proper place, so that it may gather the steam with equal facility from both ends of the boiler. When there are three sections, the middle one should receive the dome, although there are exceptions to this in practice. With two sections the usual practice, and we think the proper one, is to put the dome on the front section.

(4391) G. T. R. asks: 1. Where do balloonists get the hydrogen to inflate the balloons, or how do they produce it;? A. Street gas is generally; the most work according to weight, the steam engine used. Hydrogen can be made by passing steam over white-hot iron borings and scrap. 2. When petroleum is burned there is great smoke. Is there any material containing oxygen which, if burned with it, would result in consuming this smoke (or unconsumed carbon) or how could it be prevented? A. No such substance is known. Proper burners, atomizing, and strong draught are the proper lines to work on for smokeconsuming. 3. Would black manganese, if heated, evolve oxygen? A. Yes, if heated high enough.

(4392) L. H. D. asks: If a sheet iron armature core be used for simple motor, as in Supple MENT. No. 641. would it give satisfactory results? A. Yes, if made of sheet iron disks or rings.

(4393) E. J. K. asks: 1. What is the exciting fluid used in the Crowfoot gravity battery with zinc and copper elements? A. The exciting fluid is saturated solution of copper sulphate. 2. I am making two cells of storage battery, each cell containing t wolead plates 6×8 inches; can I form the cells and afterward charge them with Crowfoot gravity batteries? If not, could it be done by covering them with redlead paste? A. You can form your secondary plates and charge them with the gravity batteries. It is advantageous to apply to lead plates a paste of red lead. 3. Will the two cells run motor in Supplement, No. 641? If not, how many will it take? A. The two cells of batterry described by you will have a very small capacity. have 7 or 9 plates in each cell,

(4394) H. L. asks: 1. Is plaster of Paris, after being moulded and dried, porous, so as to allow sir to penetrate it? A. Plaster of Paris is quite porous. 2. Is there a mixture (the nature of plaster of Paris) that after being dried no air can penetrate it? If there is, what is it? A. Probably the oxychloride of zinc cement would be very nearly if not absolutely impervious to air, but you can saturate the plaster with gelatine, shellac varnish or paraffine, thus rendering it nonporous. 3. Is a note collectable which reads: Ten days after death I promise to pay, etc., provided after death the estate is valued at or above the amount called for by the note? A. Yes.

(4395) J. T. D. writes: Please explain the action of the Bourdon tube, used by Trouve in his aviator, illustrated on page 105, current volume of the SCIENTIFIC AMERICAN. I cannot understand why it branches recede from or approach each other as the pressure of the contained gas is increased or decreased. A. The Bourdon tube has an elliptical cross section, so that pressure exerted within the tube causes it to tend to approach a figure of circular cross section; in so doing, the inner surface of the tube is forced inwardly toward the center of curvature. As the inner wall of the tube is confined in the direction of its length by the outer wall, the pressure which renders the inner wall more convex in a transverse direction reduces its convexity or curvature in a longitudinal direction and thus tends to straighten the tube.

(4396) G. M. V. asks: How many volts, amperes, and ohms an eight inch French Grenet battery has? A. The E. M. F. of a Grenet battery is 2 volts. Its resistance depends upon the solution and the condition of the battery, from 💥 of an ohm upward. The current depends upon the resistance of the battery and of the external circuit. It is calculated according to

Ohm's law, which is  $\stackrel{E}{-}= C$ .  $\mathbf{R}$ 

(4397) Amateur asks for directions for making a dry battery, and how to charge same, or if chemicals charge it. A. For information in regard to Gassner's dry battery we refer you to SUPPLEMENT,

(4398) C. L. asks: Is it a fact that lightning rods have the power, to any extent, of protecting houses from injury by lightning? A. A lightning rod properly put up and grounded is undoubtedly a protection against lightning.

(4399) M. T. asks: If a surveyor was running an old line, that the call was north, and the time had been long enough to require two degrees variation here in Southwestern Virginia which should he run N. 2 W. or N. 2 E. to hit the old line? Out here in this portion of Virginia does the needle of a compass vary to the east or west, and about how many years would it take to make one degree variation? Where does the line of no variation, as it is called, run, and does the end of needle pointing north, if it is east of said line of no variation, tend to travel to the west, and if west of it does it tend to the east? A. The variation of the magnetic needle in Scott, Co., Va., was about 29 east in 1870, and has been decreasing at the rate of about 3 minutes per annum since that time. The predicted variation for 1892 for your county was fourtenths of a degree east. As the variation of the needle travels west, the amount of variation known since former line was run must be added to the east reading and subtracted from the west reading from the north end of the needle for tracing the old line on northern courses, and the reverse for southern courses. The north end of the needle always travels to the west by the amount of variation, whether you are to the wes or east of the line of no variation, which is now inor near your county, its amount there being somewhat uncertain from local influence due to mountain regions.

(4400) G. F. C., Plaquemine, La., asks What is meant by the figures, the river is 35 feet, a rise of 0.2 of a foot, and stands 1.7 feet below the flood line of 1890, or the gauge reads 16.6 feet, or the rise is 0.15 of a foot? I read this daily in the river news columns of our newspapers, and will be very glad if you will explain how it reads in parts of feet or inches, as there is Clay reducer, W. Burkman Cleaner. See Flue cleaner.

a dispute about it. A. The datum of river gauges is at low-water mark. The published readings of the height of water are in feet and tenths above low-water mark. The variations are also in tenths or hundredths of a foot. Thus: 0.2 is 2 inches and 4 tenths of an inch. and 17 is 1 foot 84 inches. Also 015 is 1 inch and 10 of an

(4401) O. F. H. asks: 1. Which will do or the electric motor, including with both all accessories? A. As the electric motor is not a prime motor, you will be obliged to include the weight of the prime mover in making your estimate. This being the case, of course a steam engine would weigh less than the electric motor with its prime mover. If the prime mover is disregarded, the electric motor would weigh much less than a steam engine of the same power. 2. Which will produce the most power in a given short time according to weight-the primary or the secondary battery? A. The secondary battery.

R. Bros. & Co. ask how to make ambergris extract.— C. T. L. asks for a receipt for rice soap.—R. N. C. wants to know the antidotes for the principal poisons.—H. W. J. asks how hair washes are made .- P. W. S. wants to know how to bend glass tubes.-E. C. W. asks how to make the powders for a gasogene.-B. D. L. asks how to renovate oil cloths .- F. U. G. asks how to make gelatine sheets.—J. C. O'B. wants to know how to repair books.-C. H. H. asks how to make the composition for carton pierre ornaments.-E. W. S. wants to know how to make resin for violin bows .- A. E. N. asks how to filter water for drinking purposes.--G. G. H. asks for information on core sand, -B. C. S. asks how sand blast engraving is done.

Answers to all of the above queries will be found in the "Scientific American Cyclopedia of Receipts, Notes and Queries," to which our correspondents are referred. owing to the small number of plates. You should The advertisement of this book is printed in another

### 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. 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 extensive facilities for conducting the business. Address MUNN & CO., office Scientific American, 361 Broadway, New York.

### INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

May 24, 1892.

AND EACH BEARING THAT DATE.

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

| A -13 11316-1 1113 TIT TITLIA-  | ARE FOR   |
|---|---|
| Acids, solidifying liquid, W. White   | 475,586   |
| Advertising card rack, D. S. Foote  | 475,726   |
| Alarm. See Heat alarm.  |   |
| Amalgamator, J. M. Thompson   | 475,360<br>475,701<br>475,404   |
| Andiron, E. F. Paschal  | 475,701   |
| Aduarium, picture, E. G. Lochmann. Arch, floor, R. L. Stone. Armor plates, manufacture of, T. J. Tresidder Atomizing or spraying liquids, device for, E. R.   | 475,404   |
| Arch. floor, R. L. Stone  | 475,354<br>475,364  |
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| Broom notice, A. B. Joinson, Buckle, suspender, S. E. Cook. Burner. See Oil burner. Button die, C. Wagenfohr. Button die, C. Wagenfohr. Cabinet for holding postage stamps, etc., M. P. Exiline. Cable grip, G. F. Eiliott. Cable hanger, J. J. Nate. Calendar, W. C. Hawkins. Can See Ice can. Tin can. Can testing machines, can holding frame for use with, C. H. Emery. Candle moulding machine, A. A. Royau. Car coupling, J. Krebbiel. Car coupling, E. P. Eastwick, Jr. 475,682, Car coupling, J. Krebbiel. Car coupling, A. Mailman. Car coupling, S. Q. Saunders. Car door, sliding, C. H. Dunham. Car door, grain, R. O. Hirson. Car door, sliding, C. H. Dunham. Car dectric motor, W. H. Patton. Car lectric motor, W. H. Patton. Car loading apparatus, Campbell & Whigham. Car safety catch, mining, C. R. Trew. Car signal, street, C. H. Smith. Carventilator, H. A. Dirkes. Carpes sweeper, C. K. Stinson. Carter, S. Case. Cash register and indicator, R. Mills. Casting machine, type, H. S. Popp. Casting, mould, F. J. Wooster. Chair, See Rocking chair. | 475,433<br>475,586<br>475,586<br>475,684<br>475,684<br>475,683<br>475,683<br>475,521<br>475,683<br>475,683<br>475,696<br>475,707<br>475,422<br>475,611<br>475,422<br>475,611<br>475,422<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611<br>475,611  |
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| 1   | Cleaning and scouring compound, Peterson & Ruge Clothes line, D. F. Covert Coal and wood cabinet, J. R. Egan Cock or analogous valve, stop, P. Zimmermann,   | 475,413<br>475,675<br>475,303            | Lub<br>Lub<br>Mai<br>Mal |
|-----|--|--|--------------------------|
|     | Cock or analogous valve, stop, P. Zimmermann, Jr.  Coin controlled apparatus, G. F. W. Schultze  | 475,530<br>475,743                       | Mat<br>Mat               |
| :   | Cock or analogous valve, stop, P. Zimmermann, Jr. Coin controlled apparatus, G. F. W. Schultze Coin bandling facilitator, J. O. Boggs. Coin holder, II. E. Howe Coin mailing grip, M. Hazzard. Collar, horse, C. A. Pettle Commutator brush, C. L. Coffin Composition of matter and producing the same, C. C. Cartoline, sincle extinctor E. I. Woolf.   | 475,563<br>475,397<br>475,430            | Mat<br>Mea<br>Mea<br>Mea |
|     | Commutator brush, C. L. Coffin. Composition of matter and producing the same, C. C. Carroll.   | 475,668<br>475,382                       | Med<br>Mer<br>Met<br>Met |
|     | Concrete, mortar, etc., mixing machine for, J.   | 210,221                                  | Met<br>Met<br>Met<br>Met |
|     | Skinner Conductor, anti-inductive, B. H. Wesslau Cooking apparatus, combined steam and hot air, C. H. Dexter Cooking utensil, steam, C. F. Burnap. Cooker, See Regrooler.  | 475,678<br>475,435                       | Met<br>Met<br>Mil<br>Mot |
|     | Cooler: See Beer cooler.  Cornet, V. H. Oberly.  Corset, V. H. Oberly.  Coryeit, D. See Car coupling. Hose coupling.  Thill coupling. See Car coupling. Hose coupling.  Thill coupling.  Creamer, milk, V. W. Blanchard.  Crupper strap fastener, F. L. Armas.  Crusher. See Ore crusher. Stone crusher.  Cpup. See Oil cup.   | 475,666<br>475,337<br>475,562            | Mot<br>Mot<br>Mot        |
|     | Thil coupling.  The coupling.  Creamer, milk, V. W. Blanchard.  Crupper strap fastener, F. L. Armas  | 475,658<br>475,655                       | Mov<br>Mic<br>Mu         |
|     | Crusher. See Ore crusher. Stone crusher. Cup. See Oil cup. Cutlery, die and machine for rolling, I. Hirsch Cutlery, manufacturing, I. Hirsch   | 475,315<br>475,314                       | Mu<br>Mu<br>Mu           |
|     | Cup. See Oil cup. Cutiery, die and machine for rolling, I. Hirsch Cutiery, manufacturing, I. Hirsch Cutter. See Plug cut ter. Cycle sad die, C. W. Sa ladee Darning implement, A. Bocher Decodorizing device, E. O. Ely. Diffusion battery, G. A. Messick Digger. See Polato digger. Disinfecting device, A. P. Beck Door check, B. Defenbaugh Door check, F. E. Welch Door, double, G. A. Anderson Door stop, A. Hauck Door stop, A. Hauck Dough divider, revolving, E. A. C. Petersen                                | 475,613<br>475,659<br>475,547            | Mu<br>Nai<br>Net         |
| j   | Diffusion battery, 4. A. Messick. Digger. See Potato digger. Disinfecting device, A. P. Beck. Door cheek B. Deffenbeugh  | 475,587<br>475,431<br>475,388            | Nev                      |
|     | Door check, F. E. Welch Door, double, G. A. Anderson. Door spring, H. B. Straut.   | 475,368<br>475,531<br>475,               | Nut<br>Oil<br>50il       |
|     | Door stop, A. Hauck. Dough divider, revolving, E. A. C. Petersen. Dowel, H. S. Marsh. Drawing board, R. G. Shiley. Drilling for minerals, G. R. Jarvis.  | 475,686<br>475,607<br>475,407<br>475,350 | Oil<br>Ope<br>Ope<br>Ord |
|     | prill. See Grain drill. Drilling for minerals, G. R. Jarvis. Drying spent grain and the like, apparatus for, F. E. Otto. Dumping apparatus, P. Imig.   | 475,319<br>475,602                       | Ore<br>Ore<br>Ove<br>Pai |
|     | Earthenware pipes, etc., machine for moulding,   | 210,010                                  | Pai<br>Par<br>Par        |
|     | Electric ng hting system, M. J. Cowgill<br>Electric meter, McKen na & Weed<br>Electrical apparatus, coin-controlled, H. Wick-  | 475,411                                  | Par<br>Par<br>Par        |
|     | nam.  Electrical transmitting system, F. E. Now  Electrodes for secondary batteries, manufacture of J. F. McLaughlin   | 475.335                                  | Par<br>Par<br>Per        |
|     | Engine. See Compound engine. Steam engine.   |  | Per<br>Per<br>Pes        |
|     | I raction begins: Engine crosshead, W. Wrlght. Envelope gum moist ener, N. Macphail. Evaporating apparatus, brine, T. R. Timby. Exercising apparatus, horizontal bar, F. Medart.   |  | Pho                      |
|     | Extractor. See Staple extractor.  Eyeglass and spectacle frame, J. E. Searing.  Fabric. See Woven fabric.  Farm gate, C. C. Holter.  Estenging device, C. Liobe.   | 475,615<br>475,316                       | Pile                     |
|     | Fastening device, C. Liebe, Fence wire, J. B. Cleaveland. 475,718, Fence stay, wire, J. H. Brower Fifth wheel, Hinman & Bunnell, Firing apparatus for use with coal dust, C. Wege-   | 475,581<br>475,719<br>475,717<br>475,313 | Pip                      |
| •   | пег  | 475,715<br>475,733                       | Pla<br>Pla<br>Plo        |
| •   | land.<br>Fluid meter, proportional D. McDonald.<br>Flushing tank, periodical, T. C. Beaumont.<br>Folding seat, M. H. & W.J. Hamen.<br>Fult grader, G. A. & C. F. Fleming.  | 475,506<br>475,596<br>475,533            | Plo<br>Plo<br>Plo<br>Plo |
|     | Fruit grader, G. A. & C. F. Fleming  | 475,497                                  | Poo                      |
|     | Furnace, E. F. Paddon. Furnace door opener, C. H. Oliver. Furnace for iron working, W. Heckert et al Furnaces, hydrocarbon oil burner for, J. Wilson.  | 475,603<br>475,338<br>475,398<br>475,478 | Pre<br>Pri               |
| ,   | Gag runner, Felsberg & Dill  | 475,392<br>475,561<br>475,469            | Pri<br>Pri<br>Pri<br>Pro |
|     | Furnace. See Boiler furnace. Metallurgical furnace. Smelting furnace. Furnace, E. F. Paddon Furnace door opener, C. H. Oliver Furnaces for iron working, W. Heckert et al. Furnaces, bydrocarbon oil burner for, J. Wilson. Gag runner, Felsberg & Dill Gauge. See Track gauge. Game apparatus, W. F. Hood. Game apparatus, G. L. Reynolds Game apparatus, G. Zimmerling. Game board, G. Stackhouse. Garments, adjusting strap for, J. A. Phillips. Gas, apparatus for charging magazines with lique- fied P. Giffard. | 475,653<br>475,624<br>475,515            | Pul<br>Pul<br>Pul        |
|     | Gas generatorand human carburated hydrogan   | -10,120                                  | Pui<br>Pui<br>Pui        |
| ĺ   | Blake & Sackett. Gas retorts, apparatus for discharging, A. Coze Gate. See Farm gate. Gate, Sellers & Schlissel  | 475,708                                  | Pui                      |
| 2   | Gate, Selera & Schlssel  | 475,621<br>475,385<br>475,532            | Rai<br>Rai<br>Rai<br>Rai |
| 2   | Grain shocking machine, W. Russell   | 475,612<br>475,539                       | Rei<br>Rei<br>Rei        |
| 3   | Gravel, ore, etc., apparatus for cleaning and grad-<br>ing, N. Jewett.  Grease, etc., from wool washings, recovering, R. B. Griffin Gun rest, C. W. Inger<br>Gutter former, M. C. Hungerford.  Hanger. See Cable hanger.   | 475,568<br>475,395                       | Re<br>Re                 |
| 1   | Harvester attachment. P. H. Botor  | 477.434                                  | Re                       |
| 2   | Harvester, corn or cane, R. B. Robb ins. Harvester pitman rod connection, L. C. Sweet Hat blocking and banding machine, G. E. Brush. Hay rake, horse, H. S. Powell   | 475,358<br>475,662<br>475,342            | Rb<br>Ro<br>Ro<br>Ru     |
| L   | Heat alarm, automatic electric, Palmer & Desisle   | 475,614<br>475,340<br>475,459<br>475,714 | Sal<br>Sal               |
| 7   | Heating boiler, T. Meikle.  Heel making machine, E. H. Taylor  | 475,439<br>475,332<br>475,415            | Sal<br>Sar<br>Sar<br>Sar |
| 2   | ber. See Broom holder. Coin holder. News- paper holder. Paper holder. Temporary  | 475,710                                  | Sas<br>Sas               |
| 5   | Horse boot, C. L. Schoonmaker  |  | Sav                      |
| 1   | Hose coupling, J. E. Louthian<br>Hose coupling, C. E. Petterson<br>Hose or tubing, flexible, J. Cockburn<br>Hubs, tool for cutting keyways in wheel, W.<br>Smith et al.  | 475,352                                  | Sca<br>Sca<br>Scr        |
| 3   | Ice can, C. E. Struck. Ice cracking machine, J. E. Richard Identity indicator, Houghton & Dick Indicator. See Identity indicator. Station indi-  | 475,518<br>475,400                       | Sea<br>  Sea<br>  Sea    |
| 6   | cator. Iron, steel, and other similar metals homogeneous, rendering, J. C. Fraley. Jacquard mechanism, G. W. Stafford. Jail corridors, safety door for, P. Hale. Kiln. See Brick kiln.   |  | Sev<br>Sev<br>She        |
| 2   | Kins, system of pipes for neating lumber, A. T.  |  | She                      |
| •   | Bemis. Knife. See Pocket knife. Knit nether garment, S. T. Sutton Lamp, electric arc, L. Brianne. Lamp, electric arc, R. S. Dobhie.  | 475,734                                  | Sig                      |
| 3   | Lamp, electric arc, J. E. Gaston.  | 475,727                                  | Sm<br>Sol<br>Sol<br>Squ  |
| 667 | Lamp, incandescent electric, H. Green Lamp socket, incandescent, C. A. B. Halvorson. Lamp socket, incandescent, F. C. Rockwell. Land roller attachment, Burr & Cummings. Lantern, F. I. Wells. Latch, gate, M. Haggar. Lathe, R. Conrady. Lathing machine for makin, metal G. A. Ohl   | 475,555<br>475,345<br>475,291<br>475,646 | Sq1                      |
| 5   | Latch, gate, M. Haggar.  Lathe, E. Conrady  Lathing, machine for makin metal, G. A. Ohl.  Last turner A. C. Frankl   | 475,554<br>475,671<br>475,700            | Spi<br>Spi<br>Spi        |
| 3   | Latch, gate, M. Haggar. Lathe, K. Conrady. Lathing, machine for makin metal, G. A. Ohl. Leaf turner, A. C. Frankel. Letter box, J. W. Manlove. Letter box, bouse door, G. D. Sidman. Lifter. See Plate lifter. Lightning arrester, Browne & Tidnam.  | 475,694<br>475,473                       | Sta<br>Sta               |
| 9   | Lightning arrester, A. G. Waterhouse<br>Line, plow, G. H. Jordan   | 475,645<br>475,570                       | Ste                      |
| 7   | Lock. See Nut lock. Permutation lock. Switch lock. Umbrella lock.  | 210,000                                  | Ste                      |
| 3   |  |  | Sto                      |
| 8   | Locking rack for umbrellas, coats, hats, etc., E. J. Colby.  Locomotive, electric, T. A. Edison  | 475,628<br>475,590<br>475,595            | Stu<br>Sus<br>Sw         |
| 3   | Loom shedding mechanism, G. W. Stafford.  475,825  Loom shuttle binder, Baynes & Whalley  Looms, stop motion de vice for revolving box, T.  F. Warrington  | , 475,712<br>475,380                     | Tal<br>Tal<br>Tal        |
|     | F. Warrington  | . 475,477                                | Tel                      |

|                  | Lubricator. See Propeller shaft lubricator. Lubricator, J. P. Kealy Mail bag catcher, J. Gleason Malting awaten property F. R. Glealer   | 475,690<br>475,3 <b>0</b> 7<br>475,550              |
|------------------|--|---|
|                  | Mail bag catcher, J. Gleason Malting system, pneumatic, F. B. Giesler. Mat. See Wire mat. Matte from slag, apparatus for separating, D. Sheedy. Mattes and ores, treating, H. L. Herrenschmidt   | 475.522   |
|                  | Measure reel, tape, J. Roe   | 475,558<br>475,470<br>475,630<br>475,580            |
|                  | Mechanical movement, W.H. Baker  | 475,375   |
| 1                | Metal planer, J. S. Detrick. 475,542, Metal rods, device for heating, A. D. Williamson. Metal wheel, J. R. Little. 475,582, Metal wheel, composite, J. L. Follett. Metal wheels, constructing, J. R. Little. Metals, tempering and hardening, J. S. Durning Metal wheels constructing J. S. Durning Metal wheels constructing T. R. Little. Metals, tempering and hardening, J. S. Durning Meter. See Electric meter. Fluid meter.   | 475,583<br>475,305<br>475,584<br>475,725            |
| 3                |  | 475,351   |
|                  | Motion electric mechanism for reciprocating, H. S. McKay.  Motor. See Mechanical motor.  Mower, lawn, T. & W. H. Coldwell.  Mower, lawn, C. Wherg.   | 475,410<br>475,669<br>475,649                       |
| 3                | Mowing machine, W. Scott.  Microscope, compound, L. Thomas.  Music leaf turner, C. H. Huff.  Music leaf turner, J. S. & G. S. Knoweis.  Music rack for musical instrument cases, J. A.   | 475,472<br>475,362<br>475,317<br>475,322            |
| 5                | Music rack for musical instrument cases, J.A. Weser  | 475,369<br>475,541                                  |
| 3                | J. Cook. Nailing machine, F. F. Raymond, 2d. Net, fly, W. J. Erdmann. Newspaper holder and door plate, combined, H.  | 475,674<br>475,411<br>475,496                       |
| 1                | Numbering and marking machine, J. D. Humphrey  | 475,460<br>475,688<br>475,688                       |
| í<br>3           | Oil burner, Coates & Helton.  50il burner, W. R. Jeavons.  Oil cup, J. M. Daugherty.  Opera glass attachment, P. Moews   | 475,636<br>475,297<br>475,407<br>475,387<br>475,467 |
|                  | Opera glass rental apparatus, J. W. Patterson. Ordnance, breech-loading, W. H. Driggs. Ore crusher, F. A. Ross. C. Hawley. Ore sampling delice, H. C. Hawley. Open, baker delice, Lenderoth wilk, F. & C. W.   | 475,413<br>475,54<br>475,34<br>475,55               |
| 200              | Oven, baker's, W. Lenderoth Pail and strainer, combined milk, F. & G. W. Ansley Pail amphing J. F. Zeiser  | 475,375   |
| 1                | Ansley  Pail, scrubbing, J. E. Zeiser  Paper cutting device, Coram & Huntoon  Paper feeding device, Coram & Huntoon  Paper folder feeding attachment, C. N. Walk  Paper holder, G. S. Gray  Paner set, machine for amplying athesive mate.   | 475,425<br>475,725<br>475,725<br>475,644            |
| 7                | Paper BOLLER, G. S. Gray  Paper actc., machine for applying adhesive material to the surface of, J. M. Carew.  Paper tube making machine, Coram & Huntoon.  Pavement, street, G. S. Curtis.  Pencil holder, sharpener, and eraser, combined,   | 475,538<br>475,721                                  |
| 1                | Pavement, street, G. S. Curtis. Pencil holder, sharpener, and eraser, combined, C. B. Campbell. Perfumes, extracting, R. A. Chesebrough. Permutation lock, J. Roche.   | 475,72<br>475,48<br>475,43<br>475,52                |
| 3                | Phonographic records, method of and means for duplicating, or transferring L. F. Douglass.   | 475,49  |
| 7                | Photographic pictures, developing, M. Andresen. Photographic shutter, Albrecht & Ortmann Pile fabrics, apparatus for cutting, J. H. Smith  | 475,65  |
| i<br>1           | Pile fabrics, knife for cutting, J. H. Smith et al<br>Pipe and manufacturing the same, coated metal,<br>W. Lacy, Jr<br>Planter and fertilizer distributer, potato, J. S.   | 475,62<br>475,7 <b>0</b> 9<br>475,45                |
| 5                | Robbins<br>Planter, potato, F. Robinson.<br>Plate lifter, J. H. Traylor.<br>Plow, J. Du Shane.<br>Plow, Jackson & Reiger.  | 475,519<br>475,610<br>475,369<br>475,689            |
| 5                | Plow, P. C. Pagett Plow, sulky, C. E. Tower.   | 475,60<br>475,63                                    |
| 7                | Plug cutter, F. C. Heydeureich 475,559,<br>Pocket knife, R. H. Franklin<br>Potato digger, G. E. & M. J. Anderson<br>Power, etc., machine for utilizing ocean, R. L.  | 475,46<br>475,56<br>475,30<br>475,37                |
| 388              | Press. See Printing press.   |   |
| 2                | F. C. Davis.  Printing machine, check, C. Paine  Printing meas for surface, E. S. Boynton  Printing press, W. B. Lawrence.  Propeller shaft lubricator, F. R. Cedervall  |   |
| 4                | Puller. See Stump puller. Pulley block, H. Loud. Pulverizing machine, A. Sablin.   | 475,695<br>475,47                                   |
| 1                | Puller. See Stump puller. Pulley block, H. Loud. Pulverizing machine, A. Sablin. Pump, A. Carlson Pump, C. Chamberlin. Pump, steam jet, J. A. Bills. Punch for cutting out shapes from sheets of plastic material, G. A. Firnstein. Purse safety attachment, H. W. Hock. Rack. See Advertising card rack. Locking rack. Music rack   | 475,538<br>475,29<br>475,71                         |
| 0                | Purse safety attachment, H. W. Hock  | 475,549<br>475,50                                   |
| 5                | music rava.  Railway, electric, T. A. Edison. Railway rail chair, M. E. Clemons. Railway switch, street, R. H. Snively. Railway trolley, electric, J. W. Newhouse. Rake. See Hay rake. Recorder. See Time recorder.  | 475,53<br>475,47<br>475,46                          |
| 9                |  | 475,59  |
| 8<br>5<br>0<br>8 | Refrigerator, M. S. Millard  |   |
| 4 8              | F. Holt. Regulator. See Temperature regulator. Rein support, S. J. Myers. Rheostat, C. Willins. 475,528  | 475,39<br>475,46<br>475,52                          |
| 2                | Regulator. See Temperature regulator. Rein support, S. J. Myers. Rheostat, C. Willms. 475,528, Rock, splitting, G. L. Weller, Rocking chair, reclining. J. G. Whittier. Rule, folding, J. Satter. Salt, C. F. Lawton et al.  | 475,64<br>475,37<br>475,41<br>475,57                |
| 9                | Salt, apparatus for the manufacture of, C.F. Lawton et al. Salt, manufacturing, C.F. Lawton et al. Salt manufacturing apparatus, C.F. Lawton et al. Sand box, electrically heated, L.E. Pease.   |   |
| 2<br>5<br>0      | Sand box, electrically heated, L. B. Pease. Sand moulding machine, C. S. Snead. Sand moulds for pipes, etc., apparatus for forming, P. H. Sharp. Sash fastener, M. L. Dudley. Sash fastener, M. Keenen. Sausage guts, machine for filling, W. Wassermann.  | 475,70<br>475,52<br>475,34                          |
| ļ                | Sash fastener, M. L. Dudley Sash fastener, W. Keenen. Sausage guts, machine for filling, W. Wasser- mann.  | 475,34<br>475,73<br>475,57<br>475,36                |
| 8<br>6<br>4      | mann. Sawmill, band, C. B. Long. Saw set, C. C. Taintor. Seaffold, L. Chalfant. Seale, automatic weighing, N. Lombard.   | 475,36<br>475,32<br>475,35<br>475,66<br>475,40      |
| 9                | Scale, pendulum, Chase & Smock Screw cutting tool, W. Hutcheson Sealing device, C. Cuttriss. Seam for sheet metal, C. E. Bertels   | 475,40<br>475,29<br>475,56<br>475,44<br>475,65      |
| J                | Seeat. See Folding seat.<br>  Sewage, purifying, F. R. Conder  | 475,67<br>475,42<br>475,51                          |
| 8                | Sheet metal articles, manufacturing, F. Voh-<br>ringer   | 475,51<br>475,64<br>475,29<br>475,32                |
| 0                | Shelving, adjustable book, G. Stikeman   | 475,62  |
| 9<br>4<br>7<br>4 | Signaling apparatus, electric, W. C. Moore.<br>Skale, U. Wierda.<br>Smelting furnace, copper, B. Richords.<br>Sole inking tool, Atwood & Orcutt.<br>Sole trimming machine, J. H. Reed.   | 475,33<br>475,65<br>475,66<br>475,37<br>475,60      |
| 8<br>5<br>5      | Page   | 475,74<br>475,39                                    |
| 6                | Speed changing mechanism, W. A. Wright   | 475,57<br>475,73                                    |
| 3<br>4<br>3      | Spring. See Door spring.  Spindle stand, picker, Byrne & Lafferty.  Stamp, perforating, dating, and receipting, Cummins & Stenwall, Jr  Staple extractor, T. M. Hunt.  Station indicator, R. B. Ayres.  Steam boiler, A. I. Bladholm.  Steam boiler, W. J. McAleenan.  Steam boiler, low pressure, H. Abel.  Steam engine, H. Unzicker.  Steaming clams. oysters. etc., apparatus for J. H.  | 475,44<br>475,68<br>475.37                          |
| 2<br>5<br>0      | Steam boiler, A. L. Bladholm. Steam boiler, W. J. McAleenan. Steam boiler, low pressure, H. Abel. Steam engine, H. Ilnzicker.  | 475,28<br>475,40<br>475,47<br>475,20                |
| 8                | Steam engine, H. Unzicker. Steaming clams, oysters, etc., apparatus for, J. H. Starin. Steering mechanism, boat, J. Savage. Stirrup, L. Anderson.  | 475,35<br>475,42<br>475,27                          |
| 3                | Steaming clams, oysters, etc., apparatus for, J. H. Starin. Stering mechanism, boat, J. Savage. Stirrup, L. Anderson. Stone crusher, G. Lowry Stopper. See Bottle stopper. Stoye grate, F. W. Collins. Stump puller, J. Milne. Stump puller, J. Milne. Switch See Etailway switch. Wire switch. Switch lock, automatic, S. Grove. Syringe tube sinker, A. C. Eggers. Table and chair, combined. C. Hunzinger. Tack driving machine. G. W. Copeland. Tank. See Flushing tank. Telegraphic relay, C. Cuttriss. | 475,33<br>475,29                                    |
| 8<br>0<br>5      | Suspension catch, detachable, B. Pickering<br>Switch. See Railway switch. Wire switch.<br>Switch lock, automatic, S. Grove   | 475,51<br>475,74                                    |
| 2<br>0<br>7      | Table and chair, combined, C. Hunzinger Tack driving machine, G. W. Copeland Tank. See Flushing tank. Telegraphic relay C. Chetting  | 475,48<br>475,48                                    |
| •                |  | 2.0,21  |

| Telephone extension transmitter, V. A. Cook Temperature regulater, J. F. McEiroy Temporary holder, Vawter & Copland Tenoning machine, A. Giddens Textile material, ungumming and decorticating,  | 475,300   |
|--|---|
| Temperature regulator, J. F. McElroy   | 475,010   |
| Tenoning machine A. Giddens  | 475,447   |
| Textile material, ungumming and decorticating,   | 210,221   |
| C. Girard.  Thill coupling, T. D. Lines  | 475,551<br>475,509  |
| Thill coupling, T. D. Lines475,507 to  | 475,509   |
| Smith Smith  | 475 494   |
| Tide and current wheel I Sutter  | 475,424   |
| Till, recording money, J. J. Walker et al  | 475,632<br>475,643  |
| Tide and current wheel, J. Sutter. Tide and current wheel, J. Sutter. Till, recording money, J. J. Walker et al., Time check, automatic electric, C. K. Jardine. Time recorder, work man's, M. Ma tin  |   |
| Time recorder, workman's, M. Ma tin475,457,  | 475,458<br>475,336  |
| Tin can, E. Norton   | 475,336   |
| Tire, India rubber, Moseley & Blundstone   | 475,732   |
| Tires, device for repairing, C. D. Rice  | 475,344<br>475,343  |
| Tobacco, chemical compound for treating, G. S. Yingling  | 210,020   |
| Yingling   | 475,737<br>475,676  |
| Tobacco pouch, W. J. Cussen  | 475,676   |
| Tongne support, D. Ward  | 475,366   |
| Track gauge adjustable M Gurnett   | 475,486<br>475,309  |
| Traction engine J. J. D. McNamar   | 475,597   |
| Trap. See Waste pipe trap.   | 210,001   |
| Trap and siphon, L. M. Hawley  | 475,396<br>475,622  |
| Tricycle, W. V. Snyder   | 475,622   |
| Trousers, M. & S. Kachelman  | 47 5.416<br>475,617   |
| Tug attachment, hame R Lake  | 475,325   |
| Typewriting machine, A. Densmore   | 475,443   |
| Typewriting machine, C. Spiro  | 475,623<br>475,736  |
| Umbrella lock, D. M. Wyatt   | 475,736   |
| Upper G. W. Sleeper  | 475,619<br>475,695  |
| Valve, engineers, A. F. Massey   | 475,601   |
| Valve gearing, A. S. Krotz   | 475,691   |
| Valve, reducing, N. C. Locke   | 475,585   |
| Valve, safety. A. M. Johnston  | 475,320   |
| Valve, secondary, W. H. Lavinia  | 475,455   |
| Valve, steam cylinder, G. A. Kelly   | 475,691<br>475,585<br>475,320<br>475,455<br>475,321<br>11,240   |
| Tob seco chemical compound for treating, G. S. Yingling. Tobacco pouch. W. J. Cussen. Tonzen support, D. Ward. Toy, F. W. Carpenter. Track, F. W. Carpenter. Track gauge, adjustable, M. Gurnett. Tracton engine, J. J. D. McNamar. Trap. See Waste pipe trap. Trap and siphon, L. M. Hawley. Tricycle, W. V. Snyder. Trousers, M. & S. Rachelman. Trunk, Seward & Leimberger. Tug attachment, hame, B. Lake. Typewriting machine, A. Densmore. Typewriting machine, C. Spiro. Umbrella lock, D. M. Wratt. Upper G. W. Sleeper. Valve, engineer's, A. P. Massey. Valve gearing, A. S. Krotz. Valve, safety, A. M. Johnston. Valve, safety, A. M. Johnston. Valve, steam cylinder, G. A. Kelly Vault, safety, G. S. Clark (r). Vehicle running gear, J. W. Leek Velocipede, W. J. Edwards Vending apparatus, coin-actuated, G. Jehle. Ventilator. See Car ventilator.   | 475 578   |
| Vehicle spring gear, J. Faske  | 475.304   |
| Velocipede, W. J. Edwards  | 475,578<br>475,304<br>475,445   |
| Vending apparatus, coin-actuated, G. Jehle   | 475,567   |
| Ventilator. See Car ventilator.<br>Voting booth, I. D. Vandecar.   | 475 C41   |
| Wagon bolster, L. Burg. Wagon bolster, L. Burg. Wagon, dumping, Hinman & Bunnell. Walls, construction of, M. S. Millard. Wash board, M. C. Burke.  | 475,641<br>475,292  |
| Wagon dumping, Hinman & Bunnell  | 475,312   |
| Walls, construction of, M. S. Millard  | 475.593   |
| Wash board, M. C. Burke  | 475,663   |
|  | 210,000   |
| Wash boilers, draining bucket for, G. K. Knowl-  |   |
| Wash board, M. C. Burke  |   |
| Wash boilers, draining bucket for, G. K. Knowl-<br>ton Washing machine, J. J. Otto Waste nine tran. F. N. Du Rois  |   |
| Washing machine, J. J. Otto  | 475,571<br>475,339<br>475,546   |
| Washing machine, J. J. Otto  | 475,571<br>475,339<br>475,546   |
| Washing machine, J. J. Otto  | 475,571<br>475,339<br>475,546   |
| Washing machine, J. J. Otto  | 475,571<br>475,339<br>475,546   |
| Washing machine, J. J. Otto  | 475,571<br>475,339<br>475,546   |
| Washing machine, J. J. Otto  | 475,571<br>475,339<br>475,546   |
| Washing machine, J. J. Otto  | 475,571<br>475,339<br>475,546   |
| Washing machine, J. J. Otto  | 475,571<br>475,339<br>475,546   |
| Water closet bowls, flushing device for, Cochran & State closet bowls, flushing device for, Cochran & Stover closet flushing cistern or tank, J. Demarest Water closet tank siphon, R. Morgan. Water closet tank siphon, R. Morgan. Water proofing compound, J. Stewart. Weather strip, E. G. Duryea. Welding apparatus, boop, C. L. Coffin. Welding compound, H. B. Straut. Wheel. See Fifth wheel. Metal wheel. Tide   | 475,571<br>475,339<br>475,546   |
| Water closet bowls, flushing device for, Cochran & State closet bowls, flushing device for, Cochran & Stover closet flushing cistern or tank, J. Demarest Water closet tank siphon, R. Morgan. Water closet tank siphon, R. Morgan. Water proofing compound, J. Stewart. Weather strip, E. G. Duryea. Welding apparatus, boop, C. L. Coffin. Welding compound, H. B. Straut. Wheel. See Fifth wheel. Metal wheel. Tide   | 475,571<br>475,339<br>475,546<br>475,537<br>475,371<br>475,371<br>475,512<br>475,713<br>475,391<br>475,867<br>475,355   |
| Water closet bowls, flushing device for, Cochran & State closet bowls, flushing device for, Cochran & Stover closet flushing cistern or tank, J. Demarest Water closet tank siphon, R. Morgan. Water closet tank siphon, R. Morgan. Water proofing compound, J. Stewart. Weather strip, E. G. Duryea. Welding apparatus, boop, C. L. Coffin. Welding compound, H. B. Straut. Wheel. See Fifth wheel. Metal wheel. Tide   | 475,571<br>475,339<br>475,546<br>475,537<br>475,371<br>475,489<br>475,512<br>475,713<br>475,391<br>475,367<br>475,355   |
| Water closet bowls, flushing device for, Cochran & State closet bowls, flushing device for, Cochran & Stover closet flushing cistern or tank, J. Demarest Water closet tank siphon, R. Morgan. Water closet tank siphon, R. Morgan. Water proofing compound, J. Stewart. Weather strip, E. G. Duryea. Welding apparatus, boop, C. L. Coffin. Welding compound, H. B. Straut. Wheel. See Fifth wheel. Metal wheel. Tide   | 475,571<br>475,339<br>475,546<br>475,537<br>475,371<br>475,489<br>475,512<br>475,713<br>475,391<br>475,367<br>475,355   |
| Water closet bowls, flushing device for, Cochran & State closet bowls, flushing device for, Cochran & Stover closet flushing cistern or tank, J. Demarest Water closet tank siphon, R. Morgan. Water closet tank siphon, R. Morgan. Water proofing compound, J. Stewart. Weather strip, E. G. Duryea. Welding apparatus, boop, C. L. Coffin. Welding compound, H. B. Straut. Wheel. See Fifth wheel. Metal wheel. Tide   | 475,571<br>475,339<br>475,546<br>475,537<br>475,571<br>475,492<br>475,512<br>475,713<br>475,395<br>475,7687<br>475,3687<br>475,464<br>475,464<br>475,699  |
| Water closet bowls, flushing device for, Cochran & State closet bowls, flushing device for, Cochran & Stover closet flushing cistern or tank, J. Demarest Water closet tank siphon, R. Morgan. Water closet tank siphon, R. Morgan. Water proofing compound, J. Stewart. Weather strip, E. G. Duryea. Welding apparatus, boop, C. L. Coffin. Welding compound, H. B. Straut. Wheel. See Fifth wheel. Metal wheel. Tide   | 475,571<br>475,339<br>475,546<br>475,537<br>475,537<br>475,475,475,475,475,475,475,475,475,475,   |
| Water closet bowls, flushing device for, Cochran & State closet bowls, flushing device for, Cochran & Stover closet flushing cistern or tank, J. Demarest Water closet tank siphon, R. Morgan. Water closet tank siphon, R. Morgan. Water proofing compound, J. Stewart. Weather strip, E. G. Duryea. Welding apparatus, boop, C. L. Coffin. Welding compound, H. B. Straut. Wheel. See Fifth wheel. Metal wheel. Tide   | 475,571<br>475,339<br>475,546<br>475,537<br>475,537<br>475,499<br>475,499<br>475,713<br>475,807<br>475,3667<br>475,400<br>475,730<br>475,609<br>475,609<br>475,609<br>475,609<br>475,609  |
| Water closet bowls, flushing device for, Cochran & State closet bowls, flushing device for, Cochran & Stover closet flushing cistern or tank, J. Demarest Water closet tank siphon, R. Morgan. Water closet tank siphon, R. Morgan. Water proofing compound, J. Stewart. Weather strip, E. G. Duryea. Welding apparatus, boop, C. L. Coffin. Welding compound, H. B. Straut. Wheel. See Fifth wheel. Metal wheel. Tide   | 475,571<br>475,339<br>475,546<br>475,537<br>475,537<br>475,499<br>475,499<br>475,713<br>475,807<br>475,3667<br>475,400<br>475,730<br>475,609<br>475,609<br>475,609<br>475,609<br>475,609  |
| ton toners, maning water to, y. A. Rawbatton below the pipe trap, F. N. Du Bois.  Waste pipe trap, F. N. Du Bois.  Water closet bowls, flushing device for, Cochran & Stover.  Water closet tistern, Aldrich & Hueston.  Water closet task siphon, R. Morgan.  Water proofing compound, J. Stewart.  Weather strip, E. G. Duryea.  Wedding apparatus boop, C. L. Coffin.  Welding compound, H. B. Straut.  Wheel, See Fifth wheel. Metal wheel. Tide and current wheel.  Wheel, F. S. Miller.  Wheel, C. J. Moore.  Wheel, C. J. Moore.  Whiffletree, E. Haiman.  Whiffletree, E. Haiman.  Whiffletree, E. Haiman.  Whiffletree, E. H. G. Conway.  Wire stretcher and tension device, J. B. Cleave-  | 475,571<br>475,339<br>475,546<br>475,537<br>475,547<br>475,471<br>475,489<br>475,73<br>475,391<br>475,687<br>475,687<br>475,464<br>475,736<br>475,594<br>475,594<br>475,348<br>475,348<br>475,348<br>475,348<br>475,348<br>475,359  |
| ton toners, maning water to, y. A. Rawbatton below the pipe trap, F. N. Du Bois.  Waste pipe trap, F. N. Du Bois.  Water closet bowls, flushing device for, Cochran & Stover.  Water closet tistern, Aldrich & Hueston.  Water closet task siphon, R. Morgan.  Water proofing compound, J. Stewart.  Weather strip, E. G. Duryea.  Wedding apparatus boop, C. L. Coffin.  Welding compound, H. B. Straut.  Wheel, See Fifth wheel. Metal wheel. Tide and current wheel.  Wheel, F. S. Miller.  Wheel, C. J. Moore.  Wheel, C. J. Moore.  Whiffletree, E. Haiman.  Whiffletree, E. Haiman.  Whiffletree, E. Haiman.  Whiffletree, E. H. G. Conway.  Wire stretcher and tension device, J. B. Cleave-  | 475,571<br>475,339<br>475,546<br>475,537<br>475,547<br>475,471<br>475,489<br>475,73<br>475,391<br>475,687<br>475,687<br>475,464<br>475,736<br>475,594<br>475,594<br>475,348<br>475,348<br>475,348<br>475,348<br>475,348<br>475,359  |
| ton toners, maning water to, y. A. Rawbatton below the pipe trap, F. N. Du Bois.  Waste pipe trap, F. N. Du Bois.  Water closet bowls, flushing device for, Cochran & Stover.  Water closet tistern, Aldrich & Hueston.  Water closet task siphon, R. Morgan.  Water proofing compound, J. Stewart.  Weather strip, E. G. Duryea.  Wedding apparatus boop, C. L. Coffin.  Welding compound, H. B. Straut.  Wheel, See Fifth wheel. Metal wheel. Tide and current wheel.  Wheel, F. S. Miller.  Wheel, C. J. Moore.  Wheel, C. J. Moore.  Whiffletree, E. Haiman.  Whiffletree, E. Haiman.  Whiffletree, E. Haiman.  Whiffletree, E. H. G. Conway.  Wire stretcher and tension device, J. B. Cleave-  | 475,571<br>475,339<br>475,546<br>475,537<br>475,537<br>475,499<br>475,499<br>475,713<br>475,807<br>475,3667<br>475,400<br>475,730<br>475,609<br>475,609<br>475,609<br>475,609<br>475,609  |
| Value on the state of the state | 475,571<br>475,339<br>475,546<br>475,537<br>475,537<br>475,513<br>475,513<br>475,739<br>475,739<br>475,730<br>475,730<br>475,730<br>475,730<br>475,730<br>475,730<br>475,594<br>475,730<br>475,594<br>475,594<br>475,598<br>475,598   |
| Value of the control  | 475,571<br>475,339<br>475,546<br>475,537<br>475,537<br>475,537<br>475,539<br>475,733<br>475,395<br>475,730<br>475,464<br>475,730<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594  |
| Value of the control  | 475,571<br>475,339<br>475,546<br>475,537<br>475,537<br>475,537<br>475,539<br>475,733<br>475,395<br>475,730<br>475,464<br>475,730<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594  |
| Value of the control  | 475,571<br>475,339<br>475,546<br>475,537<br>475,537<br>475,513<br>475,513<br>475,739<br>475,739<br>475,730<br>475,730<br>475,730<br>475,730<br>475,730<br>475,730<br>475,594<br>475,730<br>475,594<br>475,594<br>475,598<br>475,598   |
| ton tones, usually suster to, y. A. Ruby ton tones, and to the control of the con | 475,571<br>476,339<br>475,339<br>475,5371<br>475,5371<br>475,512<br>475,512<br>475,510<br>475,667<br>475,667<br>475,667<br>475,667<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475, |
| ton tones, usually suster to, y. A. Ruby ton tones, and to the control of the con | 475,571<br>476,339<br>475,337<br>475,537<br>475,537<br>475,512<br>475,713<br>475,512<br>475,667<br>475,667<br>475,464<br>475,730<br>475,464<br>475,730<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,786<br>475,786  |
| Value of the control  | 475,571<br>476,339<br>475,339<br>475,5371<br>475,5371<br>475,512<br>475,512<br>475,510<br>475,667<br>475,667<br>475,667<br>475,667<br>475,594<br>475,594<br>475,594<br>475,594<br>475,594<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475,726<br>475, |

## TRADE MARKS.

| IRADE MARKS.   |                   |
|--|-------------------|
| Beverage, aerated phosphated, Bright & Howe 21,1 Bicycles, Coventry Machinists' Company 21,2 Candies, licorice, and chewing gum, Hall & Hayward Company 21,1 Can ned vegetables and fruits, Strassheim & 21,1 Jaeger 21,1  | 97<br>01<br>94    |
| Jaeger       21,1         Cigars, R. La bann       21,1         Clothes sprinklers, Berry, Goss & Co.       21,1         Coffee hullers, M. Mason & Co.       21,1         Coffee polishers, M. Mason & Co.       21,1         Compounds, antiseptic, antizymotic, deodorizing,  | 89<br>85<br>65    |
| Compounds, antiseptic, antizymotic, deodorizing, and parasiticide, Buntin Drug Co  | 92                |
| Cotton goods, including tickings, cheviots, ging-  | 90                |
| Flour, cereals, and farinaceous goods in barrels, kegs, and sacks, Strassheim & Jaeger 21,1 Flour, wheat, F. H. Leggett & Co. 21,6 Gin, J. & W. Nicholson & Co. 21,2 Gin, J. & W. Nicholson & Co. 21,2 Gin applied, mat, M. & E. Healey 21,1   | 75<br>78<br>00    |
| Gold for gilding and the 'porcelain to which it is applied, mat, M. & E. Healey. 21,1 Hair, liquid dressing for curling, crimping, and frizzing the, A. L. Goetting. 21,1  | 95<br>93          |
| Hair pins, S. Beaumont & Co  | 84<br>71          |
| Medicine Co. 21.7  Medicated plasters, Raymond & Co. 21.1  Mineral water, natural, J. H. Peterson & Co. 21.1  Oil for culinary purposes and forfood, cottons eed, Occidental Oil Co. 21.1  Paper and envelopes, w iting, G. B. Hurd & Co. 21.1   | 73<br>80<br>90    |
| Paper and envelopes, w iting, G. B. Hurd & Co 21,1 Pens, writing, I. Macowsky  | .79               |
| excoriations by external application, C. Ryan 21,1<br>Remedies for alcoholism, morphine, opium, and<br>tobacco habit, consumption, and for diseases  |                   |
| of the throat and lungs, Humanitas Company. 21,1 Remedy for rheumatism, Estate of W. P. Dolloff. 21,1 Salt, Genesee Salt Company. 21,2 Salt for table and other use, Kansas Salt Company. 21,3 Shingles, cypress, Aucoin, Breaux & Renoudet 21,1 Shoes, women's, misses', and children's lace and button, G. F. Daniels & Co               | 98<br>96<br>69    |
|  |                   |
| other purposes, F. Hobson, Seaman & Co 21,1 Washing powder, Hurd & Lawrie 21,1 Watches and portable clocks, W.C. Ball 21,1 Wheat, corn, barley, and rye, F. H. Peavey & Co. 21,1 Wheat, rolled, Pettijohn California Breakfast. Food Company 21,162, 21,1 Whisky, Boldrick, Callaghan Company 21,162, 21,1 Whisky, rye, J. Simms & Co 21,1 | 191<br>166<br>163 |
| whisky, rye, J. Simms & Co   | 167               |

## DESIGNS.

| Badge, D. He∈r                                    |
|---|
| Badge, W. K. Kubin                                |
|   |
| Bird cage, J. H. Andrews 2                        |
| Bottle, G. W. Bean 2                              |
| Bucket ear, L. D. Berger 2                        |
| Burial casket, L. K. Smedes 2                     |
| Chain, watch, A. Rickert 2                        |
| Cornice, A. Carlewitz                             |
| Dish. Treat & Banghart 2                          |
| Finger ring, P. Verpihier 2                       |
| Garment, E. Young                                 |
| Heater, water, or steam pipe, W. Wilkinson 2      |
| Hinge, S. L. Stiles                               |
| Lamp chimney, J. H. La Ment 2                     |
| Lamp shade, W. S. McLewee                         |
| Monument, W. H. Perry 2                           |
| Pencil case, C. S. Freer 2                        |
| Ruffling and ruching, J. Wightman                 |
| Spoon, et c., W. A. Jameson 2                     |
| Spoon, etc., G. P. Tilton                         |
| Spoon, etc., F M. Whiting                         |
| Spoon or similar article, G. L. Crowell           |
| Spoon or similar article, E. T. Fenwick 21,554, 2 |
| Tailor's gauge, I. Geraci                         |
| Trimming, dress, B. Lipper21,575, 2               |

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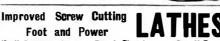
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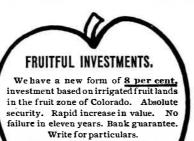
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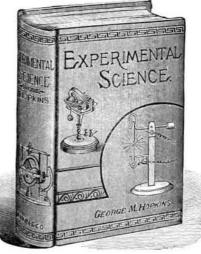
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