# RECENTLY PATENTED INVENTIONS.

STEAM ENGINE REGULATOR. — Frederick W. Mount, St. John, Canada. This invention re lates to governors adapted for use with engines operated m pairs, and provides a simple attachment to the orlinary shaft fly ball governor by which the cut-off of either of the engines may be accurately regulated and each engine thus made to do its appropriate part of the work. The regulator and governor are so arranged that they may be operated without stopping the engines, so that in case of a hot box or other slight injury to one engine a greater part of the load may be lifted to the other without interfering with the work.

HYDROCARBON BURNER.-William A. Minteer, Peachville, Pa. This is a device adapted to convert a spray of steam, oil and air into a hydrocarbon gas and burn it in a combustion chamber. The burner is inexpensively made, easily controlled, and not liable to get out of order, and the arrangement of parts is such that the oil, hot and cold air, and steam, may be controlled by the several valves so that just the right proportions of each shall be admitted to the combustion chamber in steady streams, to be mingled and burned in the most efficient way to produce intense heat.

#### Railway Appliances.

CAR COUPLING. — George H. Conrad and Adam Winter, Pittsburg, Pa. With this device the coupling of meeting care is automatically effected, and the uncoupling may be performed from the sides of the adhesion and mixing of the mass. cars. The coupling is composed of but few parts, which are easily assembled and of great stability, and it can be used in connection with the ordinary pin couplers. The invention covers a peculiar arrangement and combination of parts, embracing several novel features.

CAR TRANSPORTATION CARRIAGE. Alexander Bowie, Gallup, New Mexico. This invention relates to gravity plane railroads, and provides a carriage adapted to travel on the inclined track and receive a car from a side track for transportation on the plane. It has two truck frames connected with each other  $\varepsilon ither \, rigidly \, or \, pivotally, so that in the latter case the$ rear or lower truck can assume a different angle relative to the incline of the track. Means are provided for regulating and controlling the velocity of the carriage moving on the plane.

### Mechanical.

DIE PLATE.—Lewis C. Wetzel, Bellefonte, Pa. This die plate is provided with revoluble dies, each having in its periphery independent cutters, guide disks carried by the dies having in their peripheries recesses registering with the cutters. This improved die plate permits of quickly and conveniently changing the revoluble dies for different sized work, and removing the individual cutters of each die plate if worn out or broken, without disturbing the rest

TOOL FOR TURNING PIPES, ETC. -Gustaf Englund, Seattle, Washington. A pair of pivoted jaws crossing each other is provided with slots, a handle being pivoted to the rear end of one jaw, and another pivot at the end of the handle adapted to move in the slots of the jaws. The improvement forms a convenient tool to effectively grip a pipe, axle, or other article, for use as a pipe wrench or for turning car axles to move the cars on the track.

Nut Lock. — Michael F. Deininger, Brooklyn, N. Y. According to this improvement a locking nut screws in an opposite direction to the nut to be locked, and an interior polygonal flange formed on the locking nut engages a circular part on the nut to be locked. The device is simple, durable and very effective, and designed to securely lock axle nuts in place.

GRINDSTONE ATTACHMENT.—Jesse M. Clock, New York City. The stone is, by this invention, provided with a treadle mechanism, by which it may be easily turned by the foot, and the water, stone and tank attachments are so arranged that the stone may be kept thoroughly wet but will be prevented from spraying water on the person using it, while there are also bracket attachments by means of which certain forms of knives such as those in the cutter bar of a mowing machine, and other forms of cutters, may be readily ground on a true and uniform bevel.

CLOTH STRETCHER AND DRIER. William Bailey, Brooklyn, N. Y. This is a machine especially designed for stretching and drying shade cloth after the sizing has been applied to it. Its construction is such that the cloth may be quickly attached and will then be conveyed in a circuitous route through or over drying apparatus, the cloth being automatically stripped from the machine when it has been properly stretched and dried. A tank holds the sizing material, a regulated quantity of which is applied as the cloth is passed through sizing rolls.

## Agricultural.

PLOW AND CULTIVATOR.—Madison A., William C., and Robert L. Randolph, Summerville, Mo. This is a combined gang plow and cultivator, designed to be very effective in operation, arranged for shallow or deep plowing, and adapted to be uickly changed from a gang plow to a cultivator and vice versa. To adjust the plow frame it is only necessary f r the driver to move a lever in convenient reach of his hand, at the same time moving another lever with his foot, by which means the plows may be readily adjusted to the height

SPRAYER FOR VINES, TREES, ETC. Albert G. Provine, Puyallup, Washington. A hollow, tank-forming roller is journaled in a frame on which is mounted a pumping mechanism connected with pipes from the interior of the roller, while pipes extending along the sides of the frame are provided with spraying nozzles. The pumping mechanism is actuated by the drawing of the machine over the ground, to spray over vines, trees, and other vegetable growths a liquid solution for exterminating or destroying insect pests.

FRUIT GATHERER AND PRUNING IM-FIRMENT.—Silas Chambers, Waco, Texas. This is a de- | a picture frame in place.

vice having a pair of shears and a bag to receive the fruit attached to a long wooden handle, one blade of the shears being operated by a cord to cut off the fruit, which falls into the bag. The latter is detachable when the implement is to be used for pruning, and when the limbs are too thick for the use of shears they may be removed and a saw substituted.

#### Miscellaneous.

BRICK KILN. — Robert Garret, Free dom. Pa. This kiln is of simple construction and has a combined up and down draught designed to thoroughly circulate the heat among the ware in such manner as to quickly and evenly burn it at all parts of the kiln. The kiln body is preferably circular in shape, and beneath an air-tight floor are independent flue sections with bridge walls, forming heat chambers, each flue section con nected with a furnace and communicating with vertical flues discharging into the interior of the kiln. A down draught is provided for by flues in the side walls, and the construction is such that the damp air may be drawn off from each kiln chamber during the operation of filling and during the time the green ware is in the kiln.

ARTIFICIAL FUEL.—Cornelius Cronin. Kingston, and Gwilym Edwards, Edwardsville, Pa This is a fuel composed of several ingredients monlded or compressed into bricks, blocks or lumps, for use in crude petroleum, the ingredients being ground together seal. and a variable proportion of water added to facilitate the

LOG PULLING APPARATUS.—Edmund M. Ivens, New Orleans, La. This is an apparatus especially adapted for pulling heavy logs out of swamp lands into lagoons or hayous. It comprises a movable platform carrying a driving mechanism and winding drums with independently operated brake devices, and fixed swamp or anchor sheave with pull rope, rope laving devices, and various other novel features. apparatus is more especially designed to facilitate handling heavy cypress logs in Louisiana swamp lands.

AXLE BEARING AND HUB.-William D. T. Travis, Burlington, N. J. This improvement provides an improved connection between the axle bear ing and the wheel, and forms a simple bearing which may be readily attached to either a new or an old axle, makingit very strong, easy running, self-oiling, and very durable. It comprises a shaft chest adapted to be secured to the axle, and having means of supply at its upper side and a vent on its lower side, boxes being held removably within the chest, and a spindle turning in the boxes having one end projecting from the chest, the wheel hub being made fast to the spindle.

TURPENTINE TOOL.—Walter Watson, Fayetteville, N. C. This is a combination tool, compris ing a double hacker and puller in a single instrument It has a flat blade with its ends bent toward each other to form hackers, while the shank has a head at the lower end of which is a seat and a transverse rib at the upper end, the blade being detachable and reversible

MOVING TRUNKS ON STAIRS.—William H. H. Hallock, West Hampton, N. Y. This improvement comprises a pivoted stair railing, with balusters having a rotary movement, and locking devices whereby the railing may be held perpendicularly or carried to a horizontal position in engagement with the steps of the staircase. Other novel features are also included, con stituting a device which may be readily placed and locked upon the stair steps to form a rolling support whereby one may readily move a trunk or package up and down stairs.

RAIN WATER CUT-OFF.—Mathias A. Laska, New Orleans, La. A swinging pipe, adapted to receive water from the rain spout and deliver it to the cistern, is so connected with a counterhalanced lever and an open water-receiving vessel that the latter will receive the first water washed from the roof, with the dust and dirt which may be washed off at the commencement of a rain, such water being directed away from the cistern, the flow being directed to the cistern after the water ha come clean.

GUARD FOR DOORS, WINDOWS, ETC. Laurence F. Ryan, New York City. This is a light frame device consisting of two telescopic folding sections adapted to be readily fitted within a door or window opening, and constitute a harrier which will effectually prevent children from getting out. It is inexpensive and quickly fitted in place, and when not in use may be folded to take up but little room.

FIRE EXTINGUISHER FOR COTTON GINS.—Edward Northcraft, San Marcos, Texas. The gin, according to this invention, is provided with sliding valves for closing the top inlet and the lint chute, the valves being so connected that they may be promptly closed by the operator, whereby any fire within the gin will soon die out for want of air.

CONVERTIBLE FINGER RING.~Louis Gumbart. New York City. This is a ring made in sections, each section being capable of being employed as an earring, but the ring having the appearance of an ordinary ring when the sections are united. The changes may be quickly and easily made from one form of ring

SNUFF BOX.—Charles L. Powell, Weatherford, Texas. This is a device more especially designed for the use of those who take snuff by brushing it across the teeth, as is done in some sections of the coun The box has a brush-holding chamber, within which is a spring-pressed plunger, whereby the handle of the brush is pushed out when the box cover is removed. so that the user may always have the brush readyon opening the box to take snuff.

EASEL. - Maurice Schmirk, Fayette, Mo. A simple and durable easel, for the use of painters and others, has been provided by this inventor, the easel | allied subjects, being readily adjustable to any desired angle, or extended for supporting large canvases. It consists of a rack pivoted on a stand, while an extension rack is fitted to slide of any Architectural Publication in the world. Sold by on the main rack, and has fastening devices for locking all newsdealers.

SPECULUM.—Henry Dickinson, Jr. Chappaqua, N. Y. This instrument has independent up per and lower sections, with means whereby the anterior ends of the sections may be made to diverge, either one nore or less than the other, or both alike.

Puzzle.—John C. Fields, Meadville, Pa. This device consists of a skeleton box or baske having open top and sides, in which is located a series of blocks having their faces in two colors, each block bear ing the same colors, and the blocks having their faces further provided with one or more indicating marks colored to register with the same, the opposite, or the adjacent faces. The puzzle consists in causing similar faces only of the blocks to be presented by simply moving the blocks laterally or vertically, and without turning them.

#### Designs.

FONT OF PRINTING TYPE.—Robert S. Avery, Washington, D. C. This is a design for a font of phonetic printing type, consisting of forty-two characters, each having a distinctive phonetic value.

Pepper or Salt Box.—Joseph Walter, New YorkCity. This is a salt box in the shape of a recessed cork, such as has been used in a tightly sealed bottle, and ornamented on the top by a perforated cap.

A further design of pepper or salt box by the same stoves, furnaces, etc. Among the ingredients are specilinventor consists of a representation of the neck of a field proportions of culm, limestone, wood pulp and bottle, with an even bottom and at the top a perforated

> Note.-Copies of any of the above patents will be furnished by Munn & Co., for 25 cents each. Please send name of the patentee, title of invention, and date of this paper.

### NEW BOOKS AND PUBLICATIONS.

VADE MECUM. A work of reference for the use of architects, architectural iron workers, builders, blacksmiths, etc. Compiled and arranged by D. B. Dixon. With a comprehensive treatise on electricity. By Thomas G. Grier. Chicago: Laird & Lee. 1893. Pp. 480. Price \$2.50.

The best description of this work that we can give is to state that to some extent it covers the very wide ground embraced in Haswell. In other words, it treats of a very wide range of subjects. It contains an alphabetical table of contents and will fill its place with considerable satisfaction.

# SCIENTIFIC AMERICAN

# BUILDING EDITION

JUNE, 1893.-(No. 92.)

TABLE OF CONTENTS.

- 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 perspective elevations. Messrs. Munn & Co., architects, New York.
- 2. 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, Boston, 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.
- 5. Engravings and floor plans of a dwelling at Elm Station, Pa, erected at a cost of \$5,200.
- 6. A dwellingerected near Longwood, Mass. A modern design. Mr. Austin W. Pease, architect, Boston, Mass. Floor plans and perspective elevation. Cost about \$2,200.
- The First Congregational Church at Plainfield, N. J., erected and furnished complete at a cost of \$15,000. Mr. Oscar S. Teale, architect, New York City, Perspective and floor plans. 8. A residence at Beardsley Park, Bridgeport, Conn. A
- very picturesque design, perspective elevation and floor plans. Cost \$5,500 complete. Mr. A. H. Beers, architect, Bridgeport, Conn.
- 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.
- 10. 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.
- scellaneous Contents: New lien law in California -An improved spring door hinge, illustrated.-To estimate brick work.—Foul water main.—An improved woodworking machine, illustrated.-An  ${\bf improved\ scaffold\ truss,\ illustrated.-Sawdust}$ building bricks.—Some beautiful arch work, illustrated.—Mineral wool in buildings.—Woodmantels, illustrated.—Sound titles for real estate.—Durability of cedar.-Tin from tin scrap.-Improved steam heater, illustrated.

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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.

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Minerals sent for examination should be distinctly

Minerals sent for examination should be distinctly marked or labeled.

(5137) M. S. P. asks: 1. Will the hand ower dynamo described in Supplement 161 generate sufficient current to run the motor described in Supple-MENT 641? A. You can barely run it withou developing much power. 2. Can the eight light dynamo be run by power from a windmill? A. Yes.

(5138) W. J. R. writes: Please tell me following in "Notes and Queries" in Scientific American: The question regards difference in density and resistance of the atmosphere in Mississippi Valley and Leadville, Col. Suppose a man weighs 152 pounds, and in jumping from a balloon in the State of Illinois must have a parachute 28 feet in diameter to come down safely, what size parachute must this same man have to doscend from a halloon in Leadville, Col. ? A. The atmosphere at Leadville being about 28 per cent lighter than in Illinois, will give a proportional less resistance to falling bodies. The parachute should, therefore, be made about 38 per cent larger area, or 33 feet in diameter.

(5139) "Devoted Reader."—Probably the best way to learn the watchmakers trade is to ap prentice y urself to a thoroughly ood watchmaker.

(5140) C. B. says: Suppose 1, 2, and 3 represent three tanks filled with water of equal depth, and are each 10 feet high. Diameter of the bottom is 24 inches in each. 1 is the same area at the top as at the bottom; 2 is three times the area at the top as at the bottom; 3 has one-fifth the area at the top as at the bottom. Is the pressure (per square inch) equal on all parts of the bottom of each tank, and is the total pressure on the bottom of each the same? A. The pressure is the same per square inch on the bottom of all the tanks. The total pressure on the bottoms is in proportion to their areas in square inches.

(5141) E. S. S. asks: 1. What battery is best adapted to run a motor for the longest period that carries a 10 inch fan? A. Probably the Bunsen battery is the best. 2. I have a porous cup that has holes in it, and it is lined on the inside with cloth, and a rod of carbon is in the center, and the jar is filled up around the carbon with some kind of black stuff. How can I repair the hattery so it will work, and what is the black stuff around carbon? What is battery best adapted for? A. 361 Broadway, New York. For a filling for your porous cell, try granulated black

oxide of manganese and granulated carbon, equal parts mixed. It can be used in a Leclanche battery. 3. What can I put in a kettle to keep it from rusting? A. Try c abonate of soda.

(5142) M. B. P. asks: 1. With a dynamo storage battery and motor, what percentage of the power put into the dynamo can be delivered by the motor? A. 75 per cent. 2. What percentage could be delivered by the motor a week after the battery had been charged? A. In a good battery the percentage of loss would be small. Probably not more than 2 or 3 per cent. 3. What are the limits of the capacity of storage batteries in amperes and volts and how determined? Are storage batteries made capable of storing the electrical current developed by 30 actual horse power? If so, for how long a time could they store such a current constantly running into the battery? A. The size and number of the plates limits the current capacity, and the number of cells in series controls the voltage, each cell being equivalent practically to 2 volts. The voltage is determined by a voltmeter. There is no diffi-culty in storing current equivalent to 30 horse power. The batteries will contain a working charge for two or three months with a slight loss.

(5143) E. E. W. asks how to color lantern globes green, also blue and red, and what to use for colors. A. The simplest way to accomplish this is to purchase the colored lacquers from dealers in painters' supplies. If you find this inefficient, you might use rather thin shellac varnish, colored with aniline dyes. For additional information see our Cyclopedia of Receipts.

(5144) O. D., J. E. Z., and others ask for a remedy for freckles. A. We reprint a note from the SCIENTIFIC AMERICAN for February 13, 1892, in regard to freckles: Some people are born freckled and others have freckles thrust upon them. The former class might as well accept their freckles as a dispensation of Providence, for nothing can be done for them. The latter can always get rid of their affliction by using a couple of drachms of sal ammoniac with an ounce of German cologne, the solution mixed with a pint of distilled water. Applied two or three times a day, states one of our contemporaries, it will cure the worst case of acquired freckles on record. Freckles are caused by the action of sunlight on the coloring matter in the skin.

(5145) R. T. K. asks: Will you kindly let me know, through the columns of your paper, something of the difference in the power required to tow a barge when drawn close to stern (so as to almost touch) of tug, or when let out with cable so as to be considerable distance apart? That is, what are the effects of the currents caused by the propeller of tug (and hull also) on the barge when the barge is close up? Also when side wheels are used instead of screw? A. While no exact figures can be given, the fact is well known in the towing business that the current set back by the wheel of a a tug boat directly against the bow of a barge close behind somewhat neutralizes the power of towage. Hence all stern towing is done with long hawsers, or alongside.
With sidewheel tow boats, the back thrust of water from the wheels to a single barge directly astern is not so great as with a propeller; yet it is enough to prevent the prac tice, except where necessary by narrow and crooked channels,

## TO INVENTORS,

An experience of forty-four years, and the preparation of more than one hundred thousand applications for pa tents at home and abroad, enable us to understand the ·laws and practice on both continents, and topossess unequaled facilities for procuring patents everywhere. A synopsis of the patent laws of the United States and all foreign countries may be had on application, and persons contemplating the securing of patents, either at home or abroad, are invited to write to this office for prices which are low, in accordance with the times and our ex-tensive facilities for conducting the business. Address MUNN & CO., office Scientific American, 361 Broad-

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For which Letters Patent of the United States were Granted

June 6. 1893

# AND EACH BEARING THAT DATE [See note at end of list about copies of these patents.]

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Dye, red, Krekeler & Krais.       498,982         Dyeing frame, E. Keuser.       499,170         Dynamometer, H. C. Behr.       498,837	P
Earth Gloset, K. I. Passover. 499,081 Erg holder, A. Anderson	PP
Dredging machine, hydraulic, J. M. Robbins.         498-801           Dress protector, E. A. Lester.         498-801           Drill See Grain drill.         Drill shoes, manufacture of, W. A. Van Brunt.         499.061           Driving mechanism, J. W. Kenevel.         498.932           Dye, blue substantive, Bammann & Ulrich.         498,873           Dye, red, Krekeler & Krais.         498,873           Dye, red, Krekeler & Krais.         498,872           Dynamometer, H. C. Behr.         488,837           Bag holder, A. A. Anderson.         499,081           Electric conductor clamp, A. H. Englund.         498,776           Electric illumination, E. A. Colby.         488,873           Electric illumination, E. A. Colby.         488,873           Electric illumination, E. A. Colby.         488,873           Electric isgnal and protective system, C. E.         488,873	P P
Electric illumination, E. A. Colby. 488,879 Electric machine, dynamo, W. S. F. Dillon. 498,869 Electric signal and protective system, C. E. Ongley. 498,880 Electrical switch, L. Des Brissy. 498,880	P
Ongley 498,988  Ongley 498,988  Electrical switch, J. Des Brisay 498,988  Electro-dynamic machine, U. 2411 499,189  Electro-motive device, R. Callender 488,771  Electrolytic apparatus, T. Craney 488,771  Electrolytic apparatus, T. Craney 488,771  Elevator, H. Elicbbaum 498,971  Embroidering machine, G. Baum 498,971  Empine. See Locomotive engine. Pumping engine. Road engine. Steam engine. Traction engine.	P
Electrolytic cell, T. Craney.       498,771         Elevator, H. Eichbaum.       498,971         Embroidering machine, G. Baum.       498,925	F
Engine. See Locomotive engine. Pumping engine. Road engine. Steam engine. Traction engine.	Į.
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Exhibitor besistead, A. K. Erdman	H
Fastener, N. G. Frankin. 488,346 Faucet, R. Hagen. 498,787 Faucet attachment, R. Hagen. 498,788 Concerned B. W. Chinese 498,788	I
File case, R. L. Brown. 488,926 File holder or drawer, D. A. Alden. 499,001 Filter, water, W. B. Benham 498,967	H
Firearm, magazine, J. M. Browning	F
Fire escape, T. J. Venema	F
Fur, carroting, H. F. Dietz. 488,910 Fur scarfs, head for, M. Cohen. 498,928	Í
Gas furnace. Glory-hole furnace. Tobacco curing furnace.  Furnace J L Giroux 499 188	I
Furnaces, water heating attachment for hot air, J. E. White	F
Gas furnace. Gelory-hole furnace. Tobacco curing furnace. Gelory-hole furnace. Turnace. Guring furnace. Gelory-hole furnace. Turnace, gurinace, furnace, fur	F
uame apparatus, M. M. Wilson	H
Gas furnace, W. T. Bate	F
Gas mixer, fuel, W. G. Taylor 199, 151 Gas regulator, M. G. Reya olds 98, 151 Gas regulator for calcium lichts, J. Von Ev. 498, 897	02020
Gas refort charging apparatus, Arrol & Foulis	0.00.00.00.00.00.00.00.00.00.00.00.00.0
Gas retorts, apparatus for stirring and drawing.  W. Foulisparatus for stirring and drawing.  488,779  Gas serubber and purifier, W. T. Bate	020202
strong. 499,082 Glassware, manufacture of, T. B. Atterbury. 499,085 Glassware, tool for the manufacture of, T. B.	9000

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l	Iron Soo Curling iron	498,819 4 <b>98,</b> 757	Sta Ste Ste
	Iron and loading same into wagons, machinery for breaking pig, Martin & James.  Jacquard mechanism rise and fall, W. Evans  Joint, C. C. Merrill	498,805 498,912	Ste Sto Sto
	Knife. See Pocket knife.  Knife. See Pocket knife.  Kniting machine stop motion device. R. Morley.		Sto Sto Sto
	Lamp electric glow, E. A. Coloy  Lamp electrode, electric arc, S. Heimann  Lamp incandagent electric A. De Lodgeline	498,915	Sto
	Lamp post, Z. T. Hobbs	498,901 499,117 498,792	Sw Syr Ta
	Metager Lantern C. T. Ham Larder, window, J. Ponisi Larder, window, J. Ponisi Latte driving mechanism, F. H. Crafts Lead, crayon, or other holder, A. Fornander Lock. See Permutation lock.	498,758 499,107 499,037 499,159 499,191	Ta Tel Tel
	Lock. See Permutation lock. Locomotive driving gear, D. S. Patterson Locomotive engine, compound, S. M. Vauclain Locomotive tenders, water supplying device for,	499,034 499,065	Te Te Te Te
	H. R. Winkelmann Loom pattern mechanism, G. F. Hutchins Loom stopping mechanism, H. E. Hamilton	499,074 498,956	Th Th
	Lubricator. See Axle lubricator.	!	Th Ti
İ	Lubricator, J. Clark. Lubricator, Finfrock & Veesenmey er Lubricator, E. McCoy. Lubricator, C. W. Sherburne. Mains, coupling and valve for water or gas, A. J. Sands. Match and ticket case, combined, C. W. Becan-	498,944 499,043	Ti Ti
	mon	498,875 499,129 498,899	To To Tr
	Measuring machine, cloth, P. F. C. Chevron Meat cutting and filling machine, H. C. F. Otte Metal bending machine. C. Cunningham	498,765 498,940 498,930	Tr Tr Tr
	Metal working, E. E. Ries	499,022 499,040	Tr Tr Tu Tu
[	tion and separation of, J. A. Frey. Milking machine, B. Atwater		Ty Un
	Music rack, R. Binns. Musical instrument attachment, J. W. Long Necktie, G. E. Miller. Note in dicator, A. Wider.	498,950 498,853 498,807 498,922	Va Va
	Nut lock, Reed & Reitz. Nut lock, J. B. Woods. Nut wrench, J. Geisler. Oil burner, J. Barrow  I refining vegetable, G. W. Scollay	498,943 498,834 498,782 499,088	Va Va Va
İ	Oil, etc., treating cotton seed, G. W. Scollay.  Ore concentrator, C. E. Seymour.	498,821 498,822 498,823 498,036	Va Ve
	Paper and fixture therefor, rolled, O. H. Hicks Paper, apparatus for heating size for surfacing, W. C. Edwards Paper box machine, F. D. Harper Paper box making machines, feeding device for, F. D. Harper Paper pressing mechine, I. T. Robbuson.	498,90 <b>0</b> 498,775 498,975	Ve Ve
	Paper making machine, A. W. Case	498,976 498,904 498,764	Ve Ve W
:	Penmanship, device for assisting, J. D. McMeen.	498,811 499,029	W W W W W W
	Perrorating, metuon of an apparatus for electric, D. M. & J. H. Garnett  Perfume essences, extracting, E. Watel  Permutation lock, L. E. Schnelder  Piano actiou, S. R. Perry	498,973 498,830 498,820 498,815	W
	Picture holder, P. A. Becker. Picture support, R. L. Lynch. Pin. See Clothes pin. Pin gauge, A. Pieczka.	498,761 498,902 499,035	<u>w</u>
	Pipe burr removing implement, H. Comstock Pipe joint, R. T. Bells Piston, S. M. Vauclain Planter, corn, A. J. Fisher.	499,098 498,876 499,064 498,954	W W W
	Planter, potato, J. P. Davenport	498,773 499,110 499,047	W
	Picture support, R. L. Lynch. Pin. See Clothes pin. Pin. See Clothes pin. Pin gauge, A. Pieczka. Pipe burr removing implement, H. Comstock. Pipe boint, R. T. Bells. Piston, S. M. Vauclain. Planter, corn, A. J. Fisher. Planter, potato, J. P. Davenport. Planter, potato, J. P. Davenport. Planter, seed. T. J. Hathaway. Pocket knife, V. Siater. Post. See Fence post. Lamp post. Potato cutter, I. A. Aspinwall Potato cutter, I. A. Aspinwall Potato cutter, I. & W. B. Dum, Jr. Potato digser, E. & W. Mercer. Pottery moulding, J. Schelhorn Press. See Baling press. Printing press. Printing press, J. M. P. Close. Printing machine, label, N. M. P. Close. Printing on cotton, G. Donald. Printing press, J. M. Jones. Printing roll, Engel & Koob. Printing roll, Engel & Koob. Printing roll press protector. Prunes or plums, machine for pricking, Burrell	499,002 499,101 498,885 499,148	W W W W W W W W W
	Press. See Baling press. Printing press. Pressure regulator, Unger & Krug Printer's lock-up, C. Jesinghaus Printing machine, label, N. M. P. Close	498,996 498,935 498,843	WWW
	Printing on cotton, G. Donald. Printing press, J. M. Jones Printing roll, Engel & Koob. Printing roll, Engel & Footbacker, See Dress protector.	499,161 498,851 499,185	W
	Pump, J. W. Gregory.	499,105	
	Hippert. Pumping engine, H. Denney Pumping engine, H. Denney Punch, hand, W. Carey. Rack. See Hut rack. Music rack. Radistor for heating buildings, W. C. Baker. Radistor, hot water heat, G. W. Hawes. Rail cleaning brush, street, J. A. Gowans. Rail joints, die for manufacturing, F. H. Heath.	498,978 499,013 499,094	Ba Bu Ca
	Radiator for heating buildings, W. C. Baker	499,181 498,849 458,785 49, 791	Cu Cu De
	Rail tie and chair, combined, Howard & Eagan Railway apparatus, cable, W. T. Smith Railway chair, F. C. Weir Railway, overhead electric, J. C. Henry	498, 83 499, 078 499, 154 499, 112	Pr Fu Fu Pe
	Radiator, bot water heat, G. W. Hawes. Rail cleaning brush, street, J. A. Gowans. Rail joints, die for manufacturing, F. H. Heath. Rail tie and chair, combined, Howard & Eagan. Railway apparatus, cable, W. T. Smith. Railway overhead electric, J. C. Henry. Railway, overhead electric, J. C. Henry. Railway rail joint and fastening, P. P. Smith. Railway signal, J. W. Steele. Railway signal, J. W. Steele. Railway signal, Stewart & Wattson. Railway signal automatic, Hartman & Baker, Railway tie, W. W. Whitaker. Railway tie, metallic, C. Worden. Railway tie, metallic, C. Worden. Railway track, J. Murnane.	498,049 498,864 498,865 499,165	Si Sp Sp
	Railway tië, W. W. Whitaker. Railway tie, metallic, C. Worden. Railway track, J. Murnane. Railway trolley, conduit, M. H. Smith. Railway trolley, electric, J. R. Griffiths Reilway trolley, electric, J. W. Honor.	499,071 499,077 499,139 498,906	Sr Tr Tr
	Railway trolley, electric, J. R. Griffiths Railway trolley, electric, G. W. Hooper Railways, audible signal for, Hartman & Baker Railways, automatic signal for street, Hartman	498,906 498,933 499,115 499,166	"
	Railways, closed conduit for electric, C. J. Kint-	400 059	A: Ba
	Railways, electric signaling apparatus and system for, J. W. Lattig. Rake. See Hay rake. Range, combined cooking and water heating, A. P. Broomell Register. See Cash register.		Bi Bi Bi
	Regulator. See Gas regulator. Pressure regu-		Ca
	Retort jack et. W. L. Teter Rheostat, E. R. Knowles Rifie sight, duplex telescope, L. C. Cummins Rings, manufacture of J. Bonner. Road engine. W. C. Oastler.	498,799 499,160 499,091 498,918	Ca Co Fi
	Roofing composition, G. H. Blake. Roofing, metallic, W. R. Kinnear. Salts, electrolyzing, T. Craney. Sandnapring mechine, Donne & Sofra	498,840 499,024 498,769 499,014	! H
	Rings, manufacture of, J. Bonner. Road engine, W. C. Oastler. Roofing composition, G. H. Blake. Roofing, metallic, W. R. Kinnear. Salts, electrolyzing, T. Craney. Sandpapering machine, Doane & Sofge. Sash fastener, J. M. Porter. Sash, window, Ralph & Roach. Sash, window screen and storm, C. F. Wise. Sawmill, band, J. E. & C. M. Emerson. Scraper, P. Unsinger. Scraper, wheeled, F. A. Rathbun. Screen. See Window screen.	498,990 498,991 498,833 499 162	He Le M
	Scraper, P. Unsinger Scraper, whe eled, F. A. Rathbun Screen. See Window screen. Screw cutting implement. B. Rowman	499,060 499,038 499,092	M
	Screw making machine, B. F. Wheeler. Shelf and table, combined, G. M. Welker. Shelf support, S. A. Smith	499,070 498,893 498,945 498,877	Pi
	Scraper, whe eled, F. A. Rathbun Screen. See Window screen. Screw cutting implement, R. Bowman. Screw making machine, B. F. Wheeler. Shelf and table, combined, G. M. Welker Shelf support, S. A. Smith. Shield, armpit, M. J. Butler. Shup, apparatus for determining the bearing and course of a, E. Baker. Shock compressor, S. C. French. Shoe T. W. Trimby. Shoe T. W. Trimby.	499,087 498,898 498,065	Re
	Shoe rest, F. H. Brown. Sign plate, embossed, A. Winkler. Signal See Electric signal. Railway signal. Time signal.		Su
	Signal apparatus and system, electric, J. W. Lat- tig	499,125 498,987 499,052	W
	State, foller, C. Storia. Small arms, ejector for drop-down, C. H. Mal- cham Smoke consumer, T. T. Beckett Smoke consuming furnace, H. C. Metz Soap for removing hair from the skin, J. Mel-	499,052 499,131 499,004 498,959	! w . w
	Sodawater fountains, draught tube for, G. W.	433,104	
	Spindle, W. A. Chandler. Spindle, J. P. Kelly. Spinning and doubling yarns, apparatus for, J.	498,962 498,952 499,123	188 25 of
	Spring spindle mount, H. D. Klots	499,068 498,980 498,836 499,144	Br (ve
	Sprinkling device for traveling hands, C. McDow-		KO If

stanchion, Scoville & Genung	498,862
team boiler, C. C. Pecktteam engine, C. F. Christopher	498,849 498,841 498,895
team engine, J. R. Maxwelltone cutter, L. C. Trent	499,246
Stone entting machine, •. Thomas	498,995 499,152 499,104
stove, H. Tilden stove burner, gas, A. Weiskittel	498,826 499,069
stanchion, Scoville & Genung.  team boiler, T. C. Best team boiler, C. C. Peck.  team engine, C. F. Cbristopher.  team engine, J. R. Maxwell.  tone cutter, L. C. Trent.  tone cutting machine, Thomas.  tool, convertible, Graham & Curtis.  tove, H. Tilden.  tove burner, gas, A. Weiskittel.  tove, tooking, J. Loewerthal  tove, heating, J. E. Hunter.  tovepipe airing and drying rack, Batters & Duggan.	499,069 499,128 499,023
gan	499,089 498,79 <b>0</b>
gan T. Harrington witch See Electrical switch.  lyringe, G. Bay.	498,760
Table. See Kitchen table. Tan liquor heater, F. Vouk.	499.067
which, See Electrical switch, yrinke, G. Bay.  Table. See Kitchen table.  Tan liquor heater, F. Vouk.  Telegraphic apparatus, copying, S. P. Denison.  Telemeter systems, electrical transmitter for, C.  W. Ayton.	498,911
W. Ayton.  Felemeter systems, receiver for, C. W. Ayton.  Felephone, E. M. Harrison.  Felephone, B. Pickering.  Felephone handle or holder, B. M. Wilkerson.  Felephone switchboard annunciator, F. R.  McRerry  McRerry	498,871 498,872
relephone, B. Pickering.	499,108 498,919 498,869
l'elephone switchboard annunciator, F. R. McBerty.	498.808
McBerty. Thermostatic sprinkler, R. Wood. Thrasher, traveling, B. Holt. Thread cahnet, F. A. Goodridge Thusher hangers, machine for makingmetal, Peck & McDherson	499,180 499,113 498,784
Thread cabinet, F. A. Goodridge Timber hangers, machine for makingmetal, Peck	
& McPherson	498,960 499,062
Pire, pneumatic, W. C. Fisher	498,777 498,794 499,174 498,756
Tire, pneumatic, L. J. Fnei ps	498,756
Poe weight, J. H. Hodgkins Porpedo placer, G. E. Hopkins	498,858 498,955 499,116
Imber hangers, machine for makingmetal, Peck & McPherson.  Time signal, electric, G. W. Van Vianen  Fire, pneumatic, W. C. Fisher  Fire, pneumatic, F. W. Huestis  Fire, pneumatic, L. J. Phelps  Fire tightener, J. A. Ashford  Tobacco curing furnace, S. P. Phelps  Forpedo placer, G. E. Hopkins  Fraction engine, B. Holt  Fracton engine, B. Holt  Frap. See Animal trap.  Frolley stand, J. R. Griffiths	499,114
Traction eightie, B. Hote Frap. See Animal trap. Frolley stand, J. R. Griffiths. Frolley wire curve, R. M. Hunter. Frolley wire support, C. Peterson. Frousers, W. L. Birnbaum. Funnel building apparatus, S. I. Morris. Furning crank pins machine for H. W. Chap-	498,932 499,167
Prolley wire finder, J. Chase	499,095 499,143 498,951
Tunnel building apparatus, S. I. Morris	498,855
man	499,010
man. Umbrella stick, F. H. Howe. Valve, W. G. Nelson. Valve controlling mechanism for motors, H.	499,051 498,850 499,030
Valve, W. G. Nelson Valve controlling mechanism for motors, H.	
Eichoaum	498.970
Valve gear, Good & PetscheValve gear, Good & Petsche	499,066 498,783 498,802
Clain Good & Petsche Valve gear, Good & Petsche Valve, safety, A. Lohbiller Valve, safety, E. H. Lunken Vamp throating and marking machine, Stewart & Brewer	498,802 498,8 <b>63</b>
& Brewer Vaporizer, steam, C. H. Cuehman Vehicle brake, N. E. Bradford Vehicle, self-loading, G. F. Fischer Vehicle spring connection, S. R. Bailey Vehocipede brake mechanism, Selden & Chamber-	499, <b>0</b> 50 499,190 498,841
Vehicle brake, N. E. Bradford Vehicle, self-loading, G. F. Fischer	499,102
Velocipede brake mechanism, Selden & Chamber-	499,086 499,044
velocipeds brake meenamin, Sender & Chamberlain. Velocipede or bicycle, C. Kromer Vending machine, J. A. Williams. Wagon brake, L. E. Lane. Wagon tower, J. S. Hill. Wagon, tower, J. S. Hill. Wardrobe, folding, W. B. Manning. Washer. See Bottle washer. Washing machine, C. Grant.	498,800 498,832
Wagon brake, L. E. Lane	498,832 498,958 499,084
Wagon, tower, J. S. Hill Wardrobe, folding, W. B. Manning	499,189 498,804
Washer. See Bottle washer. Washing machine, C. Grant Washing machine, J. H. J ones. Washing machine, L. Klima. Washing machine, G. M. Miller. Water closet, J. A. Umpleby. Water closet seat. I. Linb.	498,786
Washing machine, L. Klima.  Washing machine, G. M. Miller	499,119 498,798 499,136
Water closet, J. A. Umpleby	499,866 499,026
water coset, J. A. Umpleoy Water closet seat, L. Lipp. Water cooler, L. B. Saddine. Water crane, A. Scheid. Water elevators, ste am or air connection for, H. R. Winkelmann	498,817 498,818
Water elevators, steam or air connection for, H.  R. Winkelmann.	499,179
Water wheel bucket, F. Von Leicht	499,127 499,121
R. Winkelmann. Water motor, R. M. Shaffer. Water wheel bucket, F. Von Leicht. Water wheel or motor, J. W. Kales Weighing basket, coal, S. Jones et al Barker. Well rig. oil. S. B. Sheakley	499,120
Barker Well rig, oil, S. R. Sheakley	498,966 499,045
Wheel. See Water wheel. Whip hanger, H. Weed	498,999
Well or cistern cleaner and water purifier, W. S. Barker.  Barker. Well rig, oll, S. R. Sheakley. Wheel. See Water wheel. Whip hanger, H. Weed. Window, J. Brudon. Window guard, J. C. Meyer. Window screen, Z. Loudenbeck. Window screen, Z. Loudenbeck. Wine coupling, J. Bodine. Wire fabric machine, P. Tourasse. Wood polishing compound. W. E. Rohner. Wood washing machine, F. G. & A. C. Sargent. Wrapping machine, C. R. Schilling. Yoke, carriage clip, W. J. Kauffman.	498,916 498,926
Window screen, pocket, C. L. Wagandt	498.868 499.090
Wire fabric machine, P. Tourasse	499,153 498,961
Wool washing machine, F. G. & A. C. Sargent Wrapping machine, C. R. Schilling	498,889 498,992
Yoke, carriage clip, W. J. Kauffman	499,122
DESIGNS.	
Barometer frame, H. L. Ayer	. 22,508
Buckle, U. L. Ziegler	. 22,504 o 22,517

Barometer frame, H. L. Ayer	22.508
Buckle, C. L. Ziegler	22.504
Can, W. C. Winfield	22,517
Carnet grip, stair, R. H. Warren	22.509
Cuffin plate, F. Ratcliff	22,507
Cutlery handle, C. F. Smith	22,503
Depurator, J. F. Hartz	22.510
Drinking glass, E. J. Rauchfuss	22,497
Flag. J. Terhune	22.496
Furnace J. R. Reed	22.519
Furnace J. R. Reed	22.514
Spoon, Jamoulleau & Versehuur	22,495
Spoon Jamo neau & Versehuur	22,500
Spoon W H Tomer	22,498
Spoon ato W H Tomor	22 501
Spoon or fork handle D N Oakman	22.502
Cloothriels and II W Dingham	22,505
Thirmming Millor & Porton	60,101
Spoon, H. Tomey Spoon, etc., W. H. Tomey Spoon etc., W. H. Tomey Toothpick case, H. W. Bingham Trimming, Miller & Barton. Worktable C. M. B. Roller	44,101
Work table, C. M. B. Boller	ZZ,518

	TRADE MARKS.
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Rearing r	netal Fairbanks Company 23.19
Blacking	for polishing leather, liquid, J. S. Keyser 23.16
srusbes,	tooth, Florence Manufacturing Com-
pany	
suttons,	clasps, and spring fasteners for wearing el and gloves, Consolidated Fastener
Comp	any
Canned v	egetables and fruits, B. S. Janney, Jr., &
Co	
anned McGo	vegetables, including corn, Delafield, vern & Co
locks and	1 faucets J. Conity. 23.19
cosmetic	s, Wakelee & Company
lour, L.	1 faucets, J. Conity. 23,19 s. Wakelee & Company. 23,17 A. Wright & Co. 23,16
iarness i	for norses and other draught animals, F.
O. Dai	lley & Co
Torses ho	e nails, New Process Nail Company 23,18
eather.	helt and lace. Bay State Belting Com-
pany.	and pharmacy, chemical substances pre- for use in. J. B. Halerow23,17 densed, W. D. Cleveland & Co23,16 waters, natural, Victoria Mineral Water
nared for an	for use in 1 R Helerow 92.17
Milk, con	densed, W. D. Cleveland & Co 23,16
Mineral	waters, natural, Victoria Mineral Water
Spring	g Company
Photogra	phing artists' paper used for Diamond
Aristo	otype Co
Printing	presses, perfecting, Duplex Printing Company. 23,18
Press	Company
Remedy.	catarrh, F. C. Fowler
temedy	for man and beast, external, X-Zalia
Medic	ine Company
uspenue Throads	for machine and hand sewing. Kerr
Threa	d Company
Inderwe	d Company
Vash for	the prevention and cure of sexual dis-
eases, Veterore	W. D. Mann. 23,17 offed hollow ware known as indurated,
United	d Indurated Fiber Company of New Jer-
sey	23,18
Vhisky, t	23,18 prandy, gin, rum, sherry, port, ma deira, queurs, T. Allen & Co
and lie	aueurs. T. Allen & Co 23,16