer plant, W. Hainsworth; Beverages, apparatus for rapidly cooling and straining mixed, W. J. Wright; Binder or holding device, W. R. Clough; Blacking, waterproof preservative, J. A. Van Keuren; Blind fastener, A. C. Dunham; Blind support, window, W. W. S. Orbeton; Block, See Toy block; Blower, rotary fan, W. D. Smith; Board, See Pressing board; Boat knee, D. True; Boats, building veneer, E. G. Durant; Boiler, See Heating boiler; Steam boiler; Boiler furnace, steam, C. H. & S. S. Wilson; Boot and shoe nailing machine, S. Shepherd; Bottle stopper, W. L. Roorbach; Bottle washing machine, F. B. Seiberlich; Bottom support, H. W. Shepard; Bow, cross, G. Eger; Box, See Axle box; Fare box; Packing box; Photographic camera box; Stuffing box; Bracelet, H. Cockshaw; Bracket seat, O. E. Briggs; Bridge, truss, D. B. Matlock; Buckle, J. A. Park; Buckle attachment, G. B. Northrup; Burner, See Gas burner; Button, A. H. Savage; Button, J. S. Smith; Button and button fastener, A. McKeiv; Button fastener, H. Schmoele; Button fastening, W. M. Hazel; Caisson, floating, P. H. Loud; Can, See Fluid can; Oil can; Car, coal, D. Hoyt; Car coupling, J. W. Alexander; Car coupling, B. Cade; Car coupling, E. S. Graver; Car coupling, N. Halsted; Car coupling, W. A. & C. S. Hawkins; Car coupling, H. Kroblen; Car coupling, F. G. Lawrence; Car door, grain, D. D. Miles; Car, sleeping, W. H. Paulding; Car, stock, A. C. Mather; Car window deflector, H. B. Mears; Carboy stand, C. T. Armstrong; Carpet stretcher, Peterman & Smith; Carriage top, L. Schmetzer; Carriage top-bow support, J. P. Whitman; Carrier, See Egg carrier; Cartridge shell, H. G. Piffard; Case, See Draining case; Dressing case; Eye-glass case; Show case; Ticket case; Casting shaft couplings, apparatus for, W. Tucker; Castings, facing for foundry, O. E. Weatherhead; Ceiling, fireproof, A. W. Cordes; Centering shafts, axles, etc., machine for, J. N. Kaufholz; Centrifugal machines, crushing attachment for, E. C. Knight; Chain bar, etc., E. S. Johnson; Chair, See Railway rail chair; Chair, W. H. Paulding; Chair and cutting table, combined, B. A. Hathaway; Chair fastening device, T. M. Blackstock; Charcoal kiln, H. M. Pierce; Chimney cap or ventilator, W. D. Bartlett; Churn, G. R. Barnes; Cleaner, See Flue cleaner; Steam boiler cleaner; Cloak, W. B. Bowse; Cloak, D. W. Howard; Clock, W. S. McLewee; Clothes drier, J. S. Gold; Clothes pin, R. E. Perkins; Coffee mill, O. J. Range; Coffee or tea pot, J. Vacheresse; Coffee pot and filter, A. Rutenick; Collar, horse, L. E. Woodward; Comb, See Curry comb; Compass, recording, R. Pickwell; Conduits of concrete, apparatus for forming continuous, W. M. Campbell; Cool atmosphere in rooms and apartments, producing a, H. D. Cogswell; Cooling and freezing liquids, apparatus for, H. Egells; Cores, forming, S. J. Adams; Corn sheller, feed grinder, and horse power, combined, J. S. Tarr; Cotton gin hopper, E. G. Horne; Cotton opener and lapper, R. Kitson; Coupling, See Car coupling; Telegraph wire coupling; Thill coupling; Trace coupling; Crane, brake mechanism for a trolley of a, T. A. Weston; Crimp protector, G. C. Humphries; Cultivator, F. H. Johnson; Cultivator, G. F. Skank; Cultivator and plow, combined wheel, E. L. Murray; Curry comb, W. E. Lawrence; Cut-off mechanism, J. Thomas; Cut-off valve, B. Webster; Cutter, See Fodder cutter; Pipe cutter; Sod cutter; Dash pot bumper, F. G. Coggin; Davit for boats, J. F. Mumm; Desk cabinet, L. P. Ross; Desk, cabinet folding, L. P. Ross; Desk top, E. A. Paul; Diamond drill, J. P. Griscom; Disinfecting apparatus for water closets, Parker & Blackman; Ditches, machine for forming and cleaning, C. W. Case et al.; Door check, R. G. S. Collamore; Draught equalizer, G. M. Kerby; Draining and ventilating stores, etc., apparatus for, E. & W. C. Mentz; Draining case for barrels, Crapon & Pickett; Dress lining, E. W. Wheeler; Dressing case and wash stand, combined, J. Penney; Drier, See Clothes drier; Drill, See Diamond drill; Grain drill; Druggist's graduate, L. C. Leake; Dyestuffs for application to fibrous materials, preparing, H. W. Vaughan; Dyestuffs to fibrous materials, applying, H. W. Vaughan; Eccentric, R. R. Angell; Egg carrier, A. L. Hill; Ejector, Wickersham & Huston; Electric arc light, J. A. Wetmore; Electric underground conductor, R. M. Hunter; Electrowires, system of laying subterranean lines of, J. T. Goodfellow; Electrical currents, metallic circuit for, S. D. Strohm; Electro-magnetic regulator, R. H. Tucker; Electrotype or stereotype plate holder, H. G. Waterson; Elevator, See Water elevator; Elevator safety attachment, N. P. Cleaves; Elevator safety gate, W. H. Ivers; Engine, See Gas engine; Hydropneumatic engine; Traction engine; Envelope, D. Lubin; Evaporating pan, J. Shoemaker; Eyeglass case, C. H. Manning; Fan attachment, Crawford & Temple; Fan, exhaust or blower, W. W. Green; Fare box, J. B. Slawson; Faucet, M. Dinneen; Feather renovator, G. F. Tallman; Feed water, apparatus for removing impurities from, D. D. Wass; Feed water heater, J. W. Heylman; Feed water heater for steam boilers, E. J. Hall; Feeder, automatic boiler, T. W. Mather; Fence, metallic, C. H. Salisbury; Fence wire, barbed, O. P. Briggs; Fence wire, barbed, H. A. Devendorf; Fence wire, barbed, E. S. Lenox; Fertilizer distributor, G. R. Lewis; Fertilizer distributor and grain drill, A. C. Hendricks; Filtering agent, J. W. Hyatt; Filtering bag, H. Muench; Fire escape, A. T. Brown; Fire extinguisher, automatic, C. L. Horack; Fire extinguisher, automatic, V. Vankeerberghen; Flour mill dust collector, F. Prinz; Flue cleaner, W. J. Bradshaw; Fluid can, W. H. & W. J. Clark; Fodder cutter, L. M. Batty; Form or stand, dress, G. M. Rockwell; Frame, brace, F. H. Beattie; Fruit gatherer, S. S. Hickok; Fruit stoner, L. C. Hill; Fuel, machine for twisting grass for, G. A. Parker; Furnace, See Assay furnace; Boiler furnace; Gas, apparatus for the purification of coal, C. C. & W. T. Walker; Gas burner and pipe pliers, P. Mihan; Gas engine, L. C. Parker; Gas purifying screen, E. M. Provonchar; Gate, See Automatic double gate; Elevator safety gate; Gate, A. W. Chilcott; Gate, L. D. Meekley; Gearing and un gearing mills and other machinery, pinion lifter or apparatus for, Underwood & Daniels; Generator, See Steam generator; Glycerine from fatty matter, extracting, Ams & Litzelmann; Gold washer, J. P. Spencer; Grain and seed cleaning mill, W. Bowen; Grain binder, J. P. Bullock; Grain binder, J. F. Steward; Grain cleaning apparatus, W. Shaw; Grain drill, fertilizing, A. C. Hendricks; Grate, L. Bannister; Grate bar, J. Ritchie; Grindstones, device for roughening, G. Andrews; Guard, See Berth guard; Pulley guard; Gun magazine, P. Boch; Halter trimming, O. P. Letchworth; Harness back band hook, O. Pitts; Harness breast strap slide, J. A. Park; Harrow and cultivator, wheel, C. H. Eggleston; Harrow, riding, Mighell & Hull; Hay and cotton press, W. J. F. Liddell; Hay rack, J. R. Steitz; Hay rake and loader, combined, W. W. New; Heater, See Feed water heater; Heating boiler, steam, Hopkins & Fockler; Hedge trimming machine, M. Lowrey; Hitching device, horse, J. H. Osgood; Hoisting apparatus, hog, G. B. Flangan; Hoisting machine, E. Harrington; Hoisting machine, H. S. Haskins; Holdback, vehicle, J. H. Stamp; Holder, See Electrotype or stereotype plate holder; Whisk-broom holder; Hook, See Harness back band hook; Hoop fastening for buckets, etc., H. B. Phillips; Horseshoe, H. Olson; Horseshoe calk, removable, F. Fawcett; Hydropneumatic engine, L. G. Cook; Ice cream freezer, C. W. Facker; Ice creeper, A. W. Eichelberger; Incubator, A. H. Morgan; Indicator, See Train indicator; Injector and ejector, combined, G. H. Little; Insulated electric conductor, A. A. Cowles; Irrigating agriculture and other lands, M. A. Martindale; Jack, See Lifting jack; Jar and bottle stopper, J. H. Wood; Joint, See Screw joint; Kiln, See Charcoal kiln; Knife, See Roofing knife; Knitting machine, W. Carter; Knitting machine, G. A. Leighton; Knitting machine, circular, G. A. Leighton; Knockdown table, G. D. Post; Lacinghooks, machine for making, S. N. Smith; Ladder, top extension step, M. G. Gartrell; Lamp, R. Marsh; Lamp support, tubular, J. Krummenauer; Lamp, tubular, J. Krummenauer; Lathes for turning crank-pins, attachment to, J. W. Wilbraham; Lifter, See Stove cover lifter; Lifting jack, J. S. Kirkwood; Light, See Electric arc light; Lock, See Nut lock; Padlock; Seal lock; Lock, E. P. Teeters; Locomotive, A. A. E. & H. Blackman; Locomotive sanding device, J. B. Collin; Lubricator, A. W. Swift; Mail bag, I. H. Northrup; Match cards, machine for sawing, Flewelling & Harris; Measuring and cutting out garments, apparatus for, W. Abrabart; Measuring and weighing grain, apparatus for, F. C. Mason; Measuring machine, cloth, F. Sanderson; Mechanical movement, G. R. Peare; Metal, chill for chilling, W. Tuttle; Meter, See Water meter;

Table listing inventions with names and page numbers, including: Middlings purifier, F. Prinz; Milk skimming device, W. Colditz; Mill, See Coffee mill; Grain and seed cleaning mill; Roller mill; Sawmill; Windmill; Motion, mechanical device for changing reciprocating to rotary, A. Trousdale; Motor, See Rotary motor; Spring motor; Motor, H. W. Gurney; Mule, self-acting, E. A. Baldwin; Nail or spike, W. Taylor; Neckwear shield, D. E. Mayer; Nut lock, J. M. Mack; Nut, top prop, A. Searis; Nut, top prop, H. Smith; Oil can, E. R. Deverall; Ore concentrating and amalgamating machine, D. H. Anderson; Ore concentrator, Adams & Carter; Ottoman, W. S. Wright; Packing box, reshipping, W. M. Baker; Padlock, C. H. Smith; Pails, pouring spout for milk, H. Leonard; Pan, See Baking pan; Evaporating pan; Paper cutting machine, W. F. Hill; Paper, damping and cutting, W. Scott; Pencil, lead, G. L. Jaeger; Photographic camera box, E. B. Barker; Photographic cameras, plate holder for, W. H. Lewis; Pick, J. C. Cramer; Pile, iron, Gray & Abbott; Pin, See Clothes pin; Pipe-cutter and tons, J. W. Calef; Pipe elbow, sheet metal, A. F. Peters; Pipe into sections, apparatus for cutting sewer, R. W. Lyle; Pipes of concrete, apparatus for forming underground, W. M. Campbell; Plane, recess, H. L. Tupper; Planter and cultivator, combined seed, J. J. Birdsong; Planter, automatic check row, W. H. Johnson; Planter check row lines, anchor for corn, A. Barnes; Planter check row attachment, seed, L. Eberhart; Planter check row, seed, F. C. Randall; Planter, corn, J. E. Bering; Plow, rotary, G. A. Betancourt; Pool ball rack, W. F. Whitney; Portable press, W. J. F. Liddell; Pot, See Coffee pot; Coffee or tea pot; Press, See Hay and cotton press; Portable press; Printing press; Pressing board, tailor's, J. Neerpasch; Printing machine, S. D. Tucker; Printing machine, J. T. Hawkins; Printing press, J. T. Hawkins; Printing press air cushioning device, G. P. Fenner; Printing press gripper motion, G. P. Fenner; Printing presses, automatic feeding device for, C. Ellery; Projectile for carrying and discharging oil, W. D. Baker; Protector, See Crimp protector; Pulley guard, band, C. E. Frick; Pump condenser, steam, W. A. Miles; Pump, force, A. Annibale; Pump piston, J. O. Davis; Pump reel, chain, W. P. Harrison; Pumping engine condenser, W. A. Miles; Purifying, heating, and condensing apparatus, G. B. Field; Rack, See Hay rack; Pool ball rack; Railway crossing alarm, J. A. B. Lovett; Railway rail chair, Armstrong & Abbott; Railway rail splice bar, I. Nutt; Railway rail, street, T. L. Johnson; Railway rails, hot bed for cooling, W. K. Seaman; Railway signal, N. Allen; Railway signal, electric, E. L. Orcutt; Railway signal and switch-system, electric interlocking, Knight & Baker; Railway sleeper metallic, H. Reese; Railway switch, W. Spielman; Ratchet wrench, J. W. Womelsdorff; Reel, See Pump reel; Refrigerated air and water, system of and apparatus for producing and distributing, H. D. Cogswell; Regulator, See Electro-magnetic regulator; Resawing machine, Jones & Wetherell; Roller mill, C. B. Campbell; Rolling steel springs, roll for, D. F. Kansley; Roofing knife or tinnerscraper, G. J. Cline; Rotary engine, T. & J. W. Wilbraham; Rotary motor, G. Lenhardt; Rug making machine, O. Huff; Sash fastener, H. J. England; Saw and edge moulder, scroll, A. Showalter; Saw gauge, rip, T. A. McDonald; Sawmill, J. C. Wuerfel; Sawmill, reciprocating, J. H. Berkshire; Sawmill dog, G. F. Knight; Saw setting and jointing device, Beach & Burch; Saw teeth, device for dressing, S. H. Chase; Sawteeth, machine for swaging, J. Orm; Scale for weighing diamonds, balance screws of watches, etc., F. F. Ide; Screen, See Gas purifying screen; Screw, W. Schilling; Screw grinding apparatus, H. A. Rowland; Screw joint for metal pipe fittings, W. A. Miles; Seal lock, J. C. Rae; Seaming sheet metal cans, double, F. A. Walsh; Seat, See Bracket seat; Vehicle shifting seat; Sewing machine, T. A. Macaulay; Sewing machine, D. Mills; Sewing machine, boot and shoe, C. Brown; Sewing machine buttonhole attachment, J. W. Cameron; Sewing machine feeding mechanism, G. R. Peare; Sewing machine guide, N. B. Williams; Sewing machine quilting attachment, A. Heartsill; Sewing machine ruffing attachment, T. B. Garretson; Sewing machine ruffing attachment, C. Grotz; Sewing machine, sole, McKay & Hoadley; Sewing machine trimming attachment, Wallace & Griffin; Sewing machine trimming mechanism, C. H. Bayley; Shade rollers, swinging bracket for, G. Lockhart; Shingle machine, J. P. Bowling; Ships and the rate of currents, electric log or apparatus for ascertaining the speed of, R. M. Lowne; Shirt, W. E. Hubbard; Shirt, M. O. West; Shoes or gaiters, manufacture of, O. E. Mellenny; Shoes, toe piece for rubber, J. L. Thomson;