## Business and Personal.

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Grindstone Frames-With cabinet base and all Improvements. Send for circulars and prices. Davis. Rochester, N. Y.

Acme engine, 1 to 5 H. P. See adv. next issue "U. S." metal polish. Indianapolis. Samples free. Presses & Dies. Ferracute Mach. Co., Bridgeton, N. J. 6 Spindle Turret Drill Presses. A.D. Quint, Hartford, Ct. Patent Open-Side Planing and Shaping Machines. Pedrick & Ayer, Philadelphia, Pa.

Steam Hammers, Improved Hydraulic Jacks, and Tube Expanders. R. Dudgeon, 24 Columbia St., New York.

Screw machines, milling machines, and drill press The Garvin Mach, Co., Laight and Canal Sts., New York, Centrifugal Pumps for paper and pulp mills. Irrigating and sand pumping plants. Irvin Van Wie, Syracuse, N. Y. Wanted-Pattern makers accustomed to machine work at an iron works in Camden, N. J. Address Cam-

den, care of Scientific American.

The best book for electricians and beginners in electricity is "Experimental Science," by Geo. M. Hopkins By mail. \$4; Munn & Co., publishers, 361 Broadway, N. Y. For the original Bogardus Universal Eccentric Mill. Foot and Power Presses, Drills, Shears, etc., address J.S. & G. F. Simpson, 26 to 36 Rodney St., Brooklyn, N. Y.

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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 This is for our information and not for publication.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

(4460) W. A. R. asks how to give a bright brass wheel the appearance of old bronze. A. A simple way is to wash the article with vinegar, and expose it to the vapor of ammonia, and repeat this until satisfactory, or boil it in a solution of copper nitrate. or immerse it in a solution of iron nitrate and hyposul-Cooling milk, meat, vegetables, etc., device for, Smart & Cheatham. 478,720

(4461) I. A. wants a very deep black, and been informed that Frankfort black is the blackest of all. He cannot obtain it, and asks how it is made. A It is made in Germany, from the vine branches and other refuse of the vine culture, like charcoal is made from wood. There is, however, a better black now. the aniline black, about which draughtsmen agree that it is the blackest black known,

(4462) B. M. wishes to know what is used to make woven textures uninflammable. A. The best is to wash them in a solution of sodium tungstate, next to this is ammonium phosphate, also calcium acetate and calcium chloride, equal parts dissolved in twice their weight, of water, also solution of alum, of borax, sodium sulphate, and boracic acid, or a mixture of the last four have been recommended, as preventing change of color, and not stiffening the texture after

(4463) J. B. asks for the best mixture used to protect iron machinery exposed to the atmosphere. A. 1 part pulverized graphite, 1 part lead sulphate, and I part zinc sulphate, rubbed up together and mixed well with 16 parts of linseed oil varnish and then boiled, form a coating which no water will wash off, and provesa reliable protection for all kinds of oxidizable metals, in all kinds of exposure to weather.

(4464) R. S., of New York, asks the simplest way to test if the ground combination coffee consists of a mixture of different kinds of coffee only or contains adulterations, such as burned sugar. A. When he mixes the coffce with cold water, and lets it stand for half an hour, he will find the burned sugar at the bottom, while pure coffec will float on the top. He will find that most all the so-called combination coffees are in fact adulterated coffees.

## TO INVENTORS.

An experience of forty years, and the preparation of more than one hundred thousand applications for patents at home and abroad, enable us to understand the laws and practice on both continents, and to possess unequaled facilities for procuring patents everywhere. synonsis 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 extensive facilities for conducting the business. Address MUNN & CO., office Scientific American, 361 Broad-

## INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

July 12, 1892.

AND EACH BEARING THAT DATE.

information and not for publication.  References to former articles or answers should	[See note at end of list about copies of these patents.]
give date of paper and page or number of question.  Inquirles not answered in reasonable time should	Adjusts blo goot Pierre & Poinchild 479 040
be repeated; correspondents will bear in mind that	Adjustable seat, Biggs & Fairchild
some answers require not a little research, and, though we endeavor to reply to all either by letter	Analyamator, Connors & Eddy
or in this department, each must take his turn.	Angle finish for rooms. A. D. Ellis. 478,928 Animal power, J. Dick. 478.575
Special Written Information on matters of personal rather than general interest cannot be	Animal power, J. Dick         478,575           Arch, fireproof floor, P. M. Bruner         478,914           Articles, construction of legged, Harman & Baton         478,857
expected without remuneration.	Eaton
scientific American Supplements referred to may be had at the office. Price 10 cents each.	Atomizer, T. E. Ogram 478,940
Books referred to promptly supplied on receipt of	### ### ##############################
price.	Awning, B. Brooks
marked or labeled.	Baking pan, S. L. Kelly
(A488) T T) M	
(4455) J. F. M. writes: Will you please	Baskets, means for securing coverings of netting to A. E. Story.         478,883           Bed, folding, G. W. Rodecap.         478,761           Belting, woven fasher for machine, J. Oldfield.         478,941           Bench nook, C. J. Kempf.         478,941           Bench nook, C. J. Kempf.         478,772           Bicycle, L. C. Jaquish.         478,773           Bicycle, Tuttle & Cable.         478,772           Bicycle, Tuttle & Cable.         478,732           Bicycle exhibiting device, C. W. Munson.         478,732           Bicycle support, W. A. Elmore.         475,581           Bicycle support, T. B. Marshall.         478,632           Bicycle wheel, G. G. F. Boswell.         478,732           Bit. See Bridle bit. Curb bit.         478,630           Blank feeding mechanism, F. H. Hardman.         478,637           Blink, window, W. Z. Brown.         478,633           Block. See Printing block.         478,632
explain the art of decalcomania? A. Decalcomanies or chromo transfer prints are made by brushing thin	Beiting, woven fabric for machine, J. Oldfield 478,941 Bench hook, C. J. Kempf
plate paper with flour or starch paste. When dry the	Bicycle, L. C. Jaquish
paper is treated with a solution of gum or gum and	Bicycle, Tuttle & Cable
starch. When dry it is well rolled. The printing is	Bicycle seat support, W. A. Elmore
done on this paper by lithography, but the colors are	Bicycle wheel, G. G. F. Boswell 478,735
worked in reverse order, the transparent colors being	Bit. See Bridle bit. Curb bit. Black ash dissolver. Newhall & Hamilton 478.630
printed first. Either the surface of the print or the	Blank feeding mechanism, F. H. Hardman 478,597 Blind, window W. Z. Brown
surface on which it is applied must be brushed with	Block. See Printing block.
copal varnish. Apply, and remove the paper by sponging.	Blower, powder, W.J. Evans. 478,744   Boat. See Surf boct.     Boat. J. Savage 478,763
	Boat, J. Savage
(4456) H. W. S. says: When was the	Boiler attachment, range, W. S. Clark
first railway introduced into the United States and Eng	Boot upper, O. Baker
land, and also who built the first locomotive and where did it run in America? A. Ruilways were introduced	Boot upper, O. Baker. 478,550 Bottle stand, poison, G. L. Rands. 478,550 Box. See Wood and coal box.
in England, September 27, 1825; in Austria, September	Box lid support, C. B. Struble 478,655
30, 1828; in France, October 1, 1828; and in the United	Brake. See Car brake.
States, December 28, 1829. The first locomotive which	Brake adjusting device, A. Rauh         478,638           Brake shoe, J. G. Wharton         478,671           Brick macbine, W. Burkman         478,975           Brick, paving, D. Lance         478,612           Brick press, S. McCarter         478,662           Brick press, S. McCarter         478,662           Bridle bit, J. W. James         478,676           Bucket, dinner, W. F. Janeway         478,676           Bucket, D. L. Smith         478,528           Building front, A. Brunkhorst et al.         478,736           Cable conduits, automatic trap for, Bishop & Bell 478,910           Cable gripa, litting mechanism for, Bishop & Bell 478,911           Calculating machine, W. M. McCafferty         478,934           Camera. See Photographic camera.         478,885
ran in America was built at Stourbridge, England, and	Brick, paving, D. Lance
was imported for the Delaware and Hudson Railroad.	Brick press, S. McCarter
(4457) G. M. F. says: What employ-	Bucket, dinner, W. F. Janeway
ment is considered to be the healthiest and what the	Building front, A. Brunkhorst et al. 478,974
most unhealthy, or in other words, what class of people	Cable conduits, automatic trap for, Bishop & Bell 478,910
live the longest? A. The average ages for a few occu-	Cable grips, lifting mechanism for, Bishop & Bell 478,911 Calculating machine, W. M. McCafferty
pations are as follows: Judges, 65; farmers, 64; clergy- men, 56; lawyers, 54; merchants, 51; tailors, 44; editors,	Camera, See Photographic camera, Camera shutter, Blair & Kelley, 478,909
40; machinists, 36; teachers, 34; clerks, 34; operatives,	Camera shutter, Blair & Kelley. 478,909 Car brake, F. A. Baier 478,902 Car, burglar proof, J. Beermaker. 478,554
32.	Car coupling, D. L. Barnes. 478,835
(4458) B. C. W. says: A number of	Car coupling, D. Bellon
years ago I saw a table in your paper giving the average	Car coupling, C. A. Gould
number of days of sickness that could be expected by	Car door, grain, S. W. Grosh. 478,748
people of average health at different ages. Can you	Card, envelope, R. Sinn. 478,825
give this table? A. At 20 years of age calculate on	Car, burglar proof, J. Beermaker.         478,554           Car coupling, D. Beilon.         478,855           Car coupling, D. Beilon.         478,778           Car coupling, D. Beilon.         478,778           Car coupling, C. A. Gould.         478,747           Car coupling, A. B. Luther.         478,620           Car door, grain, S. W. Grosh.         478,740           Car locker, J. E. Dempsey         478,740           Card, envelope, R. Sinn.         478,837           Cartridge coupling, N. D. Chapman.         478,837           Cartridge loading machine, J. H. Layman         478,640           Case. See Filing and supply case.         Show case.           Cash indicator and recorder, M. Leaby.         478,788           Castle, suppressing horns in, J. March.         478,872           Cattle, suppressing horns in, J. March.         478,872
4 sick days yearly; at 20 to 30, 5 or 6 days; at 45, 7 days;	Carving machine, J. Rohlmann
at 50, 9 or 10 days; at 60, 16 days; at 65, 31 days; at	Cash indicator and recorder, M. Leahy
70, 74 days, (4459) B. C. S. says: Kindly give the	Cattle, suppressing horns in, J. March
height of the ten highest towers and steeples of the	Cattle, suppressing horns in, J. March. 478,870 Chair. See Combination chair. Dental chair. Cheese vat, L. Meyer. 478,830 Chill plate for flasks. F. Marty. 478,622 Chromatic pitch pipe, C. H. Congdon. 478,570 Clamp, W. B. Seward. 478,622 Clamp for fruit lar caps, etc., C. E. Thomas. 478,771 Claw bar, J. W. Grey. 478,502 Clock, alarm, C. D. Brown. 478,830 Clock case, W. T. Amies. 478,636 Clutch, rope. Bennett & Adams. 478,636 Cob pipes, compound for filling, A. C. Bauscher. 478,532 Cock for casks. E. Cremer.
world. A. Eiffel tower 1,000 feet, Washington monu-	Chill plate for flasks, F. Marty
ment 555, Cologne Cathedral 511, Hamburg, St. Nicholas	Clamp, W. B. Seward
473, Strassburg 468, Rouen. Notre Dame, 465, Rome,	Claw bar, J. W. Gray. 478,855
St. Peter's, 455, Cairo, large pyramid, 450, Vienna, St.	Clock case, W. T. Amies
Stephen's, 449, Cairo, second pyramid, 446.	Clutch, rope. Bennett & Adams
(4460) W. A. R. asks how to give a	Cock for casks, E. Cremer         478,574           Cock, stop, C. F. Logan         479,618           Collar and cuff cabinet, H. Caspar         478,566           Collar fastener, horse, J. Himmelstein         478,606
bright brass wheel the appearance of old bronze. A. A	Collar and cuff cabinet, H. Caspar. 478,566
simple way is to wash the article with vinegar, and	COLLET VOKES, SEDSTADIE COUDING TOP, N. J. JULIE
expose it to the vapor of ammonia, and repeat this until	
satisfactory, or boil it in a solution of copper nitrate,	
or immerse it in a solution of iron nitrate and hyposul-	Cooling milk most vegetables etc. device for

			_
1	Copying press, D. Healy	478,601 478,921 478,666	Nut Nut Oil,
	Copying press, D. Healy. Core barrel, collapsible, F. Chambers. Cornet, convertible, J. Vivien. Cotton, machine for handling, cleaning, and distributing seed, R. S. Munger. Cotton press, P. B. Marsh. Counting, See Car counting. Carriage counting.	478,883 478,755	Ore Org Pac Pad
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	Crusher. See Ore crusher. Cuff holder, H. E. Snow (r). Cultivator, A. Ellis.	11,253 478,790	Pan Pap Pap
	Cultivator, G. Moore	478,624 478.861	Pap Pap
	Curb bit, ornamental, J. W. James	478,868 478,689	Pap Pea Peg Pen
	Damper operating mechanism, time, O. Briggs, Jr	478,562 478,589	Pen Pen Pen
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	Ireland. Drum J. Knittel. Drum for stoves, detachable heating, W. J. Loth. Egg carrying package, Dale & Weightman. Electric currents, distribution of, E. Thomson. Electric elevator. See & Tyler.	478,605	Pip Pip Plas Plas
	Electric motor, H. F. Ong.	478,968	Plo
	Short	478,718 478,664 478,661	Plo Plo Plo Poc
	H Cohnrich	478,568 478,853	Poir Pov Pov Pre
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	ter. Envelope opener, Rogers & Van Buren. Exhibiting pictures, etc., stand for, V. L. M. Renard. Explosive compound, A. C. Rand.	478,889 478,887	Pri Pri Pri
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Rein guard, A. C. Massey. Rein spreader, J. H. & F. S. Pew. Road, gravel, F. J. Hoyt. Roofing tool, L. L. Sagendorph. Rope driving apparatus, T. H. Maedonaid et al Rotary engine, A. F. G. Brown. Sack bolder, J. C. Bratney. Sad Iron, Ette & Sanders. Sawmill, band, D. C. Prescott. Saw swaging device, A. L. Navone.	478,712 478,862 478,642
Rope driving apparatus, T. H. Macdonald et al Rotary engine, A. F. G. Brown Sack bolder, J. C. Bratney	478,873 478,843 478,913 478,929
Sack noder, J. C. Bratney. Sad Iron, Ette & Sanders. Sawmill, band, D. C. Prescott. Saw swaging device, A. L. Navone. Scale, spring, L. E. A. Kovsky. Scraper or cleaner for boots or shoes. F. A. Cabu.	478,929 478,817 478,886
Scale, spring, L. E. A. Kovsky.  Scraper or cleaner for boots or shoes, F. A. Cahn. Scrubbing machine, H. Prud'homme	478,69 478,84 478,63
Scrubbing machine, H. Prud'homme. Sculpture, translucent, F. A. Shaw Seam folder, double, H. L. Totten. Seaming machine, can, C. W. Ellsworth	478,636 478,76 478,72 478,58
Seat. See Adjustable seat. Separator. See Magnetic separator. Sewer trap, R. Newton. Sewing machine clamp, buttonhole, C. A. French	
Sewing machine feed regulating attachment, R. Todd.  Sewing machine needle bar, P. Diehl	478.66
Signaling apparatus electric, W. L. Denio. Signaling apparatus for making, A. McLean. Spinning mule, cotton, C. A. Dam. Spittoon, combustible pocket, J. Koehler. Spoon blank swaging die, H. C. Hart. Sprinkler. See Automatic sprinkler. Stalk cutter, H. W. Alien. Stamp or label affixer, W. B. Shafer. Stand, See Bottle stand. Umbrella stand. Steam boller, G. L. Allen.	478,738 478,873 478,860
Sprinkler. See Automatic sprinkler. Stalk cutter. H. W. Alien	
Stamp or label affixer, W. B. Shafer	478,676 478,76
Stamp or label affixer, W. B. Shafer. Stand. See Bottle stand. Umbrella stand. Steam boiler, G. L. Allen. Steam boiler, H. F. Cook.	478,676 478,76 478,67 478,69
Stamp or label affixer, W. B. Shafer. Stand. See Bottle stand. Umbrella stand. Steam boiler, G. L. Allen. Steam boiler, H. F. Cook. Stencils, method of and apparatus for producing. J. L. Young. Strrup, E. A. Peacock.	478,69
Steam boiler, H. F. Cook.  Stencils, method of and apparatus for producing. J. L. Young.  Stirup, E. A. Peacock.  Stocking ribs, device for transferring, F. Lasber.	478,69 478,67 478,63 478,61
Steam boiler, H. F. Cook.  Stencils, method of and apparatus for producing. J. L. Young  Stirup, E. A. Peacock.  Stocking ribs, device for transferring, F. Lasber.  Stova, cook, W. L. Mc Dowell.  Stove, portable, F. T. Schneider.  Stoves and furnaces, means for securing glass plates in windows of, L. C. Ballentine.	478,69 478,63 478,63 478,61 478,75 478,80 478,82
Steam boiler, H. F. Cook.  Stencils, method of and apparatus for producing. J. L. Young  Stirup, E. A. Peacock.  Stocking ribs, device for transferring, F. Lasber.  Stova, cook, W. L. Mc Dowell.  Stove, portable, F. T. Schneider.  Stoves and furnaces, means for securing glass plates in windows of, L. C. Ballentine.	478,69 478,63 478,63 478,61 478,75 478,80 478,82
Steam boiler, H. F. Cook.  Stencils, method of and apparatus for producing. J. L. Young. L. Young. Stirrup, E. A. Peacock. Stocking ribs, device for transferring, F. Lasber. Stockings, assortment of, W. H. Howard. Stove, cook, W. L. M. & Dowell. Stove, portable, F. T. Schneider. Stoves and furnaces, means for securing glass plates in windows of, L. C. Ballentine. Stoves, gas attachment for cooking, R. Bigley. Stoves, valve for hot blast, J. Kennedy. Stovewier fastening, J. H. Johnston. Surf boat, safety, W. C. Soule. Suspenders, J. P. Galvin. Sweeping machine, E. O. Pease.	478,69 478,63 478,61 478,75 478,80 478,80 478,80 478,80 478,56 478,96 478,96 478,96 478,96
Steam boiler, H. F. Cook Stencils, method of and apparatus for producing. J. L. Young. Stirrup, E. A. Peacock. Stocking ribs, device for transferring, F. Lasber. Stockings, assortment of, W. H. Howard. Stove, cook, W. L. M. & Dowell. Stove, portable, F. T. Schneider. Stoves and furnaces, means for securing glass plates in windows of, L. C. Ballentine. Stoves, gas attachment for cooking, R. Bigley. Stoves, valve for hot blast, J. Kennedy. Stoventy fastening, J. H. Johnston. Surf boat, Safety, W. C. Soule. Suspenders, J. P. Galvin. Sweeping machine, E. O. Pease. Switch. See Cut out switch. Railway switch. Syringe, J. A. Flexner.	478,69 478,61 478,63 478,61 478,75 478,82 478,82 478,86 478,96 478,96 478,96 478,96 478,95 478,95
Steam boiler, H. F. Cook Stencils, method of and apparatus for producing. J. L. Young. Stirrup, E. A. Peacock. Stocking ribs, device for transferring, F. Lasber. Stockings, assortment of, W. H. Howard. Stove, cook, W. L. M. & Dowell. Stove, portable, F. T. Schneider. Stoves and furnaces, means for securing glass plates in windows of, L. C. Ballentine. Stoves, gas attachment for cooking, R. Bigley. Stoves, valve for hot blast, J. Kennedy. Stoventy fastening, J. H. Johnston. Surf boat, Safety, W. C. Soule. Suspenders, J. P. Galvin. Sweeping machine, E. O. Pease. Switch. See Cut out switch. Railway switch. Syringe, J. A. Flexner.	478,69 478,61 478,63 478,61 478,75 478,82 478,82 478,86 478,96 478,96 478,96 478,96 478,95 478,95
Steam boiler, H. F. Cook Stencils, method of and apparatus for producing. J. L. Young. Stirrup, E. A. Peacock. Stocking ribs, device for transferring, F. Lasber. Stockings, assortment of, W. H. Howard. Stove, cook, W. L. M. & Dowell. Stove, portable, F. T. Schneider. Stoves and furnaces, means for securing glass plates in windows of, L. C. Ballentine. Stoves, gas attachment for cooking, R. Bigley. Stoves, valve for hot blast, J. Kennedy. Stoventy fastening, J. H. Johnston. Surf boat, Safety, W. C. Soule. Suspenders, J. P. Galvin. Sweeping machine, E. O. Pease. Switch. See Cut out switch. Railway switch. Syringe, J. A. Flexner.	478,69 478,61 478,63 478,61 478,75 478,82 478,82 478,86 478,96 478,96 478,96 478,96 478,95 478,95
Steam boiler, H. F. Cook.  Stencils, method of and apparatus for producing. J. I. Young.  J. L. Young.  Storcking ribs, device for transferring, F. Lasber.  Stockings, assortment of, W. H. Howard.  Stove, cook, W. L. McDowell.  Stove, cook, W. L. McDowell.  Stoves and furnaces, means for securing glass plates in windows of, L. C. Ballentine.  Stoves, gas attachment for cooking, R. Bigley.  Stoves, yalve for hot blast, J. Kennedy.  Stovewipe fastening, J. H. Johnston.  Surf boat, safety, W. C. Soule.  Sweeping machine, E. O. Pease.  Switch. See Cut out switch. Railway switch.  Syringe, G. F. Miles.  Syringe, G. F. Miles.  Syringe, G. F. Miles.  Syringe, coloth boards, J. V. Moore.  Tapping mains, machine for, W. S. Payne.  Telephone, P. H. D'Unger.  Telephone desk attachment, L. C. Butler.  Telephone repeater, T. A. Edison.  Terret, harness, F. Park.  Thermal alarm, Maxim & Price	478,69 478,61 478,63 478,61 478,75 478,82 478,82 478,86 478,96 478,96 478,96 478,96 478,95 478,95
Steam boiler, H. F. Cook Stencils, method of and apparatus for producing. J. I. Young. Strirup, E. A. Peacock. Stocking ribs, device for transferring, F. Lasber. Stockings, assortment of, W. H. Howard Stove, cook, W. L. McDowell. Stove, cook, W. L. McDowell. Stove, cook, W. L. McDowell. Stoves and furnaces, means for securing glass plates in windows of, L. C. Ballentine. Stoves, gas attachment for cooking, R. Bigley. Stoves, valve for hot blast, J. Kennedy. Stovewipe fastening, J. H. Johnston. Surf boat, Safety, W. C. Soule. Swepping machine, E. O. Pease. Switch. See Cut out switch. Railway switch. Syringe, G. F. Miles. Syringe, G. F. Miles. Syringe, G. F. Miles. Syringe, colth boards, J. V. Moore. Tasping mains, machine for, W. S. Payne. Telephone desk attachment, L. C. Butler Telephone eppeater, T. A. Edison. Terret, harness, F. Tark. Ther mai slarm, Maxim & Price Ther mostat, electrical W. L. Denio.	478,69 478,63: 478,63: 478,75: 478,80: 478,80: 478,96: 478,96: 478,96: 478,96: 478,96: 478,98: 478,79: 478,79: 478,63: 478,63: 478,79: 478,63: 478,79: 478,79: 478,79: 478,79: 478,79: 478,79: 478,79: 478,79: 478,79: 478,79: 478,79: 478,79: 478,79: 478,79: 478,79: 478,79:
Steam boiler, H. F. Cook Stencils, method of and apparatus for producing. J. I. Young. J. I. Young. Stercils, method of and apparatus for producing. J. I. Young. Store, E. A. Peacock. Stocking ribs, device for transferring, F. Lasber. Stockings, assortment of, W. H. Howard. Stove, cook, W. L. McDowell. Stove, cook, W. L. McDowell. Stoves, and furnaces, means for securing glass plates in windows of, L. C. Ballentine. Stoves, gas attachment for cooking, R. Bigley. Stoves, valve for hot blast, J. Kennedy. Stovewipe fastening, J. H. Johnston. Surf boat, safety, W. C. Soule. Suspenders, J. P. Galvin. Sweeping machine, E. O. Pease. Switch. See Cut out switch. Railway switch. Syringe, J. A. Flexner Syringe, G. F. Miles. Syringe, G. F. Miles. Syringe, vaginal, J. D. Kirkwood. Table and embroidery frame, M. Schmirk. Tag for cloth boards, J. V. Moore. Tapping mains, machine for, W. S. Payne. Telephone, P. H. D'Unger. Telephone desk attachment, L. C. Butler Telephone repeater, T. A. Edison. Telereth, tanness, F. Park. Thermal alarm, Maxim & Price Thermostat, electrical, W. L. Denio. Thill coupling, G. H. Allen. Thill coupling, G. H. Allen. Till lock, W. R. Van Vijet.	478,698 478,673 478,673 478,673 478,673 478,673 478,673 478,673 478,673 478,673 478,673 478,673 478,673 478,773
Steam boiler, H. F. Cook Stencils, method of and apparatus for producing. J. L. Young. Stencils, method of and apparatus for producing. J. L. Young. Stirrup, E. A. Peacock. Stocking ribs, device for transferring, F. Lasber. Stockings, assortment of, W. H. Howard Stove, cook, W. L. McDowell. Stove, cook, W. L. McDowell. Stove, cook, W. L. McDowell. Stoves, cook, W. L. McDowell. Stoves and furnaces, means for securing glass plates in windows of, L. C. Ballentine. Stoves, gas attachment for cooking, R. Bigley. Stoves, valve for hot blast, J. Kennedy. Stovewipe fastening, J. H. Johnston. Surf boat, safety, W. C. Soule. Sweeping machine, E. O. Pease. Switch. See Cut out switch. Raiiway switch. Syringe, G. F. Miles. Syringe, G. F. Miles. Syringe, G. F. Miles. Syringe, G. F. Miles. Syringe, coloth boards, J. V. Moore. Tapping mains, machine for, W. S. Payne. Telephone, P. H. D'Unger. Telephone, P. H. D'Unger. Telephone desk attachment, L. C. Butler Telephone repeater, T. A. Edison Terret, harness, F. Park. Thermal alarm, Maxim & Price Thermostat, electrical, W. L. Denio Thill coupling, A. A. Froehlich Tickets, excess baggare stamp or check for rail- way, T. M. Cunningham Till, C. M. Strusholm. Till lock, W. R. Van Viet. Time alarm, electric, J. Jacobi Tire for vehicle wheels, elastic, Bullard & Har- rington.	478,698 478,678 478,678 478,678 478,678 478,678 478,678 478,678 478,789 478,578 478,678 478,789
Steam boiler, H. F. Cook Stencils, method of and apparatus for producing. J. L. Young. Stencils, method of and apparatus for producing. J. L. Young. Stirrup, E. A. Peacock. Stocking ribs, device for transferring, F. Lasber. Stockings, assortment of, W. H. Howard Stove, cook, W. L. McDowell. Stove, cook, W. L. McDowell. Stove, cook, W. L. McDowell. Stoves, cook, W. L. McDowell. Stoves and furnaces, means for securing glass plates in windows of, L. C. Ballentine. Stoves, gas attachment for cooking, R. Bigley. Stoves, valve for hot blast, J. Kennedy. Stovewipe fastening, J. H. Johnston. Surf boat, safety, W. C. Soule. Sweeping machine, E. O. Pease. Switch. See Cut out switch. Raiiway switch. Syringe, G. F. Miles. Syringe, G. F. Miles. Syringe, G. F. Miles. Syringe, G. F. Miles. Syringe, coloth boards, J. V. Moore. Tapping mains, machine for, W. S. Payne. Telephone, P. H. D'Unger. Telephone, P. H. D'Unger. Telephone desk attachment, L. C. Butler Telephone repeater, T. A. Edison Terret, harness, F. Park. Thermal alarm, Maxim & Price Thermostat, electrical, W. L. Denio Thill coupling, A. A. Froehlich Tickets, excess baggare stamp or check for rail- way, T. M. Cunningham Till, C. M. Strusholm. Till lock, W. R. Van Viet. Time alarm, electric, J. Jacobi Tire for vehicle wheels, elastic, Bullard & Har- rington.	478,698 478,678 478,678 478,678 478,678 478,678 478,678 478,678 478,789 478,578 478,678 478,789
Steam boiler, H. F. Cook Stencils, method of and apparatus for producing. J. I. Young. J. I. Young. Stercils, method of and apparatus for producing. J. I. Young. Stripp, E. A. Peacock. Stocking ribs, device for transferring, F. Lasber. Stockings, assortment of, W. H. Howard. Stove, cook, W. L. McDowell. Stoves, valve for hot blast, J. Kennedy. Stoves, valve for hot blast, J. Kennedy. Stovewipe fastening, J. H. Johnston. Surf boat, safety, W. C. Soule. Suspenders, J. P. Galvin. Sweeping mashen, E. O. Pease. Switch. See Cut out switch. Railway switch. Syringe, G. F. Miles. Syringe, G. F. Miles. Syringe, G. F. Miles. Syringe, waginal, J. D. Kirkwood. Table and embroidery frame, M. Schmirk. Tag for cloth boards, J. V. Moore. Tapping mains, machine for, W. S. Payne. Telephone P. H. D'Unger. Telephone desk attachment, L. C. Butler Telephone repeater, T. A. Edison. Telephone desk attachment, L. C. Butler Telephone repeater, T. A. Edison. Telereth, harness, F. Park. Thermal alarm, Maxim & Price Thermostat, electrical, W. L. Denio Thill coupling, G. H. Allen. Thill coupling, G. H. Allen. Till lock, W. R. Van Vliet. Time alarm, electric, J. Jacobl. Tire for vehicle wheels, elastic, Bullard & Harrington. Tobacco ordering apparatus, Mayo & Peple. Tongs, blacksmith's, W. M. Haworth. Tool holder, G. Rehvuss et al. Tool sharpening device, G. A. Keist. Torch, signal, F. D. Marston. Torpedoes and other vessels, depth regulating mechanism for narine, F. H. Pajine	478,698 478,678 478,678 478,678 478,678 478,678 478,678 478,678 478,678 478,678 478,678 478,678 478,678 478,678 478,778 478 478 478 478 478 478 478 478 478
Steam boiler, H. F. Cook Stencils, method of and apparatus for producing. J. I. Young. Stencils, method of and apparatus for producing. J. I. Young. Storking ribs, device for transferring, F. Lasber. Stocking ribs, device for transferring, F. Lasber. Stockings, assortment of, W. H. Howard. Stove, cook, W. L. McDowell. Stoves, valve for hot blast, J. Kennedy. Stoves, valve for hot blast, J. Kennedy. Stovewipe fastening, J. H. Johnston. Surf boat, safety, W. C. Soule. Suspenders, J. P. Galvin. Sweeping methine, E. O. Pease. Switch. See Cut out switch. Railway switch. Syringe, J. A. Flexner Syringe, G. F. Miles. Syringe, G. F. Miles. Syringe, vaginal, J. D. Kirkwood. Table and embroidery frame, M. Schmirk. Tag for cloth boards, J. V. Moore. Tapping mains, machine for, W. S. Payne. Telephone P. H. D'Unger. Telephone desk attachment, L. C. Butler Telephone repeater, T. A. Edison. Terret, harness, F. Park. Thermal alarm, Maxim & Price Thermostat, electrical, W. L. Denio Thill coupling, G. H. Allen. Thill coupling, G. H. Allen. Till lock, W. R. Van Vliet. Time alarm, electric, J. Jacobl. Tire for vehicle wheels, elastic, Bullard & Harrington. Tobacco ordering apparatus, Mayo & Peple. Tongs, blacksmith's, W. M. Haworth. Tool holder, G. Rehvuss et al. Tool sharpening device, G. A. Keist. Torch, signal, F. D. Marston. Torpedoes and other vessels, depth regulating mechanism for R. H. Paine. Torcheoses and other vessels, speed regulating mechanism for R. H. Paine.	478,69 478,678 478 478 478 478 478 478 478 478 478 4
Steam boiler, H. F. Cook Stencils, method of and apparatus for producing. J. I. Young. Strirup, E. A. Peacock. Stocking ribs, device for transferring, F. Lasber. Stocking sassortment of, W. H. Howard Stove, cook, W. L. McDowell. Stove, cook, W. L. McDowell. Stove, cook, W. L. McDowell. Stoves and furnaces, means for securing glass plates in windows of, L. C. Ballentine. Stoves, gas attachment for cooking, R. Bigley Stoves, valve for hot blast, J. Kennedy, Stovewipe fastening, J. H. Johnston. Surf boat, safety, W. C. Soule. Swepping machine, E. O. Pease. Switch. See Cut out switch. Railway switch. Swepping machine, E. O. Pease. Syringe, G. F. Miles. Syringe, G. F. Miles. Syringe, G. F. Miles. Syringe, colth boards, J. V. Moore. Tapping mains, machine for, W. S. Payne. Telephone, P. H. D'Unger. Telephone deak attachment, L. C. Butler Telephone repeater, T. A. Edison Terret, barness, F. Park. Thermal alarm, Maxim & Price Thermostat, electrical, W. L. Denio. Thill coupling, A. A. Froeblich Tickets, excess baggage stamp or check for railway, T. M. Cunningham. Till, A. M. Strusholm. Tille own M. Strusholm. Tille own M. Strusholm. Tobacco ordering apparatus, Mayo & Peple. Toongs, blacksmith's, W. M. Haworth Tool holder, G. Rehruss et al. Torpedoes and other vessels, depth regulating mechanism for marine, F. H. Paine Trap Soa Sewer tran.	478,699 478,673 478,632
Steam boiler, H. F. Cook.  Stencils, method of and apparatus for producing. J. I. Young.  Stirrup, E. A. Peacock.  Stocking ribs, device for transferring, F. Lasber.  Stockings, assortment of, W. H. Howard.  Stove, cook, W. L. McDowell.  Stoves and furnaces, means for securing glass plates in windows of, L. C. Ballentine.  Stoves, gas attachment for cooking, R. Bigley.  Stoves, valve for hot blast, J. Kennedy.  Stovewipe fastening, J. H. Johnston.  Surf boat, Safety, W. C. Soule.  Sweeping machine, E. O. Pease.  Switch. See Cut out switch. Railway switch.  Sweeping machine, E. O. Pease.  Syringe, G. F. Miles.  Syringe, G. F. Miles.  Syringe, G. F. Miles.  Syringe, or old hot blast, J. Woore.  Tapping mains, machine for, W. S. Payne.  Telephone, P. H. D'Inger.  Telephone desk attachment, L. C. Butler.  Telephone repeater, T. A. Edison.  Terret, harness, F. Park.  Thermal alarm, Maxim & Price  Thermostat, electrical, W. L. Denio.  Thill coupling, A. A. Froeblich.  Tickets, excess baggare stamp or check for rail-  way, T. M. Cunningham  Till cok, W. R. Van Vijet.  Time alarm, electric, J. Jacobi.  Tire for vehicle wheels, elastic, Bullard & Har-  Tingons, blacksmith; W. M. Haworth.  Tongs, blacksmith; W. M. Haworth.  Tonge, blacksmith; W. M. Haworth.  Torob, signal, F. A. Healing.  Torob, signal, F. M. B. Parham.  Toruck, beam, Bancroft & Rhoades.	478,699 478,673 478,632 478,732 478,732 478,732 478,732 478,732 478,732 478,732 478,732 478,732
Steam boiler, H. F. Cook Stencils, method of and apparatus for producing. J. I. Young. Stencils, method of and apparatus for producing. J. I. Young. Stirrup, E. A. Peacock. Stocking ribs, device for transferring, F. Lasber. Stockings, assortment of, W. H. Howard. Stove, cook, W. L. McDowell. Stoves and furnaces, means for securing glass plates in windows of, L. C. Ballentine. Stoves, gas attachment for cooking, R. Bigley. Stoves, valve for hot blast, J. Kennedy. Stoves, valve for hot blast, J. Kennedy. Stovewipe fastening, J. H. Johnston. Stoves, valve for hot blast, J. Kennedy. Swetching, J. P. Galvin. Swetching, J. P. Galvin. Swetching, S. C. Pease. Switch. See Cut out switch. Railway switch. Syringe, J. A. Flexner. Syringe, G. F. Miles. Syringe, G. F. Miles. Syringe, G. F. Miles. Syringe, G. F. Miles. Table and embroidery frame, M. Schmirk. Tag for cloth boards, J. V. Moore. Tapping mains, machine for, W. S. Payne. Telephone, P. H. D'Unger. Telephone desk attachment, L. C. Butler. Telephone desk attachment, L. C. Butler. Telephone repeater, T. A. Edison. Telephone desk attachment, L. C. Butler. Telephone desk attachment, L. C. Butler. Telephone state, electrical, W. L. Denio. Thill coupling, G. H. Allen. Till lock, W. R. Van Vliet. Time alarm, electric, J. Jacobl. Tire for vehicle wheels, elastic, Bullard & Har- rington. Topadoes and other vessels, depth regulating mechanism for, H. P. Baine. Torophismal, F. D. Marston. Torpedoes and other vessels, depth regulating mechanism for, H. P. Paine. Tory money safe, G. R. Rowland Trace carrier, A. M. Miller. Trap. See Sewer trap. Truck, beam, Bancroft & Rhoades. Tube. See Larynx tube. Typewriting machine, W. M. Jenne. Umbrells stand, Sencenbaugh & Ives. 478645	478,699 478,673 478,633 478,733 478,733 478,733 478,733
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