RECENTLY PATENTED INVENTIONS. **Engineering**

LOCOMOTIVE DRIVING GEAR.—David S. Patterson, North Platte, Neb. This invention provides for a front and a rear cylinder ar anged on opposite sides of the driving wheel and connected by their pitmen with crank pins on opposite sides of the center of the driving wheel, the improvement forming a driving gear of simple and durable construction, designed to prevent horizontal straining of the axle journals and pounding of the wheels on the rails, whether caused by the centrifugal force of a single main connecting rod, a single parallel rod, or a single crank pin, or by the angular thrust of the main connecting rod.

Engine Grease Arrester. - Jeremiah F. Traver, Newburg, N. Y. The oil, grease, and other impurities with which the steam becomes charged in passing through the engine to the condenser are effectively separated from the water of condensation, according to this improvement, in a novel form of filter box, the water of condensation being returned to the boiler comparatively pure. A pipe valve is adapted to be seated on the outlet pipe of the filter box, the valve being actuated by a float and extending from its seat to a point above the highest level of the water in the filter box, whereby only the lower, pure strata of water can be drawn off by the pump, the impurities being held for removal when a sufficient quantity has accumulated.

Railway Appliances.

CAR COUPLING .- Joseph Zehneck, Magdeburg, Germany. This is a device especially adapted to the form of car coupling employed on the German state railways. Combined in the coupling is a drawhead having a hooked outer end, a rock shaft on which is a yoke pivotally connected with a link, with means for throwing the shaft, while a frame pivoted to rock vertically has an operating lever, the frame ca ying arms diverging from each other and extending acros the hooked end of the drawbead.

CAR COUPLING.—Lemuel S. Manning, Alessandro, Cal. In this device a cylindrical drawhead is employed, spring cushioned against percussion and draught strain, conically recessed at its front and provided with a pivoted latch block adapted to interlock with an elongated slotted link. The coupling link has a conical recess at its front end, the link body having nearly parallel side walls, with top and bottom walls tapered toward each end from the center of length, and similarly slotted near each end to receive the tongue of a latch block in the conically recessed drawhead. The device is adapted to couple automatically with another coupling of its class, and uncoupling may be readily esfected from either side of the car.

METALLIC TIE.—Charles Worden, Rve. N. Y. The body of this tie is formed of a central arch and upwardly projecting side flanges, its shape being designed to insure great strength and at the same time permit of using comparatively thin sheet metal. Blocks resting upon the arch engage the flanges to prevent them from spreading, the blocks serving as supports upon which the rails rest. At or near the middle of the arch is a longitudinal opening through which packing mate ial may be introduced to insure the stability of the tie on the track.

IMPROVED TRACK. — John Murnane, Coopersville, N. Y. To securely hold the rails so they cannot spread and prevent accidents from broken rails is the object of this invention. The rails are each provided with a casing made in two sections, formed in such a manner that each covers one half of the base of the rail, the web, and the under side of the base of the The sections are held in place by bolts passing through at the web, where the sections are united to-gether and secured to the rail. The rail so protected can be spiked to the ordinary wooden tie, but a sectional tie of special form and having curved flanges engaging the casing sections is preferably employed.

Electrical.

TIME SIGNAL. — Gerhard W. Van Vianen, Cologne, Germany. This invention relates to electric alarms for dwelling places, hotels, etc., permitting visitors, guests and others to set the alarms for any time in their own rooms, so that the occupants of rooms will not be dependent on the punctuality of servants or others. The apparatus is set in motion by a clock provided with specially constructed contact mechanism, there being placed in each room a plug contact apparatus provided with a bell which serves as an alarm, conducting wires connecting the clock with the different alarms.

two pivoted clamping dogs pivoted between their ends their being injured. to the body and projecting at their inner ends into the bore, a spring-pressed plate bearing on the inner ends of creased by increased tension on the wires.

Tower Wagon. - Joseph S. Hill, Lafavette, Ind. This is a wagon to facilitate stringing trolley wires for electric railways and for putting up electric lines generally. It has an extensible tower and is provided with an insulating platform for supporting the wagon, there being also a reel for holding the line wire, sheaves for guiding it, and a brake controlling the reel, whereby any desired amount of tension may be given to the wire.

Mining.

MINER'S SAFETY LAMP. - Heinrich other novel features designed to insure safety, the construction being such that the chimney and the gauze cylinder may be readily connected and disconnected from | holder also affords facility for introducing condiments

the reservoir, while the accidental disconnection of the

COAL WEIGHING BASKET. - Simon Jones and Samuel B. Bishop, Hamilton, Ohio, and Thomas C. Dupont, Central City, Ky. This is a device for weighing coal in transit from the inclined screens or chutes to the railway car, the basket being of such construction as to permit the miner's quota of coal to be weighed at one operation, and yet separate this quantity while in the basket into different grades to be separately discharged into different cars or be loaded with the other coal which goes through the screen for which the miner is not paid.

Agricultural.

CULTIVATOR.—Joseph R. Finney, Randolph, Wis. The cultivation of corn and similar plants is especially the design of this machine, in which, when two rows of teeth are employed, either of the rows may be raised or lowered independently, or both elevated or depressed simultaneously, while the beams carrying the rows of teeth are so swiveled to the frame of the machine that when the latter is turned at the end of a row the cultivator does not injure the plants. The cultivator teeth are also of peculiar formation, and in their rear are located the teeth of hill coverers not adapted to enter the ground, but to travel quite close

SEED POTATO CUTTER. — Isaac Dunn and William R. Dunn, Jr., New Brunswick, N. J. This is a device to facilitate the cutting of potatoes for seeding purposes without danger of bruising or injuring the eyes or skin of the potato. The box containing the potatoes has an opening to form a rest for the operator's arm, and a knife of special shape is secured to the end of a swingmg arm, the latter being connected by a link with a treadle. The arrangement is such that a shearing cut is given to the potato, which may be very conveniently handled by the operator.

Miscellaneous.

ORGAN.—Jerzy Polukanis, Bloomfield, N. J. A rapid sounding of the organ pipes is designed to be obtained by the improvement made by this inventor, the performer being also enabled to easily manipulate the keys. A self-acting pneumatic valve is adapted to be actuated by the wind from the wind box, on releasing air from the valve by means of the keys or pedals, the valve being controlled by a preponderance of pressure from the wind box at the time the keys or pedals are

INKSTAND.—Phineas B. Myers, Brooklyn, N.Y. This is an inkstand provided with one or more racks so arranged that when a particular rack i pressed down, the cover of a corresponding ink well will be automatically opened, the covers of other ink reservoirs remaining closed, enabling a bookkeeper to keep a red ink pen upon a rack operating the lid of the red ink well, the black ink pen being placed on a similar rackfor the black ink well, etc., thus preventing the frequently recurring mistake of dipping a pen mto the wrong ink reservoir, and enabling the penman to work with perfect safety and dispatch.

GLOVE. - George M. Cluze, Paris. France. This is a new article of manufacture, consisting of a glove almost identical in appearance with the usual style, but having the thumb sewed to it in a particular manner, whereby the seam around the thumb is avoided, and the thumb is rendered yielding in its length, affording greater freedom for the movement of the hand The seam by which the thumb is secured does not extend to the wristband, nor is it continued to the palm, so that the latter is left perfectly smooth, as in ordinary gloves.

ROLLER SKATE.—Carl Storla, Belford, South Dakota. This skate has a box-like frame containing compartments for holding steering mechanism, wrenches, and other articles, and means are provided for tying the skates together to form a vehicle for carrying the rider. The skates likewise have movable springpressed platforms held to move vertically within the boxlike body, in connection with a ratchet mechanism for turning the wheels by the downward movement of the platforms, a tripping device automatically releasing the ratchet during the upward movement of the platforms, and the skates being operated by simply shifting the weight of the body from one skate to the other, whereby the skates may be made to run very rapidly.

WASHING MACHINE.—James H. Jones, Floyd, Texas. This device comprises a revoluble cylin der mounted in a casing, there being on the interior of the cylinder slats corresponding to the ribs of the washboard, while in connection therewith is arranged a series of buckets, so shaped as not to present sharp edges likely WIRE COUPLING.—John Bodine, Pitts- to injure the clothes, the buckets serving to carry upwater field, Ill. To couple the ends of electric wires, or mend and empty it upon the clothes as the cylinder is revolved broken wires, so that the circuit will be as good as it, by means of a crank. The clothes are thus tumbled about, 10. was before the break, is provided for by this invention as the water is kept in a state of agitation, and the by means of a longitudinally bored coupling body, with clothes are conveniently washed without a possibility of

CONVERTIBLE STOOL.—Frank Graham both dogs. The ends of the wires are thus firmly bound and Irvine E. Curtis, Easton, Washington. This is a secin place in such way that the g ip of the coupling is in- | tional stool which may be folded to incase an umbrella. the whole device being then adapted for use as a walking stick. It consists of an upper and lower series of braces hinged at their adjacent ends to swing outwardly, each brace having an outer hinged section to swing inwardly into a horizontal position, while an annular ring or cap connects the adjacent inner ends of each series of hinged sections. When the stool is folded an open-ended tube is formed to removably inclose anumbrella.

EGG HOLDER.—Abraham A. Anderson, New York City. Two patents have been granted this inventor for a device comprising a frame, containing an cally, a large and splendid MAGAZINE OF ARCHITEC- faces in advance when exposed to the sun? A. All raegg cup or socket, a top ring fitting the upper end of the ITURE, richly adorned with elegant plates in colors and egg, and a horizontally swinging knife with a circular eggreceiving aperture, and a swinging cover plate also having examples of Modern Architectural Construction and Hubner, Hermsdorf, Germany. This is a lamp in which an egg-receiving aperture, whereby an egg may be se- allied subjects. the ignition of the wick is effected by the explosion of a curely held and one end cut by the knife, which does not! The Fullness, Richness, Cheapness, and Convenience percussion cap or the like, the invention also providing then interfere with the removal of the contents of the of this work have won for it the LARGEST CIRCULATION shell. The egg may be further cooked if desired, the egg of any Architectural Publication in the world. Sold by and the holder being together placed in the water. The all newsdealers.

and stirring them within the egg shell. With the holder likewise an egg may be conveniently cooked at the table with an alcohol or other lamp.

Pot or Kettle Scraper.—Peter Unsinger, Fremont, Ohio. This is a flexible scraper to fa cilitate removing grease and dirt from the sides, bottoms, and corners of pots, kettles, metallic sinks, etc. It con sists of a thin steel blade with a handle formed in two parts, each part pivotally connected at its forward end to the blade, and the parts pivotally connected with each other at their rear ends. The scraper readily conforms to the outer surfaces of the pot or kettle, and may be readily introduced into the sharp corners to clean them

COOKING STOVE.—Albert Loewenthal, Berlin, Germany. This is a portable or pocket stove, comprising a casing formed of two sections fitting one upon the other, each section being provided with a bowlhaped cavity, the cavity of one section being adapted to receive spirits or alcohol when placed under the other Chain Belting & Grain Dryers, F. H.C. Mey, Buffalo, N.Y. section. The device is specially designed to serve the convenience of travelers, as it can be readily carried and easily set up for use in preparing, cooking, and warming coffee, cocoa, eggs, soup, etc.

BURNER FOR GAS STOVES.—Anton Weiskittel, Baltimore, Md. An annular cup or receiver has an open central air space, and its edges have out-wardly flaring beveled surfaces forming a concave seat, in which rests by gravity an annular top having beveled surfaces and radial grooves, the latter serving to conduct off any liquid that may be spilled, and prevent its pass ing into the cup or receiving chamber of the burner. All separate fastening devices are dispensed with, and access may be readily had to every part for cleaning.

Pump. - John W. Gregory, Garden City, Kansas. This pump has a displacing cylinder so constructed and arranged that the cylinder may be made of equal weight to the liquid which it displaces, thus reducing the power required to operate it, the relative weight and buoyancy of the displacing cylinder being conveniently adapted or adjusted to different depths of wells or heights to which the water is to be raised.

DESIGN FOR A FLAG.—John Terhune. Hackensack, N. J. This flag has on one side the insignia of Ferdinand and Isabella, and on the other representations of Columbus and his caravels, with characters simulating a page of his log book. The flag is swallow tail in shape, the Maltese cross of the insignia on one side being of comparatively large size.

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SCIENTIFIC AMERICAN BUILDING EDITION

JUNE, 1893.-(No. 92.)

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1. Elegant plate in colors, showing the residence of Joseph P. Beach at Pine Orchard, Conn., erected at a cost of \$1,200 complete. Floor plans and two Messrs. Munn & Co., perspective elevations. architects, New York.

Plate in colors showing the handsome residence of Seward W. Jones, at Newton Highlands, Mass. erected at a cost of \$9,000 complete. Perspective view and floor plans. Messrs. Rand & Taylor, architects, Boston, Mass. An attractive design

A handsome colonial dwelling on Beacon Hill, Bos ton, Mass. Two perspective views and floor plans. A model design. Messrs. Shepley, Rutan & Coolidge, architects, Boston, Mass.

A Colonial residence dwelling at Montclair, N. J., erected at a cost of \$5,500 complete. Floor plans, two perspective view, etc. Messrs. Munn & Co., architects, New York. An excellent design.

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Views showing the exterior of the twelve story Boyce Building, at Chicago, put up in thirty-nine days. The cost of the structure was \$300,000.

The Fifth Avenue Theater, New York.—Views of the auditorium, the Broadway lobby, the Twenty-eighth Street foyer. Mr. Francis H. Kimball, architect, New York.

 Miscellaneous Contents: New lien law in California. estimate brick work .- Foul water main .- An improved woodworking machine. illustrated.-An improved scaffold truss, illustrated.—Sawdust building bricks.-Some beautiful arch work. illustrated.-Mineral wool in buildings.-Wood mantels, illustrated.—Sound titles for real estate.—Durability of cedar.—Tinfrom tin scrap.—Improved steam heater, illustrated.

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(5146) F. I. A. asks: 1. Would the microphone described in "Experimental Science" work well as a telephonic transmitter? A. Yes. 2. If so, would it make it better to substitute a diaphragm of tintype in the place of the wooden one? A. Yes; the diaphragm being not more than 214 or 216 inches in dia-Mr. Oscar S. Teale, architect, New York City. Per- | meter. 3. Which of the two motors described in Supple. MENT 641 and 759 respectively would give the most satisfaction? A. Probably the motordescribed in Supple MENT 759 would prove satisfactory.

(5147) F. M. M. writes: In our gas field we have rock pressure of gas 135 lb. Our line pressure is about 125 lb. The question in dispute is this: We have a four inch pipe running from part of our field, say three miles, into the six inch pipe. Parties here claim by placing another three inch pipe alongside the four inch, we would gain pressure by it on the six inch line. We have now, understand, twenty-two miles of six, inch a of four it -An improved spring door hinge, illustrated .- To be the same, that is, it would equalize on the six, and pressure be the same; but by placing a pump on said line to force from the end of six inch line to city would be far better, and use suction on the four inchline. A. The difference in pressure between the four inch pipe and the six inchpipe is no doubt due to friction. Any additional supply that you can make to the six inch pipe by an additional pipe will increase the flow and tend to equalize the presre or raise the pressure in the six inch main. A pump will also overcome the difficulty, but in general is expensive for gas transmission.

(5148) N. R. F. asks: 1. Why is it that two hundred ordinary book pages; forming, practi- the wheel of a radiometer always rotates with the white diometers do not turn the same way. At a certain de gree of exhaustion the black surface moves toward the source of heat, while at a further degree of exhaustion the white surface moves toward the source of heat. The cause of rotation is supposed to be the difference in the deg ee of absorption and radiation of heat by surfaces of different colors. The dark surface being hottest repels the molecules of gas. If the gas is sufficiently rarefled the reaction due to such separation turns the vane. If the

gas is not sufficiently rarefied, convection currents are established, causing the blackened faces to approach the source of heat. There is also a degree of rarefaction at which there is a critical point in the conditions of molecular disturbance, when the radiometer ceases to move under the influence of heat. 2. How many people do you think will visit the World's Fair from opening day, May 1, to date of closing? A. Probably several million.

(5149) J. C. R. says: I have a well the water of which is full of Turbellarian worms, thus rendering it unfit for use. Could you suggest a means by which the well could be cleared of the worms? hat is the cause of these worms being in the well? Is it on account of some impurity or do they exist in pure water? Please give me a receipt for cheap metallic roof paint which will stand the weather and will not wash off. I would prefer a dark brown. A. Thorough cleaning of the well is recommended. Then, if the worms still come in, put in a trout or frog. The worms probably burrow in the soil around the well and crawl through the curb and drop into the water accidentally. The best paint for roofs is red oxide of iron paint or Prince's metallic paint mixed with bolled linseed oil. Add a little lamp-black to give it the required shade. Let the first coat dry well before second coat is put on. Use no turpentine

(5150) E. A. P.—It is said the surface of tracing cloth may be restored by varnishing the cloth with Canada balsam dissolved in turpentine, to which may be added a few drops of castor oil, but do not add too much, or it will not dry.

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AND EACH BEARING THAT DATE.

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Track clamp. Clothes drier, H. A. Eversdyk	499,663
Track chain. Clothes drier, H. A. Eversdyk. Clothes line hanker, J. R. Hoit. Clothes line wire, F. S. Dowell. Clover hulling machines, concave for, M. T.	499,528
Clute training machines, Children Mariag Machines, Clutch, Iriction, J. F. Byers. Coat and hat book, F. Taylor Coin controlled machine, W. M. Ducker. Coke oven, G. W. Mixon.	499,591 499,208 490 cm
Coin controlled machine, W. M. Ducker	499,453 499,565
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Collars, cuffs, etc., composition for glazing, A. Viner. Colters machine for making plow, J. T. Duff. 4 Colters, press for straightening plow, J. T. Duff. 4 Commode, D. K. Osbourne. 4 Commude, J. Towle 4 Commutator for dynamo-electric machines, H. F. Parshall 4 Compassioint, F. Aborn. 4 Composite stock, A. A. Hill. 4 Compound engine, concentric, J. Player. 5 Conveyer, J. M. Dodge. 499,525 to 4	99, 685	Keyho Kitche
Colters machine for making plow, J. T. Duff 4 Colters, press for straightening plow, J. T. Duff 4 Commode, D. K. Osbourne	99',454 99,418 99,438	Gr Knife. Knitti
Commode, J. Towle Commutator for dynamo-electric machines, H. F. Parshall	99,310	Knitti R. Lace f
Compass joint, F. Aborn	99,193 99,546 99,589	Lamp, Lamp Lamp
Compound engine, tandem, J. Player. 499,525 to 4 Conveyer, J. M. Dodge. 499,525 to 4 Corn crib. J. Beckley, Sr. 4	99,584 99,527 99,200	Lamp, Lamp tle
Cot or hammock book, C. S. McRee	99,547 99,644	Lamp Lamp Lantei
Cotton grid, roller, F. L. Montgomery, 4 Cotton grader, L. A. Greene. 4 Coupling. See Car coupling. Hose coupling.	99,358	Last, J Lathe Letter
Cow tail holder, J. Cooper	99,213 99,622	Light Lock, Lock,
Cultivator, Cardinal & Love. 4 Cultivator, rotary, J. Carrothers. 4 Cun See War and	99,415 99,211	Lock, Lock a Loom,
Current generator, alternating, Stanly, Jr., & Kelly.	99,446	Loom Loom Loom, Loom,
Current generator, alternating, Stanly, Jr., & Kelly Current pretector, strong, C. D. Maskins. Cut-of engine, variable, d. Abell. Cut-out P. J. Barrett Damper regulator, I. Z. Merrjam Dental plueger, pneumatic, J. H. Helvly. Dental plueger, pneumatic, J. H. Helvly. Die. See Welding die. Diffusjon cell locking device, H. P. Dyer. Display stand, B. Masse. Display stand, B. Masse. Display stand for shoes, J. C. F. Dick. Distilling tar, etc., method of and apparatus for, F. Lennard. Distribution systems, safety device for, H. C.	99,493 99,497 99,435	Loom Lubric Lubric
Dental plugger, pneumatic, J. H. Heivly. 4 Dental vulcanizer, G. B. Snow. 4 Die. See Walding die	99,632 99,602	Lubric Magne ces
Diffusion cell locking device, H. P. Dyer	99,529 99,420 99,326	Martin Matrix Be
Display stay for shoes, J. C. F. Dick. 4 Distilling tar, etc., method of and apparatus for, F. Lennard. 4	99,375	Measu Measu Mecha
		Metal Ha Metal
Door lor cat or do gnouses, G. Clement	99,222	Metals H. Metals
Dough receptacles, collapsible cover supporting frame for, K. L. Brewster. Draught device for stacks, B. F. Taylor Draught device for blokey. Dredging bucket, W. A. Collins.	99,510 99,607	mil. Mill. Mirror
Dredging bucket, W. A. Collins. Dress shields, apparatus for manufacturing, S.		Miter Mop, 'Mords
Dress shields, apparatus for shaping, S. S. Wil-	199,272 199,271	Mord a Motio He Motor
Drill, A. G. Turner	199,312 199,460	Motor liq Music
Dye, blue tetrazo, Bammann & Ulrich	99,198 99,216 99,649	Music Music Neckt
Dyeing aniline black, O. P. Amend. 4 Egg cup and cooker, W. R. Hill. 4 Electric igniting device, W. H. & G. E. Russell. 4	99,410 199,426 199,596	Nickel an Numb
Electric light, G. Sautter	99,473 199,544 199,363	Ores, t
liamson Drier. See Clothes drier. Drill, A. G. Turner Dryng apparatus, F. X. Hooper Dye, blue, E. Meyer Dye, blue tetrazo, C. Duisberg Dyeng and printing, V. G. Bloede Dyeing and printing, V. G. Bloede Dyeing and printing, V. G. Bloede Dyeing and printing, V. G. Bloede Eige cup and cooker, W. R. Hill Electric igniting device, W. H. & G. E. Russeil Electric igniting device, W. H. & G. E. Russeil Electric machine regulator, J. C. Henry Electric switch, J. F. McElroy Elevator, See Hydraulic elevator. Elevator, See Hydraulic elevator. Elevator gate operating device, T. W. Graham Elevator indicator, A. L. Meyer Elevators, electric signaling apparatus for, C. G. Armstrong Armstrong End gate, wagon, N. Broadweil End gate, wagon, N. Broadweil Endigate. See Compound engine Exercising machine. W. J. O. Bryon, Jr	199,496 99,357	Overs Ozone tio
Elevator indicator, A. L. Meyer Elevators, electric signaling apparatus for, C. G. Armstrong.	199,390 199,411	Packin Packin Packin
End gate, wagon, J. S. & H. L. Phillips. Engine. See Compound engine. Engelos letter W. McDonnell	199,579	Pail, o Pan. Pan e Paper
Envelope, letter, W. McDonnell Exercising machine, W. J. O. Bryon, Jr. Extension table, W. D. Stryker Extractor. See Butter extractor. Staple ex-	99,205 199,480	Peas 1 R. Pen a
tractor. Eyeglasses, De Celles & Wells	199,320 199,554	Pen o Persu Phone
Fan, G. W. Grimes. Fau, exhaust, J. E. Green. Faucet, beer, C. Guenther.	199,421 199,573 199,537	Pills, i
tractor. Eyeglasses, De Celles & Wells. Eyeglasses, A. J. Landry. Fan, G. W. Grumes. Fan, G. W. Grumes. Fan, exhaust, J. E. Green. Faucet, beer, C. Guenther. F'eed roll for opening, picking, and carding machines, A. B. Hansoom Feed trough, P. Reinbart. Feedwater heater, A. Normand Fence, W. J. Johnston. Fence ratchet, whe, J. Stauffer. Fencing machine, siat and wire, J. B. & J. E. Solt	199,423 199,249	Pipe of Pipe in
Fence, W. J. Johnston	199,567 199,462 199,260	Plane Plant Pliers
Spivey & Halmshaw	199,603	Plow Pole of Pole s Powe
Fibrous material, machine for treating, Adriance & Armstrong. File, letter or bill, W. Lumley. File or index, continuous, A. J. Rudolph. Filter, fresh water, R. R. & C. B. Darling. Filter, non-pressure, F. K. Way. Filter, pressure, C. C. Burke. Fire escape, C. Dobbs. Fire escape, C. Dobbs. Fire escape, C. Dobbs. Fire escape tower, O. Nielsen Flour bin and sifter, M. S. Sager. Folding table, N. Schumacher Fork. See Hay fork. Friction brake, J. F. Byers.	199,409 199,433 199,443	Press.
Filter, fresh water, R. R. & C. B. Darling Filter, non-pressure, F. K. Way Filter, pressure, C. C. Burke	499,284 199,268 199,515	Prope S. Prote
Fire escape, C. Dobbs Fire escape, portable, Murphy & Rankin. Fire escape tower, O. Nielsen.	499,528 (499,562 499,329	Pug n Pulle Pulle
Folding table, N. Schumacher	499,292 499,599	Punel Puzzl Rack.
Fumigation, E. Watson	199,407	Radia Radia Railw Railw
Furnace for fusing processin, etc., W. M. Sharp. Furse block, electric, T. J. Fay. Fuse block, multiple, J. T. Voorhees. Fuse block, relay, G. T. Voorhees. Game apparatus, C. H. Burch.	499,664 499,614 499,485	Railw Railw Railw
Game board, G. W. Seeback	100,001	Rasp, Rasp Rasp W
Game counter, C. C. Fields. Garden implement, R. M. Rockey. Garment supporter, W. B. Draper. Gas lighting apparatus, electric, T. W. Lane Gas lighting apparatus, electric, Lane & Lee Gas, making, E. Tatham Gas, mannfaduring, hydregarhen, J. W. Tall-	499,251 499,215 499,298	Recor
died interested and and an oral oral		Regis Ist Regul
Gas pressure regulator. D. Wilson	499.489 I	ch Go Resav Rollin
Gate. See End gate. Railway gate. Wire gate. Generator. See Current generator. Glass, apparatus for the manufacture of, L. West Glass carrying vehicle, R. M. Roberts	499,624 499,593	Rollin Rollin
Governor for pumping engines, nuit pressure, F.	400.450	Rollin H Rollin
Governor, speed, W. H. Von Mengeringhausen. Grain purifier, F. M. Schell Grain scourer and dust collector, combined, A. Heine	499,255 499,598	Rollir Rubb ha
Graphoscope, H. Franz	499,380	Rubb Rule, Safe,
Grinding pan, W. G. Stevenson. Gun barrels to stocks, means for separably attach- ing, W. Mason. Gun feed, machine, R. J. Gatling. Gun mounting, F. F. Fletcher.	499.367 I	Sash, Saw f Sawn
Gun mounting, F. F. Fletcher. Gun sighting apparatus, F. F. Fletcher. Guns, antomatic recoil rest for breech-loading, H. Borchardt.	499,530 499,532	Saws Saws Sawt
Guns, breech mechanism for breech-loading, F.	499,315 [†] 499,531	Scale, School
bolt D Mangar	499,516 499,328	Scrap Sea, a
Guns or cannon, adjusting device for rifing, M.	499,683 499,439 499,238	Seat. Separ Separ
Hanger, See Clothes line hanger. Door hanger.	499,238	Separ Sewar
Pipe banger. Trolley wire hanger. Harness, C. R. Spencer. Hat and coat hook, F. Taylor. Hat blocking process and apparatus, Yule & Bag-	499,684 499,608	Shaft Sheav Sheet
lin Hay fork, double harpoon clover, D. A. Shank Heater. See Bath water heater. Car heater.	499,492 499,258	Ship's Shoe
Feedwater heater. Soldering iron heater. Heating apparatus, steam, F. Kaeferle	499,231	Shutt
paratus for, W. Heckert	499,322 499,412 499,339	Sifter Signa Silver Sr
Holsting apparatus, N. H. Gilmore. Holdback, vehicle, C. A. G. Swasey. Hook See Cost and betheath Cost as homest	499,428 499,536 499,447	Slip b Snap
hook. Hat and coat hook. Snap hook. Hose coupling, electric, H. Sargent	499,254 499,578	Snap Snap, Solde Solde
Heating hôt water and steam, method of and apparatus for, W. Heckert. Heating system, M. W. Bayliss. Heating system, I. N. Gordon. Hinge, electric, W. S. Hull. Holsting apparatus, N. H. Gilmore. Holdback, vehicle, C. A. G. Swasey. Hook. See Coat and hat book. Cot or hammock hook. Hat and coat hook. Snap hook. Hose coupling, electric, H. Sargent. Hot air furnace, W. J. Owens. Hydraulic elevator, S. A. Worcester. Hydroarbon burner, Lannert & Jeavons. Ice breaking and clearing apparatus, Kruisbrink & Van Leeuwen	499,276 499,300	M Spinn Spool
& Van Leeuwen, Ice splitter, C. R. Day Incubator, C. W. Robinson Index and file, book, A. J. Rudolph, Indicator. See Elevator indicator, Railway in-	499,296 499,286 499,396	Spool Spool Spool Spool
Index and file, book, A. J. Rudolph, Indicator. See Elevator indicator, Railway indicator, Indicator look W. F. Reesley 400 500	455.442	Spoot
dicator. Indicator lock, W. F. Beasley	499,640 499,524 11,344	Sprin Sprin Stair Stand

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5	Keyhole guard, W. F. Beasley	Stay Stee
9	Grossman	Stee Stov Stov Stov Stov Stov
9 4 7	Lamp chimney attachment, K. N. Hollister. 499,548 Lamp, electric arc, R. M. Hunter. 499,676 Lamp extinguisher and wick trimmer, C. Shoet-tle 490,388 Lamp bolding ring, T. Hipwell. 499,388 99,388 499,388	Stov Stov Stra Stra Stru
7	Lamp shade bolder, electric, C. Rembof 499,470 Lanteru, bicycle, F. Rhind 499,440 Last, J. C. French 499,669 Lathe attachment, W. Frasier 499,289 Latter Fox O. I. Witzball 490,669 1 of the Fox O. I. Witzball 490,669	Sugg
300	Light See Electric light, Lock See Indicator lock Switch lock. Lock, W. F. Beasley	Swit Swit
í :	Loom, A. W. Farweather 499,456 Loom for weaving cut pile fabrics, G. A. J. Schott 499,476 Loom lingo, G. W. Stafford. 499,478 Loom shuttle thread guide, R. Orr 499,308 Loom swyrel Smith & Michelin 499,309, 409,400	Tab Tab Tap
752	Loom weft stop motion, d'Andria & Slicer. 499,196 Lubricator, liny & McIntyre. 499,541 Lubricator, Mattes & Lewis. 499,434 Lubricator, II. C. Roller. 499,595 Magnetic generation and appearatus therefor are-	Ten Test Thi Thi
9 0 6 5	Lamp, electric arc, R. M. Hunter	Tire Tire Tob
7 5 7	Mechanical power for elevators, etc., P. Sweeney 499,605	Toy Toy Toy Tra Tra
6 2 3	Hauber 499,540 Metal brunching apparatus, C. L. Coffin 499,549 Metals, method of and apparatus for uniting. J. H. Bassler. Metals, treating materials containing, R. F. Nenninger (r) Mill. See Pug mill. Rolling mill.	Tro Tro Tro
721	Mirror, duplex, French & Heald	Tru Tur Tur Twi
1 2 0	Motors and compressors, apparatus for cooling liquids employed in W. Maybach	Typ Typ Typ Typ Um
386906	Music leaf turner, Ji. Abistrand. 499,935 Music leaf turner, O. W. Newcomb. 499,636 Nickel from ores containing nickel, producing	Vac Val Val
634	Motion, dutch mechanism for reversing, M. & C. Heimeke	Val Veh Veh Veh Vel Ves
6 7 0	Ozone, apparatus for the production and inhala- tion of, M. P. Oudin. 499,572 Packing, piston, G. H. Reynolds 499,471 Packing ring or gasket, rubber, J. J. Voerhees 499,422 Packing, red. J. B. Griswold. 499,422	Vis Vis Wa Wa
1 9 3 5	Pail, dinner, R. E. Carroll 499,628 Pan. See Grinding pan. Vacuum pan. Pan emptying machine, W. G. Stevenson. 499,366 Paper box, D. S. Clark 489,655 Peas from the vines, gathering and bullinggreen,	Wa Wa Wa
0	Pen or pencil holder and prutector, C. Kertell. 499,552 Perspectokraph, J. H. S. Jechoux 499,370 Phonograph, W. Bruenung 490,370	We We We We
37	Pinking machine, E. W. Silsby 499,445 Pipe collar, soll, A. W. Cram 499,589 Pipe hanger, Hunter & Cajar 499,549	Wh
19 17 20 13	Planer, buzz, E. F. Gordon. 489,220 Plant protector L. Bricker 499,203 Pilers, L. E. Meilen. 499,638 Plow attachment, A. J. Petch. 499,577 Pole coupling, vehicle. A. J. Taylor 499,408 Pole strap coupler, G. D. Hayes. 499,225 Power, See Mechanical power. 499,225 Press, J. D. Deiss 490,416	Wh Wh Wir Wir
)3)9 13 13	Prejectile, D. B. Wesson. 499,487 Propelling canal boats by electricity, system of	Wit Wit Wit Wit Wir Wre
4855820	Protector. See Current protector. Plant pro-	Wre
19 12 19 17	Rack. See Display rack.	Bee But Che Che Cig
76 14 15	Railway, conduit electric, W. R. De Voe. 499,374 Railway crossing, W. S. East 499,455 Railway gate, J. Harper 99,300 Railway indicator, conductor's, B. W. Carrington 499,300	Dis Ele Fal
17 51 18 15 15	Rasp punching machines, cutter head for, A. Weed	Foo
98 97 93 96	Register. See Autographic register. Cash register. Regulator. See Damper regulator. Electric machine regulator. Gas pressure regulator.	Lar Lar Les
24 93 01	Resawing machine, A.J. Haskell. 499,424 Rolling and condensing metal bars machine for, B. V. Daelen. 499,677	Lin Me Pai
50 12 55 98	Rolling mill feeding and discharging apparatus, 499,259 R. E. Sheldon. 499,259 Rolling mill olling box, J. Judd. 499,431 Rolling mill, universal, A. Reese. 499,590	Rei
35 38 30 37		Sev Ski Sos
34 30 32	Saw set, C. C. Taintor	Sta Tol Tru Vet
15 31 16	Hinkley. 499.238 Scale, pendulum weighing, L. C. Farmer. 499.378 School seat and desk, adjustable, Gard & Wing. 499.671 Scraper, B. F. Shuart Sea, apparatus for calming the waves of the, B.	Wa
28 83 39 38	B. D'Alessandro. 499,319 Seat. See School seat. Vehicle shifting seat. Separation, centrifugal, O. B. Peck. 499,348, 499,349	Bac Bac Bot
8 4)8	Separator. See Grain separator. Ore separator. Separator. Separator. R. A. Stubbs. 499.252 Sewage, apparatus for treating, J. J. Powers 499.552 Sewing machine thread cutter, J. E. Snapp. 499.352 Sewing machine, wax thread, O. E. Brown 499.414 Shafts, volucle, J. & W. F. Kuykendall. 499.340 Sheave, F. B. Torrey. 499.611 Sheet metal salvers, making, Z. T. Hall. 499.359	Car Car Car Cof Dis
92 58 31	Ship's distance from an object, apparatus for determining E. Baker Shoe fastening, J. M. Branig	Fin Flo Per Per Pla
22 12 39 28	Settening apparatus. S. Greistad. 499,282 Sifter, ash, E. Coon. 499,282 Signal. See Railway straal. Silver, composition of matter for cleaning, D. A. Smith 499,401	Pla Rad Sev Spo
47 54	Snap hook, G. S. Minshall	Sta Sta Sto Sto Sto
73 76 00 96	Spinning jenny stop motion, B. Bodell. 499,280 Spooling machine, J. W. Foster. 499,683 Spooling machine stop motion, J. W. Foster 499,665 Spooling machine tube holder, J. W. Foster 499,667	A
96 42 01	Huddard. 499427 Spoon, G. A. Schlechter. 499328 Spoons, forks, etc., cleaner for, J. H. Moulder. 499,467 Spring. See Watchess spring.	25 c of Bro Ve i
40 24 44	Sprocket wheel, J. A. Brown. 499,627 Stair curve, W. S. King. 499,636 Stand Sop Display stand Umbrella stand	gein

Stay, dress, G. S. Brown. Steel plates, etc., apparatus for shaping, hardening, and tempering, J. B. Armstrong. Steering grar, ship, W. A. Oglethorpe. Stirrup, J. T. Crone Stove caster, adjustable, Z. D. Morrow. Stove, gas, A. Weiskittel. Slove, gas, M. Weiskittel. Slove, hearing, W. N. Moore. Stove hearing, W. N. Moore. Stove hood, J. Canavan Stove reservoir, F. S. Lang. Stove, straw burning, Robinson & Hoopes. Strawboard lining machine, M. F. Wilson Straw stacker, J. Galland	499,513
Steel plates, etc., apparatus for shaping, hardening, and tempering, J. B. Armstrong	499,368
Steering gear, ship, W. A. Oglethorpe	499,569 459,283
Stove caster, adjustable, Z. D. Morrow	499,561
Stove, gas oline, C. A. Frayer.	499,623 459,220
Stove hood, J. Canavan.	459,220 459,306 499,210
Stove reservoir, F. S. Lang	490,290 490,300
Strawboard lining machine, M. F. Wilson	499,274
Straw stacker, J. Galland Structural shape, E. M. Butz	499,381 499,652
Sugar wagons, machine for dumping, G. Van	499 265
Strawboard lining machine, M. F. Wilson Straw stacker, J. Galland Straw stacker, J. Galland Sugar wagons, machine for dumping, G. Van Wagenen Suphur cande or fumigator, R. W. Johnson. Switch. See Electric switch. Troller wire	499,325
Switch. See Electric switch. Trolley wire	
switch. Switch, G. W. Russell, Jr. Switchboards, system of wiring multiple, C. H. Wilson	400 000
Switch lock, F. P. Hilburn	499,693 499,459
Table. See Extension table. Folding table.	
Kitchen table. Tablet, roller, H. T. Wilson Tapping and emptying device, barrel, S. A. Reinhard	499,44 8
heimer	499,592
Test plug, contractible, M.F. Smith	499,682
Thill coupling, T. Oliver Thill coupling, R. M. Shaffer	499,39 3 499,475
Tire inflating device, J.F. Cranston	499.659
Tire, pneumatic, W. Sherbondy.	499,600
Tablet, roller, H. T. Wilson Tapping and emptying device, barrel, S. A. Reinheimer. Tent, E. E. Mann Test plug, contractible, M. F. Smith Thill coupling, R. M. Shaffer Thill coupling, R. M. Shaffer Trie infating device, J. F. Cranston Tire, pneumatic, C. H. Pagett Tire, pneumatic, W. Shorbondy. Tobacco piper cap, A. T. Harver Toy building, G. L. Brower Toy detachable animal and vehicle, H. C. Ives Toy detachable animal and vehicle, H. C. Ives Toy puzzle, W. Schott Track clamp, J. P. Kimble Tray, ring, C. A. Troescher Tree support, W. H. Cook Trolley wire safety support, H. K. Whitner Trolley wire safety support, H. K. Whitner Trolley wire safety, overhead, R. M. Hunter Truck, hand, J. M. Coffield Turnentine box, B. W. Ketchum Twisting machine, G. L. Brownell Type, W. W. Bishop Typeswriting machine, G. L. Brownell Typewriting machine, W. H. Barten Typewriting machine, W. H. Barten Typewriting machine, W. H. Barten Typewriting mach, B. Bronner	499,884 499,539
Toy building, G. L. Brower	409,512 499,430
Toy, musical, Hanb & Dasha	490 292
Track clamp, J. P. Kimble.	100,237
Tray, ring. C. A. Troescher	499,52 0 499,52 0
Trolley wire safety support H. K. Whitner	499,682 499,270
Trolley wire switch, overhead, R. M. Hunter	499,461
Truck, hand, J. M. Coffield	499,212
Tunneling shield, J. J. Nobbs	499,566 499,368
Twine cutter, Quick & Nelson	499,364
Type, W. W. Bishop.	499,507
Typewriting machine, W. H. Barten	499,498
Typewriting machine, D. H. Taylor	499.263 499.449
Vacuum pan, W. Walter	499,449 499,486 499,586
Umbrella stand, B. Bronner Vacuum pan, W. Walter. Valve motion, compound engine, J. Player Valve motion for tandem compound engines, J.	400 500
Valve, reducing starting, J. Player	499,586 499,588
Valve, steam radiator air, J. H. Lindsay	490,463 499,288
Vehicle shifting ceat, J. B. Armstrong et at	499,369
Velocipede saddle, Hendrick & Kelly	499,675
Vessel nandle, C. D. Milne	499,341
Vise J. B. Gury	499,291 499,232
Valve motion for tandem compound engines, J. Player. Valve, reducing starting, J. Player. Valve, steam radiator air, J. H. Lindsay. Vehicle shifting ear, L. J. Ewell. Vehicle shifting ear, L. J. Ewell. Vehicle shifting ear, L. J. B. Armstrong t at. Vehicle wheel, J. Buchanan Velocipede saddle. Hendrick & Kelly. Vessel handle, C. D. Milne. Vise, C. H. Ayars. Vise, J. B. Gury. Washing machine, E. A. Kibbe. Washing machine, W. M. Lindsey. Washstand and dressing case, combined, A. Wettervik. Watchcase spring, V. Nivois. Watchcase spring, V. Nivois.	499,237
wasnstand and dressing case, combined, A. Wetterwik. Watchcase spring, V. Nivois. Water close bowl, F. Adee. Water motor, W. R. White. Water wheel, A. B. Frame. Weather strip, E. C. Ellis. Weighing machine automatic, C. H. Gorringe Weiding die, link, J. W. R. Johnson. Weiding metals, electrically, C. L. Coffin. Weiding sheet metal, method of and apparatus	499,408
Water closet bowl, F. Adee.	499,564 499,154
Water motor, W. R. White	499,269 499,533
Weather strip, E. C. Ellis	499.629 499.229
Welding die, link, J. W. R. Johnson	499,239
Welding metals, electrically, C. L. Comn Welding sheet metal, method of and apparatus for electrically, C. L. Coffin	100,018
for cleat wheelly C. I. Coffin	400 057
Wells, rod adjuster, and clamp for artesian or oil, G. S. Gahagan. Wheel. See Sprocket wheel. Vehicle wheel. Water wheel. Whittetre center J. Edgar.	499,670
Water wheel.	499,217
Whisky making W. E. Bradley.	299,316
Whistle, air alarm, Campbell & McHugh	499,209 499,634
Windmill, T. O. Perry	499,395
Windmill governing mechanism, T. U. Perry Window, J. Lewis.	499,394 499,236
Wire gate, C. B. Bird	499,279
, ,,	
Wrench. See Pipe wrench.	,001
Winding machine twisting attachment, J. W. Foster. Windmill, T. O. Perry. Windmill geverning mechanism, T. O. Perry. Window, J. Lewis. Wire gate, C. B. Bird. Wire stretcher, J. W. McKinney. Wrench. See Pipe wrench.	
TRADE MARKS.	

TRADE MARKS.
Beer, lager, Bartholomay Brewery Company. 23,209 Butterine, Swift & Company. 23,201 Checke, B. S. Janney, Jr. & Ch. 23,202 Checolate icing, A. H. Stollwell. 23,200 Checolate icing, A. H. Stollwell. 23,200 Clagars, stogies, cheroots, and cigarettes, and smoking and chewing tobacco, Baer Brothers. 23,198 Disinfecting chemical compound for purifying water, Jr. C. Lemmon. 23,217 Water, Jr. C. Lemmon. 23,217 Electric batteries, open-circuit, P. C. Burns, 23,219, 23,220 Fabrics of wool, worsted, hair, silk, linen, hemp, and cottom, piece, Dr. Jaeger's Sanitary Woolen System Co. 23,196 Food and systemic tonic and restorative, liquid, F. A. Lovecraft. 23,210 Guitars, mandolins, banjos, and zithers, W. J. 23,210 Hosiery and underwear, Willcox & Gibbs Sewing Mackine Company. 23,194 Lawative, Bordeau x Prune Company. 23,214 Lawative, Bordeau x Prune Company. 23,216 Medicine Woolen Company. 23,216 Medicine for use in fevers, tonic, Diffusible Tonic Company. 23,216 Medicine for use in fevers, tonic, Diffusible Tonic Company. 23,216 Medicine for use in fevers, tonic, Diffusible Tonic Company. 23,216 Reinen For covering wood and iron, Thomas & Klein. 23,206 Polishing substance for use on metal and glass, Morain Bros. Remedies for gonorrhea, J. Kremer. 23,212 Sewing machines, H. R. Tracy. 23,222 Sewing machines, H. R. Tracy. 23,223 Sewing machines, H. R. Tracy. 23,236 Tunks professional, theatireal, and commercial. 23,196 Tunks professional, theatireal, and commercial.
composition for shoes, etc., G. F. Stengel 23,197 Soap, toilet, laundry, and scouring, Ke-Li Manu-
Stays, dress, F. Hinckel
Trunks, professional, theatrical, and commercial travelers, C. A. Taylor Trunk Works. Veterinary powders, J. P. Hull Horse, Cattle, and Poutry Powder Company. Waters, both plain and aerated, spring and mineral, E. E. Hoyt.
DEGLAMA

DESIGNS.

i		
3	Badge, L. J. Chandler	22 528
ŝ	Dadas C D T	00 500
i	Badge, C. E. Long	22,529
	Bowl, sugar, H. Berry. Can opener handle, F. E. Kehler	22 530
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ı	Display stand, C.B. Morrow	44,000
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ı	Winger ring on use I W Ford	22 521
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ı	Flower hed support for graves, G. W. Burns	44,536
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ı	Penholder handle Fickert & Cohen	00 504
ı	Plate litter, w. I. Russell	22.534
ı	Radiator, E. Gurney	22.543
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ı	Sewing machine Traine, H. K. Tracy	44,044
ı	Spoon, etc., H. W. Hirschield	22.525
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ı	Spoon, C. E. Pretat	22,527
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į	Otamo Gambi F. E. Montel	22,001
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ř	Stove, heating, G. H. Holland	22.542
۱	Stove, lamp, J. F. Myers	22,510
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