

## ENGINEERING INVENTIONS.

A shoe attachment for car trucks has been patented by Mr. Elwood H. Newman, of Asbury Park, N. J. The invention consists in the application of longitudinally flanged shoes of novel form and in a novel way to a car truck, whereby a car upon jumping a track will be held in more or less engagement therewith, and prevented from falling from a bridge or down an embankment, and the engineer will be notified.

A hydraulic engine has been patented by Mr. Charles R. Whittier, of Yonkers, N. Y. The invention consists principally in providing such engines, used for operating elevators, with automatic valves or cut-offs between the main operating valve and the cylinder, or within the cylinder, for stopping the piston at both terminals without danger of its coming in contact with the cylinder head and without impeding its movement in the opposite direction.

## MISCELLANEOUS INVENTIONS.

A gate latch has been patented by Mr. George W. Charville, of Baird, Texas. The invention covers a novel construction and combination of parts for a latch which avoids the use of springs, and possesses no complications of parts likely to get out of order, while it can be cheaply made.

A washing machine has been patented by Mr. Ira B. Stillman, of Wellsville, N. Y. This invention covers an improvement on a former patented invention of the same inventor, and provides a reversible roller depressing spring, to avoid the danger of the bars becoming set at any particular curve.

A baling press has been patented by Mr. William C. Ellis, of Rising Sun, Ind. It may be mounted on a wheeled truck, and the invention covers a novel construction, making a press designed to be inexpensive, durable, and efficient for a wide range of work, in pressing hay, straw, cotton, and similar material.

A folding seat or chair has been patented by Mr. Amos H. Underwood, of Auburn, N. Y. It is especially applicable to sewing machine or type writing machine tables, permanently connecting therewith a light and strong seat or chair, easily adjusted for use and capable of being folded beneath the table when not in use.

A jar clamp has been patented by Mr. Henry H. Davidson, of Northport, N. Y. It is for hermetically securing covers upon fruit jars or like packages, and consists of a wire or bar adapted to grasp or fit upon the open end of a jar, and having a transverse bend, a cam lever being fitted on the bend of the wire or bar.

A double seaming machine has been patented by Mr. Virgil Crockett, of Dexter, Me. It is for making a double seam in tinware, the machine providing means for easily and quickly setting the different sized disks, while the heads may be quickly changed, and no spring or other delicate mechanism liable to frequent disarrangement or breakage is employed.

Sheathing paper forms the subject of a patent issued to Mr. William H. H. Childs, of Brooklyn, N. Y. The invention covers a compound paper consisting of two or more layers cemented together in the center by one composition and at the edges by another, making a waterproof disinfecting or anti-moth paper of improved quality.

A projectile for rifled guns has been patented by Mr. John G. Butler, of Springfield, Mass. It is made up of metal of two or more qualities, as hard and soft steel, or hard steel and wrought iron, these metals being in alternate disks or rings, and welded one to the other, the head of the projectile being adapted to take a high degree of hardness.

A pipe thread protector has been patented by Messrs. William H. and Harry W. Pickett, of Warren, Pa. It is made in the form of a ring, preferably of sheet metal, with an intumed flange at its outer end which laps upon the end of a pipe, for protecting exterior threads on the ends of pipes from injury during handling or transportation.

A baling press has been patented by Mr. Moses C. Nixon, of Peru, Ind. It is of that class known as "continuous" presses, the invention providing novel constructions of condensing, feeding, and pressing devices, with improved operating mechanism, and various novel details in the combination and arrangement of parts.

A cotton press clamp has been patented by Mr. William F. Moss, of Fitzpatrick's, Ala. Combined with the side doors are hooked sections having hooked ends or points extending in inverse directions, permitting the same to interlock, which may be quickly and easily manipulated to lock the doors of the press together, and will not be liable to accidental displacement.

A folding bed has been patented by Mr. Karmell Brooks, of New York City. A spring is so connected with brackets attached upon either side of the divisions in the side boards that when the lower section has been folded over and locked on the upper section, and it is desired to open the bed, the spring will act and take the burden of weight as the lower section is lifted.

A link driving belt has been patented by Mr. John K. Tullis, of Glasgow, Scotland. The invention consists in forming the leather links of a gradually increasing depth from the center toward the edges, thus constituting the driving surface of the belt into a rounded hollow channel, so that the belts will lie in more close contact with the rounded surface of the driving pulleys.

A horse detacher has been patented by Mr. John M. Fiedler, of Wentzville, Mo. It is an attachment for the singletrees of vehicles for holding and adjusting the traces, and detaching the horse in case of accident, and consists in a clamping buckle pivoted to the end of a singletree and adapted to engage the trace, a cord extending therefrom into the vehicle for releasing the clamping buckle.

A safety attachment for anchors has been patented by Mr. Nelson Smith, of Smithville South, N. Y. The invention consists in pivoting a triangular frame to the shank of an anchor between the flukes, so constructed that it will guide the cable clear of the non-embedded fluke without regard to the position of the ship, and in no manner interfering with cutting the anchor.

A grocer's cabinet has been patented by Mr. John P. Flick, of Ottawa, Ill. Combined with top, bottom, and ends forming a casing are partitions extending entirely across the cabinet, open upon opposite sides, with rack bars, and other novel features, being especially adapted for holding wrapping paper, paper bags and boxes, butter dishes and twine, besides tools and various other articles.

A ball turning lathe has been patented by Mr. Tronson Draper, of Petrolia, Ontario, Canada. The invention consists of a face plate covered with leather and backed by an elastic material, means for stretching the leather cover, and means for holding the ball to be turned in contact with the leather-covered plate, in connection with various novel features of construction and arrangement of parts.

A book attachment has been patented by Mr. Aron Bieber, of Bieber, Cal. The invention consists of a spring-acted plate bent to receive the edge of the book cover, and provided with a slide in which is inserted an elastic band which passes around the cover and around the leaves of the book, to mark the place temporarily and bind the leaves of the book together against the cover.

A tobacco pipe has been patented by Mr. August Werner, of Leadville, Col. A block is hinged to the base, with a bowl open at both ends pivoted at about the center to the block, whereby the bowl may be reversed and fire held within it, the base being provided with a receptacle for any proper absorbent and provision being made for the cleaning of the stem and base.

A music leaf turner has been patented by Messrs. John T. Carrington and Andrew J. Sleeper, of Clay Center, Kan. It is designed to enable the performer to turn the leaves by touching finger plates on levers near the keyboard, or by the use of a foot pedal, the invention covering novel features of construction and the combination of parts to make a simple and inexpensive device.

A trace fastener has been patented by Mr. Samuel M. Stevenson, of Bastrop, La. Combined with a singletree mortised vertically through each end is a retaining bolt having a hook upon one end and a fork upon the other for engaging the ring of the trace, the arrangement being such that the draught is upon the singletree, and the fastener is subjected to very little wear or strain.

A tricycle has been patented by Mr. Hermanns T. Frie, of Curacao, West Indies. The invention consists of a rocking chair located on the frame and operating at its free end on a segmental gear wheel, connected by a train of gear wheels with the axle of a driving wheel, being designed to make a machine which can easily be propelled very fast without much exertion on the part of the operator.

A bed slat fastener has been patented by Mr. Lafayette B. Hopkins, of Council Grove, Kansas. The side rail is provided at its inner face with an auxiliary rail, supporting a rail iron which supports the bed slat, the latter being provided with a slat iron which interlocks with the rail iron, to hold the slat securely while allowing instant removal when required, and also prevent lateral spreading of the rails of the bedstead.

A resistance regulator for electric currents has been patented by Mr. Georg Montanus, of Frankfort-on-the-Main, Germany. The invention consists of a number of wires forming a rheostat and connecting a number of springs with the terminals of the motor, and of a ring having a segmental flange which, when turned, connects the first flange of the number of wires with any desired number of the remaining wires, being especially adapted for electrical dental motors.

A hoisting machine has been patented by Mr. Walter Hart, of East Orange, N. J. Two disks are arranged to rotate in different planes, one of them beveled or coned, the other plain or beveled, the angles of the disks being arranged so that one point in the surface of each will be parallel with the corresponding part of the other disk, on opposite sides the disks gradually receding, with other novel features, making a device for hoisting and lowering heavy bodies.

A hoisting and conveying machine has been patented by Mr. William Thornburgh, of Elyria, Ohio. Combined with a main shaft is a frame adapted to swing longitudinally and operated from the shaft, a swinging pulley hanger being held on the outer end of the swinging frame, with other novel features, the machine being adapted for hoisting, loading, or unloading iron or coal or other articles from or to the holds of vessels, cars, or other places.

A filter has been patented by Messrs. Jacob Waespi, Emil Fretz, John Spellman, and John Frey, of Dallas, Texas. The receptacle has receiving, settling, and filtering chambers, there being transverse wedge-shaped ridges in the bottom of the latter, outlet pipes being arranged at the bottoms of all the chambers, the several chambers being easily cleaned, and the arrangement being such that one can be cleaned while the other is working.

A coupling for gas, steam, or water pipes, etc., has been patented by Messrs. Harrison Traver, of Brooklyn, N. Y., and John Weeks, of New York City. The invention covers a novel construction and combination of parts for a coupling which is designed to be unaffected by expansion or contraction, and wherein the supply will be automatically cut off from one section of pipe while the other section is disconnected therefrom.

A speed indicator for vessels forms the subject of two patents issued to Mr. Charles Sperry, of New York City. It has a pressure chamber with a flexi-

ble diaphragm, and connected upon both sides of the diaphragm to an outside double tube, in combination with registering mechanism and mercury chambers, indicating varying pressures according to the speed with which the vessel is moved through the water, and in combination therewith is a clockwork and registering system, showing the distance that the vessel to which the instrument is attached has covered since the time of starting.

A shutter for photographic cameras has been patented by Mr. William H. Lewis, of Brooklyn, N. Y. Combined with an apertured sliding shutter is a lever adapted to throw it, a spring, and an adjustable slide, with means for clamping or holding it when adjusted to vary the tension of the spring, the invention being more especially applicable to shutters having a straight sliding movement, adapted to both instantaneous and time work.

A camera especially adapted for instantaneous work has likewise been patented by the same inventor. It has a focusing device by which the camera tube may be focused approximately without observing the image on the ground glass of the camera, an improved spring device for holding the ground glass and for receiving and holding the plate holder, an improved finder, means whereby the speed of the closing of the shutter may be regulated, and buffers of peculiar form for arresting the motion of the shutter after being released, with other novel features.

A grindstone frame has been patented by Mr. William Thornburgh, of Elyria, Ohio. Combined with the side bars and legs is a clamp having openings in its bottom and sides, into which fit the ends of the side bars and legs, a vertically moving wedge fitting on the inside edges of the legs, and a bolt and nut for holding the wedge in place, with other novel features, making a frame which can be readily knocked down for transportation and easily set up and fastened together.

A scissors sharpener has been patented by Mr. Isaac A. Abbot, of Denver, Col. It consists of a stock having a sharpening disk held thereto and a gauge with a flange against which the blade to be sharpened rests, the gauge being held to a curved end part of the stock by screws, allowing adjustment of the flange at various angles to the periphery of the disk, the blade to be sharpened to be drawn across the disk with its inner face flat against the gauge, the wire edge made by the disk being at the same time removed by another edge.

## SCIENTIFIC AMERICAN BUILDING EDITION.

## NOVEMBER NUMBER.

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## Special.

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It is a folly for any physician to declare that he cures hopeless cases, or patients who have been "given up" by other practitioners. Sensible men, with pride in their art and reputations that they prize, do not seek to imperil their noble profession or their own fame. Insurance companies avoid taking risks on threatened lives. Of course every practitioner whose heart is not stone does take cases that imperil his success. He does so because he loves his fellow man. At the same time disease is most effectively grappled with in its earlier stages. Neglect of apparently trifling disorders leads to the many complicated cases which baffle the highest skill, when any one of the maladies existing alone could be handled by the physician with certainty. When the system has become the slave of some overmastering physical complication, a complete regeneration alone suffices to restore health. The blood, the nerves, and the digestive and urinary machinery must be thoroughly overhauled. For this nothing has ever been found that equals the Compound Oxygen Treatment. The New York Tribune recently declared that the successful application of oxygen gas to medicine has stimulated the most urgent search for new methods of making it unattended with the long and expensive process that has so long been used. Mrs. Starkey & Palen, No. 1529 Arch Street, Philadelphia, Pa., have met with unprecedented success in apparently hopeless cases of lung and heart diseases in the administration of their Compound Oxygen, and this encourages them to urge its merits. They have many imitators, some of whom, even with imperfect appliances, effect a few cures. But the best is not only the cheapest, but the safest. Drs. Starkey & Palen have a large office practice that employs themselves and several assistants during the day. They have introduced a system of Home Treatment, by which they send the Compound Oxygen to all parts of the country for a very low price. It should not be understood that they prefer to treat patients at long range. On the contrary, their large and magnificently appointed offices, 1529 Arch Street, are crowded daily. One visit, at least, is always desirable, but where that cannot be had the next best thing must be done. The sufferer should write a full description of his or her condition to Drs. Starkey & Palen. They will give an honest opinion of the case, and their advice will cost nothing.

## 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.

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Fibrous stone, or mineral wool, is in universal use for all insulating purposes. It has been proven to be the best. Send for proofs, with sample free. West'n Mineral Wool Co., Cleveland, O., or St. Louis, Mo.

Wanted—In a manufacturing business, a man acquainted with machinery and to some extent its manufacture, who is a first class salesman, of experience. Address A. B. C., box 773, New York City.

To Inventors, Patentees, and Manufacturers.—Geneseo Business Men's Association will aid the establishment of manufactures in Geneseo, Ill. Desires to correspond with parties who have a good thing and wish a good location. Address H. L. Kiner, Secretary, Geneseo, Ill.

Mineral wool will not burn. It is fibrous stone. Sample free. West'n Mineral Wool Co., Cleveland, O.

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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.

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

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LIFE OF WASHINGTON. By Virginia F. Townsend. Published by Worthington & Co., N. Y. Illustrated. 12mo. Cloth, \$1.25.

As a perusal of this work will show, this is a woman's way of looking at the great national hero; and although the ground traversed has been trodden before, it possesses interest from its actual familiarity, and tells a story of which one never tires. The work contains a series of pictures which take hold of the fancy and give a pretty vivid picture of the great man and his surroundings. The type is bright and clear and the illustrations well selected, rendering the work an appropriate one to be put in the hands of the young, for whom it was principally written.

EASY LESSONS IN THE DIFFERENTIAL CALCULUS. By Richard A. Proctor. London: Longmans & Green. 1887. Pp. vi, 114.

This little work is reprinted from the columns of Knowledge, the well known scientific journal, which is edited by Mr. Proctor, who also contributes a great part of the matter that appears in its columns. The book purports to give a thoroughly practical view of the subject. The work, small as it is, contains, according to the author's statement in the preface, rather more of the differential calculus than he was obliged to take up in studying for a degree at Oxford University. The general idea is to give the more practically useful applications of the science, such as determination of maxima and minima, quadrature of areas, and the like. The work is of pocket size, and in giving a more popular cast to the subject should be serviceable in removing some of the dread which people are apt to entertain for calculus.

FIRST STEPS IN GEOMETRY. By Richard A. Proctor. London and New York: Longmans, Green & Co. 1887. Pp. viii, 179.

This work attacks the solution of geometrical problems, such as questions in maxima and minima, rather than the study of propositions. It is not very extensive, as is evident from the limited number of its pages, but it, like the calculus of the same author, forms a pleasing pocket manual and complement to the ordinary course in geometry. For those who find their mathematics growing rusty, this work may be recommended as adapted to refresh the mathematical knowledge so often laboriously acquired and quickly forgotten.

A SHORT HISTORY OF ARCHITECTURE. By Arthur Lyman Tuckerman. With illustrations by the author. Charles Scribner's Sons.

As its title indicates, this is an elementary work giving in a clear, incisive, interesting way, a brief account of the origin and growth of the various styles of architecture. As it passes over the entire province of architecture, it gives the reader little more than a glance at the various topics touched upon, but the glance is comprehensive and instructive, and although we do not, of course, look for anything absolutely new, we have facts put before us in such a way as to leave an impression that will render these facts available for reference and future use. The author has endeavored to bring out the distinctive features of the various types and to emphasize their more prominent characteristics. Pages 168, price \$1.50.

A MANUAL OF ANALYTICAL CHEMISTRY, QUALITATIVE AND QUANTITATIVE, INORGANIC AND ORGANIC. By John Muter, M.A., Ph.D., etc. Philadelphia: P. Blakiston, Son & Co. 1887.

This work is calculated for the English Technical School requirements. It is largely in the form of schemes of analysis, not being a treatise on the subject in the sense of Fresenius' or Rose's works. It is a very useful laboratory companion, though for purposes of instruction, where the student is to be made a chemist and not a mere analyst, it should be supplemented by a more extensive work. In books of this class the danger is that a student may acquire the idea that every precipitate is absolutely insoluble, and that every analysis must go by the scheme like clockwork. Chemistry in its full scope is better studied by the defects of analytical processes than by their too successful application to simple analyses.

Notes & Queries

HINTS TO CORRESPONDENTS.

Names and Address must accompany all letters, or no attention will be paid thereto. This is for our information, and not for publication.

References to former articles or answers should give date of paper and page or number of question. Inquiries not answered in reasonable time should be repeated; correspondents will bear in mind that some answers require not a little research, and, though we endeavor to reply to all, either by letter or in this department, each must take his turn.

Special Written Information on matters of personal rather than general interest cannot be expected without remuneration.

Scientific American Supplements referred to may be had at the office. Price 10 cents each.

Books referred to promptly supplied on receipt of price.

Minerals sent for examination should be distinctly marked or labeled.

(1) F. H.—Marble is finished by grinding the surface with fine sand under a slab of stone, which may be a piece of marble or sandstone, to a true surface. Then the surface is smoothed with ground pumice stone under a rubber of leather or felt, and afterward polished with oxide of tin and water with a rubber of felt. The rubber is fastened to a block of wood.

(2) F. S. A.—No satellites or planets move in circles, to our knowledge. There is a possibility of comets moving in parabolas or hyperbolas; but the probability is that all orbits to which our sun is a common center are elliptic. The influence of the planets upon comets may often be such as to change their orbits apparently to hyperbolas, as also to change the direction of the axis of their future orbits. We have yet to find that any cometic orbits are interstellar.

(3) J. B. C.—Lead does not run smooth in casting with any kind of mould, nor do we know of any elastic substance that will not be destroyed by the heat of melted lead. If you can alloy the lead with tin or with tin and bismuth, it will run smooth at much lower temperature than the melting point of lead. Old typemake a smooth-running metal, which can be cast in plaster of Paris moulds.

(4) W. C. D. asks how solar prints are made. A. Specially prepared silvered paper is placed in a large extension camera, upon which the enlarged image is received. After an exposure of 15 minutes to sunlight, the paper is removed in a holder and to a dark room, where the picture is developed by means of special preparations. This slow method is now largely superseded by the employment of bromide paper, which is much more rapid and can be used with artificial light. In a dark room the paper may be pinned to a wall, and the enlarged image of a negative in an apparatus like a magic lantern be thrown upon it for about two or three minutes. It is then removed and developed in a solution of iron and oxalate of potash called ferrous oxalate, fixed in hyposulphite soda solution, washed, and dried. In all cases it is essential that a glass negative, somewhat thin, be secured from the paper photograph. Better still, use the original negative when possible.

(5) W. O. says: Will you kindly oblige one who, although a helpless invalid for fifteen years, is still much interested in your paper, by giving him the best information at your disposal? 1. What is the composition and process of manufacture of the best artificial stone sidewalk you know of? A. To make a cement walk, level the ground and pack the earth well; then spread upon it a stiff mortar three inches thick, of sharp sand four parts, best cement one part. Cover this while fresh with another coating of mortar made of best Portland cement one part, clean, sharp sand 2 parts. 2. Is there a reliable artificial building stone? If so, what is it composed of? A. Good artificial stone is made of best Portland cement one part, clean, sharp sand two parts, mixed stiff, shaped in boxes to give the desired form of blocks.

(6) J. J. C. asks the best coating or covering to prevent water pipes from freezing. A. Heavy hair felt and mineral wool covering, boxed, or boxing and filling with sawdust, hay, or straw, are all suitable for preventing freezing. The size of the box should be made suitable to the intensity of exposure; 1/2 inch or 3/4 inch water pipe should have from 3 to 5 inches of space all around filled with packing where exposed to cold winds.

(7) J. T. D. writes: When lead is plated with copper and used to make a steam joint, will the copper protect the lead from the steam? A. Lead does not make a good steam joint under any condition; it is too plastic. The copper cover will protect the lead from the action of the steam, and in this combination may make a joint that will answer for some purposes, but not as good as a corrugated pure copper gasket.

(8) T. N. C. asks why the Christian era commences four years after the birth of Christ. A. Our present era was fixed by Dionysius Exiguus in 525 A.D., and the latest edition of the Encyclopedia Britannica is authority for the statement that "we cannot demonstrate the exact year of the nativity, but critics of all schools are verging more and more to the acceptance of 4 B.C. as the probable year of Christ's birth."

(9) W. N. asks how to dress the skins of birds so that they can be pieced together and made into a small robe or mat. A. Thoroughly impregnate the fibrous part with a mixture composed of 4 parts alum and 1 part alum and saltpeter. Arsenic powder is also sometimes used in similar work as a protection from insects and vermin, but the danger of employing such a poison is evident. For directions about skinning and stuffing birds, see Spoons' Workshop Receipts, first series, which we mail for \$2.00.

(10) E. H.—The first French steam railway was the Paris and St. Germain line, 11 miles long, opened in 1827.

TO INVENTORS.

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INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

November 15, 1887,

AND EACH BEARING THAT DATE.

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

Table listing inventions and their patent numbers, including items like Air compressors, Alarm, Alloy, Bag holder, Bailer, Baking tin, Bedstead, Baling press, Battery, Battery jar, Bed cover holder, Bed, Sofa, C. E. Barber, Bedstead, Folding, G. W. Bent, Bell, automatic signal, A. P. Whiting, Bell, electric, G. M. Sternberg, Bell, signal, H. E. Russell, Jr., Belt, electric, G. S. Bennett, Blind stop, W. W. Rexford, Blind window, J. B. Hartman, Board, See Wash board, Boat detaching mechanism, J. W. Willing, Boiler, See Culinary boiler, Boiler flue attachment, J. Kelly, Bolt, See Double-acting bolt, Boot, felt, W. F. Quigley, Bottle stopper, Tucker & Roorbach (r), Bottle washing machine, N. J. Simonds, Box, See Journal box, Tobacco box, Bran duster, J. B. Alifree, Brick machine, W. T. Duvall, Bridge gate, swinging, C. K. Cordrey, Bridle check piece, C. Russwurm, Brush, fountain scrubbing, W. N. Rowe, Buckle, harness, J. H. Neill, Buckle, suspender, M. Ilyman, Buckle, trace, J. J. Wallace, Bung making machine, E. E. Elder, Burner, See Lamp burner, Bustle, H. O. Canfield, Bustle, M. B. Hammond, Button, S. B. Simon, Buttonhole piece, J. Reece, Button or stud, G. E. Adams, Button, spring cuff, E. K. Haynes, Button tuft or ornament, H. A. Cables, Buttons, etc., toggle fastening for, C. V. Richards, Cable grip, L. D. Libbey, Calendar, perpetual, A. H. Isbell, Can cover clamp, H. Cottrell, Can opener, W. B. Nutter, Cane, walking, O. H. Byrning, Canning machine, D. D. Ranney, Canvas stretcher, D. G. Smyth, Car coupling, R. R. Asbury, Car coupling, P. Campbell, Car coupling, J. Timms, Car coupling, T. Welch, Car heater, G. F. Higgins, Car heating apparatus, J. H. Sewall, Car mover, L. B. Gifford, Car, railway, H. H. Sessions, Car signal, Farmer & Shaw, Car starter, H. P. Titus, Car wheel, J. A. Woodbury, Car wheel rims, die for shaping, G. W. Miller, Card list, J. H. Fezandie, Carding machine, condensing, M. E. George, Carriage top irons, machine for drilling, F. Schreidt, Carriage top irons, machine for filing, F. Schreidt, Carriage top irons, machine for sawing, F. Schreidt, Carriages, gear iron for, J. F. Fallon, Carrier, See Cash and parcel carrier, Cash and parcel carrier, J. Burns, Casting ingots, smoking moulds in, J. Illingworth, Chair, See Convertible chair, Check register, J. H. Guest, Churn, H. J. Wagner, Cigarette machine, J. Floyd, Clamp, See Can cover clamp, Clock, H. A. Russell, Clock synchronizing apparatus, C. J. Hexamer, Closet, See Water or other closet, Cloth finishing machine, E. Rau, Coke in ovens, device for watering, T. S. & J. E. Stewart, Combing fibrous substances, machinery for, P. Heilmann-Ducommun, Compressor cross head, A. Snyder, Convertible chair, G. M. & F. P. Mann, Conveyor, J. Creager, Cooler, See Milk cooler, Cord or twine, machine for making, G. L. Brownell, Cot, folding, H. D. Hard et al, Cotton compressor, J. A. Gaboury, Cotton, etc., machine for opening and cleaning, R. Kitson, Coupling, See Car coupling, Pipe coupling, Thill coupling, Coupling, Traver & Weeks, Coupling for hose, steam pipe, etc., Jacobson & Bade, Cuff fastener, H. A. Clark, Culinary boiler, C. D. Salfeld, Cultivator, J. H. D'Amatter, Cultivator, duster, and digger, W. C. Davidson, Cup, See Oil cup, Cutter, See Washer cutter, Decorticating machine, J. B. Vogel, Dental engine, W. A. Knowles

Table listing inventions and their patent numbers, including items like Dental engine, W. B. Mann, Double-acting bolt, H. Clemons, Door hanger, H. Fleming, Door lock, E. Yeiser, Door spring, W. Gillilan, Drain pipe, T. W. Larrabee, Dress form, J. D. Richardson, Dress shield and making the same, G. A. Close, Drill, See Rail drill, Dust collector, O. M. Morse, Earthenware, manufacturing, M. S. Higbie, Electric cable, A. E. Dolbear, Electric machine and electro-motor, dynamo, W. Main, Electric machines, automatic regulator for dynamo, C. D. Jenney, Electro motor, E. Thomson, Electric wires in underground conduits, sectional draw rod for placing, W. H. Hart, Electro motor and dynamo electric machine, W. Main, Electrode for forming clots in varicose veins, J. R. Hamilton, Elevator, V. Gelineau, Elevator, H. F. Wallmann, Engine, See Dental engine, Hydraulic engine, Steam engine, Vibrating engine, Extension table, G. Hebebrand, Extension table, T. Skinner, Eyeglasses, C. H. Farley, Farm gate, O. A. Williams, Feed water apparatus, J. F. Belleville, Feed water purifier, S. H. Mosher, Feed water regulator, G. S. Herrick, Fence, Jay & Coate, Fence lock and stretcher, wire, C. F. Darnell, Fence rail, A. M. Brock, Fence wire spooling device, Martin McHenry, Fifth wheel blocks, making, W. H. & E. L. Baker, File, paper, W. H. H. Claugue, Filter, J. Waeppi et al, Filter for cisterns, M. Rice, Firearm, magazine, C. J. Ehbets, Firearm, magazine, W. Mason, Fire kindler, Clough & Flynn, Fish trap, J. Brosch, Flour mill, roller, N. Cornelius, Frame, See Grindstone, frame, Sewing machine quilting frame, Sign frame, Furniture base or support, M. Samuels, Gaiter, J. H. Elliott, Galvanic battery, C. Gassner, Jr., Game, ball, A. M. Freeman, Gas main, J. N. Pew, Gas, process of and apparatus for manufacturing, A. M. Sutherland, Gas supply, pressure gauge attachment for automatically controlling, W. B. Mann, Gate, See Bridge gate, Farm gate, Glass by means of compressed air, apparatus for blowing, R. E. Donovan et al, Glass globes, manufacturing, R. G. A. Witt, Glove or mitten, R. D. Burr, Grain binders, cord tier for, W. Butterfield, Grain cleaning and separating mill, M. Grollmund, Grain drying apparatus, P. Jepson, Grapple adjuster, E. A. Reed, Grinding and polishing material, C. M. Lindsey, Grinding or pulverizing mill, A. Morlock, Grindstone frame, W. Thornburgh, Guard, See Railway cattle guard, Gun or firearm, repeating, J. W. Mullins, Handle, J. E. Gaitley, Hanger, See Door hanger, Shaft hanger, Shafting hanger, Harrow and seeder, combined, C. Svendsen, Harrow, disk, M. G. Elliott, Harvester, self-raking attachment for, M. Dew, Harvesters, twine holder alarm for, J. Davaine, Hat bodies, machine for manufacturing, T. Shirley, Heater, See Car heater, Heater, D. F. McHenry, Heel nailing machine, J. F. McMullett, Hides, machine for unhairing, J. W. Vaughn, Hinge, P. Forg, Hoisting and conveying machine, W. Thornburgh, Hoistways, door for, W. K. Crofford, Holder, See Bag holder, Bed cover holder, Paper holder, Photographer's plate holder, Surgical instrument holder, Shade holder, Hoop expander, C. H. Shepard, Hook, C. Robin, Hopple, J. A. W. Burris, Horseshoe attachment device, J. Ott, Horseshoe machine, J. A. Burden, Hydraulic engine, C. R. Whittier, Indicator, See Mail box indicator, Weather warning indicator, Injector for furnaces, air, W. S. Hutchinson, Insecticide, A. Fullwiler, Ironing tablet, C. Zimmerling, Jack, See Wagon jack, Jar, See Battery jar, Jar cover fastening, F. H. Palmer, Joint, See Railway rail joint, Journal box, self-oiling, M. Garland, Key, See Telegraph key, Lacing hooks, machine for setting, J. H. Reed, Lamp, B. J. M. Menge, Lamp burner, H. Gillette, Lamp burner, E. B. Requa, Lamp, gas, R. M. Dixon, Lamp, hanging, E. Fisher, Lamp, miner's, J. L. Morris, Lamp shade, G. E. Brehmer, Lamp, signal, R. J. Armour, Lamp standard, W. Patzer, Lamp standard, W. A. Penfield, Lantern, tubular, F. Dietz, Latch, gate, G. W. Charleville, Leather, machine for splitting scraps of, C. E. Roberts, Light, See Signal light, Lightning rods, interlocking coupling for, G. R. Kress, Lithographic process, etc., L. Bertling, Lock, See Alarm lock, Door lock, Fence lock, Trunk lock, Lock, W. H. Taylor, Loom for weaving looped or terry fabrics, J. A. Campbell, Loom, hand, C. N. Newcomb, Looms, harness board for Jacquard, W. G. Northup, Looms, positive shuttle motion for, F. K. Wright, Magnetic separator, J. Wenstrom, Mail bag fastener, G. L. Walton, Mail box indicator, J. P. Tirrell