

### HINTS TO CORRESPONDENTS.

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 This is for our information, and not for publication.

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

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

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

Books referred to promptly supplied on receipt of price.

Minerals sent for examination should be distinctly marked or labeled.

(1) F. W. K. wants (1) a receipt for making bronze paint for bronzing a bust. A. Boil 3 pounds pure linseed oil with 12 ounces finely powdered litharge: strain through a coarse canvas cloth, and allow to stand until clear, 15 ounces of this soap varnish mixed with 12 ounces metallic soap powder (made as follows: To a solution of soda soap in linseed oil, cleared by straining, add a mixture of 4 pints sulphate of copper solution and 1 pint sulphate of iron solution which precipitates a metallic soap of a peculiar bronze hue; wash with cold water, strain, and dry to powder) and 5 ounces fine white wax, are to be melted together at a gentle heat in a porcelain basin by means of a water bath, and allowed to remain for a time in a melted state to expel any moisture that it may conthe plaster, previously heated to 200° Fah., being care- hot) may better answer your purpose ful to lay it on smoothly, and without filling up any small indentations of the plaster design. Place it for a few days in a cool place, and, as soon as the smell of the soap varnish has gone off, rub the surface over with cotton wool or fine linen rag, and variegated with a few streaks of metal powder or shell gold. Small objects may be dipped in the melted mixture, and exposed to the heat of a fire till thoroughly penetrated and evenly coated with it. 2. A good rubber cement for putting on wringer rolls. A. See answer to query 3 contained in the Scientific American for December 25, 1886. See also Rubber Cement" in article on flame) is needed. Cements contained in Scientific American Supple-MENT. No. 158.

(2) W. C. L., Michigan, asks: Why is the 4th of March taken for the inauguration of the President? A. The second Continental Congress provided, nine States having theretofore ratified the proposed new constitution, that the new government should go into operation on the first Wednesday of March, 1789, which was March 4.

(3) A. H., Richmond, Va., asks: How is lemon extract made? A. Expose 4 ounces of the exterior rind of lemons in the air until partially dry; then bruise in a Wedgwood mortar; add to it 2 quarts deodorized alcohol of 95°, and agitate until the color is extracted, then add 6 ounces recently prepared oil of lemon. If it does not become clear immediately, let it stand for a day or two, agitating occasionally. Then

(4) L. W. B. writes: I have a lathe with a 21 in. balance wheel, 50 lb. weight. I wish to run a 4 in. circular saw. Will a fly wheel on saw arbor improve the power? A. It will do you no service where the cutting is continuous. It might equalize the speed for knotty stuff or short, quick cuts. You must add muscle to make the saw go

(5) T. H. T., Buffalo, N. Y., asks: What will clean fly specks from hanging lamps? A. Old ale is excellent to wash any gilding with. It acts at once on fly specks. Apply with a soft rag.

(6) T. J. G. There are many kinds of lamps advertised as nou-explosive. We think the nonexplosive qualities depend more on burning high test oil than in any protective form of the lamp, although there is no doubt that some forms of lamp are safer than others. There is no lamp proof against explosion that has the wick communicating with the oil chamber. The Student lamp is considered safe from explosion in ordinary use, but is not safe to upset with low test oil.

(7) J. S. asks: Would a watch case of about 8 to 10 karats do for an anode to electroplate with? A. It will not do. It will contaminate the solution

(8) R. L. D. asks: 1. Is it a fact that lightning never strikes a building with a tin roof, provided there is no ground connection? A. No; it is not a fact. 2. Is the field of a telescope finder artificially illuminated, so the hair lines can be seen? I have made one, but can't readily see the hair lines, unless the star others. Better consult a physician. is very bright. A. The hair lines are not essential in (23) G. S., Chicago, writes: 1. What is the finder, except for very high powers. Adjust the a good receipt for gluing pearl to wood? A. Dissolve finder central with the telescope. The judgment of the 1 part isinglass and 2 of white glue in 30 of water, strain, eye is sufficient to cover the telescope field in the finder, and evaporate to 6 parts. Add one-thirtieth part of or use white human hair, which gathers the light, and gum mastic dissolved in 1/2 part of alcohol, and add 1 shows luminous on smaller stars better than colored part of zinc white. When required for use, warm and hair. 8. Can I determine the efficiency of a dynamo by the argunt of water it will decompose in a certain each of the four sides, has recently made its appeartime? Must the points be platinum? A. It can be done. but not easily, from the difficulty of measuring the gases. Use platinum points.

(9) J. K. asks the best way to prevent the iron work of heaters in cellars from rusting? A. To whitewash them is the most simple way.

(11) D. J. N. asks the best composition of brass to withstand the corrosive effects of heat and

film on the glass, and must on that account be left out. A brass composed solely of copper and tin is so tough that it can only be worked with difficulty. A. Copper 16 oz., tin 1 oz. makes a good turning metal. Copper 16 oz., tin 1/2 oz. makes a good stamping metal. Copper with a small portion of nickel is a good resistant to oxidation. Aluminum bronze is also a resistant. All the above are tough, and do not work as easy as common

new lead for gaskets. Boiling hot water and potash should clean your sewer connecting pipes thoroughly.

(14) W. G. — Locomotives commonly carry from 100 to 125 pounds steam pressure. The ex haust is very variable, and according to the conditions of running. With throttle and link wide open, there may be as much as 20 pounds back pressure.

(15) W. M., Pittsburg, Pa.—The ring piston packing devices referred to were invented and constructed on the principle of expansion by the steam pressure in the cylinder.

(16) T. K. & Co. ask the best varnish or grease for protecting barbed fence wire. A. Common coal tar, with a little tallow melted and thoroughly mixed, is probably the best. All dry varnishes and coal tar alone crack off in handling the wire. If necessary to have it dry enough to handle without marking the tain. It is then applied with a brush to the surface of hands, a mixture of coal tar and boiled linseed oil (mix

> (17) M. A. G. asks why the electric light gives out so little heat, if it is true that the temperature of the arc in the arc light is unequaled by any other artificial heat. A. In a gas or lamp flame an exceedingly small portion of the heat develops light. Hence a production of a relatively great quantity of heat is ne cessary for the development of a given quantity of light. In the electric arc the temperature is so high that a much more favorable ratio of heat to light ap pears. For a given unit of light a very small quantity of heat (compared to the same factor in an ordinary

> (18) E. W. S. asks: In what way should two or more electro-magnets be connected in the same circuit, so as to give the greatest amount of power? If two magnets are connected, will each magnet have as much power as one of them would have if the other were left out of the circuit? A. The best way to connec magnets in a battery circuit for power is in series. Each magnet as introduced in the circuit will reduce the strength of the remaining ones.

> (19) Accountant writes: I am using an ink on a set of books; it thickens very quickly, and I have found that a little ammonia water will thin it and amalgamate the particles as nothing else (water or fluid) will. Does the use of the ammonia impair the ink in any way or endanger the record in time? A. We can only surmise as to the effect of ammonia or an ink of unknown composition. From what you say we imagine it would not injure the ink. Test two samples, one with and one without ammonia, by writing with each and exposing to strong sunlight.

> (20) Ch. asks: Does the crystal which is formed by the freezing of water contain water of crystallization? That water crystallizes when it freezes is plain enough, but does such a crystal contain water of crystallization? A. Ice contains no water of crystallization, as far as known. If so, there would be an uncrystallized or amorphous condition of ice, which has so far never been observed.

> (21) C. B., Hartford, asks: 1. Is there any kind of glue or paste that will answer for putting labels on the side of flower pots when in use and filled with soil more or less damp? Supposing a label of white paper is used, is there any way it can be treated by varnishing or some other method, so that it can be washed and made clean? A. Use thin paper for label, and attach with white gelatine in solution, to which has been added 1 per cent of bichromate of potash. This must be done in a dark or obscure room. Then expose the labels to sunlight. Afterwriting, varnish with solution of shellac in alcohol.

> (22) H. P. asks: 1. How can I make wine of coca? A. Take of the fluid extract of coca ounce, magnesium carbonate 1 drachm; mix and add of simple elixir and of rectified alcohol each 1 ounce, and used. 2. Is it considered a good remedy for dyspepsia? A. A good remedy for some people is not good for

shake up. 2. A reflector in form of a cube, concave on ance. It divides the original flame into four small flames, placed so as to reflect from each of four sides of the cube reflector that has been placed on the gas jet. Can these reflectors be of any value in the center of a room? A. Any reflector that does not, by creating draughts or otherwise, interfere with the production of the flame is, as a general thing, useful in directing (10) E. H., Boston, asks: How can I the light where most wanted. 3. Will steam forced into make a sulphur bath? A. Use 4 ounces potassium sul- iron pipes make the pipes hot enough to ignite pa er phide and 1 ounce sulphuric acid dissolved in 30 gal. or cloth? A. It is claimed that long action of such heat will, under favorable conditions, effect such ignition, and many fires have been attributed thereto.

(24) S. D. K., Providence, R. I., asks: coal gas. Brass is to be used for Argand burners, in a listhere anything which will dissolve mica so it can be regenerative gas lamp. Zinc is said to cause a white used in a liquid form and afterward be evaporated,

leaving a coating of mica on any article which has been covered while in solution? A. No. The nearest you can come to it is to powder the mica and mix and apply with a transparent varnish, giving something of an aventurine effect.

(25) Miss S. G., South Carolina, asks: 1. What is simplest method of etching on glass? A. See article on this subject in Scientific American Sup-PLEMENT, No. 7, also on page 231 of this paper. 2. How can I stain willow chairs mahogany, rosewood, or cherry? A. For mahogany, take nitric acid, dilute with ten parts water and wash the wood with it. For rosewood, alcohol 1 gallon, camwood 2 ounces. Set them in a warm place, then add extract of logwood 3 ounces, nitric acid 1 ounce, and when dissolved. For cherry, boil 4 ounces annatto in 3 quarts rain water, till the annatto is dissolved, then add a piece of potash and boil for 30 minutes longer. 3. How can I clean willow furniture? A. Soap and water will remove dirt, and sulphur fumes will bleach the willow.

(26) M. F. S. asks: What is a good receipt for a good gold wash for a watch? A. Wash thoroughly & ounce chloride of gold, theu add to it a solution of 2 ounces cyanide of potassium in a pint of clean rain water; shake well and let it stand until the chloride is dissolved. Add 1 pound prepared Spanish whiting, expose to the air until dry. In applying, make into a paste with water, and rub it on the surface of the article with a piece of chamois skin or cot-

### TO INVENTORS.

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March 22, 1887,

### AND EACH BEARING THAT DATE

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Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume  Electric currents, underground conduit for powerful, G. B. Pennock  Electric lighting system, F. A. Cheney.  Electric machine, dynamo, R. J. Sheehy.  Electric machine, dynamo, N. Tesla  Electric machine regulator, dynamo, C. L. Buckingham.  Electrical conductor, E. H. Johnson.  Electrical synchronal escapement, J. F. McLaughlin.  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe.  Excelsior, machine for making, J. A. Adams  Extension table, G. Schmitt.  Expeglasses, E. De Celles.  Fanning mill, H. Summerfeld	359,690 359,739 359,982 359,982 359,713 359,894 359,748 369,770 359,726 359,806 359,767 359,857 359,857 359,857 359,857 359,945 359,945 359,945 359,945 359,788
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume  Electric currents, underground conduit for powerful, G. B. Pennock  Electric lighting system, F. A. Cheney  Electric machine, dynamo, R. J. Sheehy  Electric machine, dynamo, N. Tesla  Electric machine regulator, dynamo, C. L. Buckingham  Electrical conductor, E. H. Johnson.  Electrical synchronal escapement, J. F. McLaughlin.  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe.  Excelsior, machine for making, J. A. Adams  Extension table, G. Schmitt  Eyeglasses, E. De Celles  Fanning mill, H. Summerfeld  Fastener, metallic, J. Felbel  Faucet for oil cans, G. W. Banker  Feed grinder, I. & J. C. Jay  Feed rolls, top pressure for, G. W. Church  Feed water heater, A. M. Rowe	359,690 359,739 359,982 359,982 359,718 359,894 359,770 359,726 359,805 359,805 359,805 359,805 359,805 359,805 359,805 359,805 359,805 359,805 359,805 359,805 359,805 359,805
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume  Electric currents, underground conduit for powerful, G. B. Pennock  Electric lighting system, F. A. Cheney.  Electric machine, dynamo, R. J. Sheehy.  Electric machine, dynamo, N. Tesla  Electric machine regulator, dynamo, C. L. Buckingham.  Electrical conductor, E. H. Johnson.  Electrical synchronal escapement, J. F. McLaughlin.  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe.  Excelsior, machine for making, J. A. Adams  Extension table, G. Schmitt.  Exyeglasses, E. De Celles.  Fanning mill, H. Summerfeld	359,690 359,739 359,982 359,982 359,783 359,748 359,748 359,767 359,767 359,805 359,806 359,806 359,807 359,80
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume  Electric currents, underground conduit for powerful, G. B. Pennock  Electric lighting system, F. A. Cheney  Electric machine, dynamo, R. J. Sheehy  Electric machine, dynamo, N. Tesla  Electric machine regulator, dynamo, C. L. Buckingham  Electrical conductor, E. H. Johnson  Electrical synchronal escapement, J. F. McLaughlin  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe  Excelsior, machine for making, J. A. Adams  Extension table, G. Schmitt  Eyeglasses, E. De Celles  Fanning mill, H. Summerfeld	359,690 359,739 359,783 359,783 359,894 359,748 359,748 359,707 359,707 359,607 359,817 359,817 359,817 359,817 359,817 359,817 359,817 359,817 359,817 359,817 359,817 359,817 359,817 359,817 359,817 359,817 359,817
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume  Electric currents, underground conduit for powerful, G. B. Pennock  Electric lighting system, F. A. Cheney.  Electric machine, dynamo, R. J. Sheehy.  Electric machine, dynamo, N. Tesla  Electric machine regulator, dynamo, C. L. Buckingham.  Electrical conductor, E. H. Johnson.  Electrical synchronal escapement, J. F. McLaughlin.  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe.  Excelsior, machine for making, J. A. Adams  Extension table, G. Schmitt.  Expeglasses, E. De Celles.  Fanning mill, H. Summerfeld	359,690 359,739 359,982 359,982 359,713 359,894 359,748 359,707 359,726 359,806 359,707 359,857 359,806 359,806 359,806 359,807 359,807 359,807 359,807 359,807 359,807 359,807 359,707 359,807 359,707 359,807 359,70
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume  Electric currents, underground conduit for powerful, G. B. Pennock  Electric lighting system, F. A. Cheney.  Electric machine, dynamo, R. J. Sheehy.  Electric machine, dynamo, N. Tesla  Electric machine regulator, dynamo, C. L. Buckingham.  Electrical conductor, E. H. Johnson.  Electrical synchronal escapement, J. F. McLaughlin.  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe.  Excelsior, machine for making, J. A. Adams  Extension table, G. Schmitt.  Expeglasses, E. De Celles.  Fanning mill, H. Summerfeld	359,690 359,739 359,982 359,982 359,713 359,894 359,748 359,707 359,726 359,806 359,707 359,857 359,806 359,806 359,806 359,807 359,807 359,807 359,807 359,807 359,807 359,807 359,707 359,807 359,707 359,807 359,70
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume  Electric currents, underground conduit for powerful, G. B. Pennock  Electric lighting system, F. A. Cheney  Electric machine, dynamo, R. J. Sheehy  Electric machine, dynamo, N. Tesla  Electric machine regulator, dynamo, C. L. Buckingham  Electrical conductor, E. H. Johnson  Electrical synchronal escapement, J. F. McLaughlin  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe  Excelsior, machine for making, J. A. Adams  Extension table, G. Schmitt  Eyeglasses, E. De Celles  Fanning mill, H. Summerfeld	359,690 359,739 359,982 359,982 359,713 359,894 359,748 359,707 359,726 359,806 359,707 359,857 359,806 359,806 359,806 359,807 359,807 359,807 359,807 359,807 359,807 359,807 359,707 359,807 359,707 359,807 359,70
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume  Electric currents, underground conduit for powerful, G. B. Pennock  Electric lighting system, F. A. Cheney.  Electric machine, dynamo, R. J. Sheehy.  Electric machine, dynamo, N. Tesla  Electric machine regulator, dynamo, C. L. Buckingham.  Electrical conductor, E. H. Johnson.  Electrical synchronal escapement, J. F. McLaughlin.  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe.  Excelsior, machine for making, J. A. Adams  Extension table, G. Schmitt.  Eyeglasses, E. De Celles.  Fanning mill, H. Summerfeld	359,690 359,739 359,789 359,783 359,894 359,718 359,718 359,726 359,707 359,806 359,707 359,857 359,857 359,857 359,818 359,857 359,945 359,945 359,707 359,70
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume  Electric currents, underground conduit for powerful, G. B. Pennock  Electric lighting system, F. A. Cheney  Electric machine, dynamo, R. J. Sheehy  Electric machine, dynamo, N. Tesla  Electric machine regulator, dynamo, C. L. Buckingham  Electrical conductor, E. H. Johnson  Electrical synchronal escapement, J. F. McLaughlin  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe  Excelsior, machine for making, J. A. Adams  Extension table, G. Schmitt  Eyeglasses, E. De Celles  Fanning mill, H. Summerfeld	359,690 359,739 359,892 359,893 359,718 359,894 359,718 359,726 359,726 359,805 359,805 359,805 359,805 359,807 359,807 359,807 359,807 359,807 359,807 359,807 359,807 359,807 359,807 359,604 359,701 359,604 359,604 359,604
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume  Electric currents, underground conduit for powerful, G. B. Pennock  Electric lighting system, F. A. Cheney  Electric machine, dynamo, R. J. Sheehy  Electric machine, dynamo, N. Tesla  Electric machine regulator, dynamo, C. L. Buckingham  Electrical conductor, E. H. Johnson  Electrical synchronal escapement, J. F. McLaughlin  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe  Excelsior, machine for making, J. A. Adams  Extension table, G. Schmitt  Eyeglasses, E. De Celles  Fanning mill, H. Summerfeld  Faucet for oil cans, G. W. Banker  Feed grinder, I. & J. C. Jay  Feed rolls, top pressure for, G. W. Church  Feed water heater, A. M. Rowe  Feence, J. A. Devore  Fence post, J. H. Buscher  Fence post, J. H. Buscher  Fence post, J. H. Buscher  Fences, machine for weaving wire, Brown & Blake  Fire alarm, A. Sewel  Fire and burglar alarm, electric, S. Taussig	359,690 359,739 359,982 359,982 359,718 359,894 359,718 359,726 359,707 359,607 359,80
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume.  Electric currents, underground conduit for powerful, G. B. Pennock.  Electric lighting system, F. A. Cheney.  Electric machine, dynamo, R. J. Sheehy.  Electric machine, dynamo, N. Tesla.  Electric machine regulator, dynamo, C. L. Buckingham.  Electrical conductor, E. H. Johnson.  Electrical synchronal escapement, J. F. McLaughlin.  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe.  Excelsior, machine for making, J. A. Adams.  Extension table, G. Schmitt.  Eyeglasses, E. De Celles.  Fanning mill, H. Summerfeld.  Faucet for oil cans, G. W. Banker  Feed grinder, I. & J. C. Jay  Feed rolls, top pressure for, G. W. Church.  Feede water heater, A. M. Rowe  Fence, J. A. Devore.  Fence, good, A. Buracker.  Fence post, J. H. Buscher.  Fence post, J. H. Buscher.  Fence, wire, J. F. Hanna.  Fences, machine for weaving wire, Brown & Blake.  Fire and burglar alarm, electric, S. Taussig.  Firearm, breech-loading, J. M. & M. S. Browning.  Firearm, breech-loading, J. M. & M. S. Browning.	359,690 359,739 359,783 359,783 359,783 359,894 359,748 359,705 359,705 359,805 359,805 359,805 359,805 359,805 359,807
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume  Electric currents, underground conduit for powerful, G. B. Pennock  Electric lighting system, F. A. Cheney  Electric machine, dynamo, R. J. Sheehy  Electric machine, dynamo, R. J. Sheehy  Electric machine regulator, dynamo, C. L. Buckingham  Electrical conductor, E. H. Johnson  Electrical synchronal escapement, J. F. McLaughlin  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe  Excelsior, machine for making, J. A. Adams  Extension table, G. Schmitt  Eyeglasses, E. De Celles  Fanning mill, H. Summerfeld  Fastener, metallic, J. Felbel  Faucet for oil cans, G. W. Banker  Feed water heater, A. M. Rowe  Feed rolls, top pressure for, G. W. Church  Feed water heater, A. M. Rowe  Fence, Jood, A. Buracker  Fence post, J. H. Buscher  Fence post, J. H. Buscher  Fence, machine for weaving wire, Brown & Blake  Fire alm, A. Sewel  Fire and burglar alarm, electric, S. Taussig  Fire arm, breech-loading, J. M. & M. S. Browning. Firearms, rear sight for, J. C. Kelton  Fire box lining, A. S. Newby	359,690 359,739 359,692 359,783 359,894 359,718 359,726 359,726 359,726 359,806 359,726 359,806 359,727 359,857 359,857 359,857 359,858 359,778 359,596 359,788 359,596 359,596 359,624
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume  Electric currents, underground conduit for powerful, G. B. Pennock  Electric lighting system, F. A. Cheney.  Electric machine, dynamo, R. J. Sheehy.  Electric machine, dynamo, N. Tesla  Electric machine regulator, dynamo, C. L. Buckingham.  Electrical conductor, E. H. Johnson.  Electrical synchronal escapement, J. F. McLaughlin.  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe.  Excelsior, machine for making, J. A. Adams  Extension table, G. Schmitt.  Expeglasses, E. De Celles.  Fanning mill, H. Summerfeld  Fastener, metallic, J. Felbel.  Faucet for oil cans, G. W. Banker.  Feed grinder, I. & J. C. Jay  Feed rolls, top pressure for, G. W. Church.  Feed water heater, A. M. Rowe.  Fence, J. A. Devore.  Fence building machine, W. H. H. Fauber  Fence, flood, A. Buracker  Fence, flood, A. Buracker  Fence post, J. F. Banna.  Fence, wire, J. F. Banna.  Frence, wire, J. F. Hanna.  Frence, wire, J. F. Hanna.  Fire and burglar alarm, electric, S. Taussig.  Fire arm, A. Sewel.  Fire alarm, A. Sewel.  Fire alarm, R. S. Newby.  Fire box lining, A. S. Newby.  Fire box lining, A. S. Newby.	359,690 359,739 359,982 359,783 359,784 359,748 359,770 359,726 359,806 359,707 359,806 359,806 359,806 359,806 359,807 359,807 359,807 359,807 359,807 359,788 359,788 359,607
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume  Electric currents, underground conduit for powerful, G. B. Pennock  Electric lighting system, F. A. Cheney.  Electric machine, dynamo, R. J. Sheehy.  Electric machine, dynamo, N. Tesla  Electric machine regulator, dynamo, C. L. Buckingham.  Electrical conductor, E. H. Johnson.  Electrical synchronal escapement, J. F. McLaughlin.  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe.  Excelsior, machine for making, J. A. Adams  Extension table, G. Schmitt.  Eyeglasses, E. De Celles.  Fanning mill, H. Summerfeld	359,690 359,739 359,789 359,783 359,713 359,894 359,716 359,726 359,707 359,806 359,707 359,85
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume  Electric currents, underground conduit for powerful, G. B. Pennock  Electric lighting system, F. A. Cheney.  Electric machine, dynamo, R. J. Sheehy.  Electric machine, dynamo, N. Tesla  Electric machine regulator, dynamo, C. L. Buckingham.  Electrical conductor, E. H. Johnson.  Electrical synchronal escapement, J. F. McLaughlin.  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe.  Excelsior, machine for making, J. A. Adams  Extension table, G. Schmitt.  Expeglasses, E. De Celles.  Fanning mill, H. Summerfeld	359,690 359,739 359,982 359,783 359,784 359,748 359,770 359,726 359,806 359,707 359,806 359,806 359,807 359,807 359,807 359,807 359,807 359,807 359,604 359,60
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume  Electric currents, underground conduit for powerful, G. B. Pennock  Electric lighting system, F. A. Cheney.  Electric machine, dynamo, R. J. Sheehy.  Electric machine, dynamo, N. Tesla  Electric machine regulator, dynamo, C. L. Buckingham.  Electrical conductor, E. H. Johnson  Electrical synchronal escapement, J. F. McLaughlin.  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe.  Excelsior, machine for making, J. A. Adams  Extension table, G. Schmitt.  Eyeglasses, E. De Celles  Fanning mill, H. Summerfeld	359,690 359,739 359,982 359,783 359,894 359,718 359,894 359,707 359,707 359,806 359,806 359,806 359,807 359,80
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume  Electric currents, underground conduit for powerful, G. B. Pennock  Electric lighting system, F. A. Cheney  Electric machine, dynamo, R. J. Sheehy  Electric machine, dynamo, R. J. Sheehy  Electric machine regulator, dynamo, C. L. Buckingham  Electrical conductor, E. H. Johnson  Electrical conductor, E. H. J. Sheehy  Fence post, J. H. Buscher  Fence post, A. W. Newton  Fence, machine for weaving wire, Brown & Blake  Fine and burglar alarm, electric, S. Taussig  Fire and	359,690 359,789 359,892 359,893 359,718 359,894 359,770 359,726 359,805 359,805 359,805 359,805 359,807 359,80
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume.  Electric currents, underground conduit for powerful, G. B. Pennock.  Electric lighting system, F. A. Cheney.  Electric machine, dynamo, R. J. Sheehy.  Electric machine, dynamo, N. Tesla.  Electric machine regulator, dynamo, C. L. Buckingham.  Electrical conductor, E. H. Johnson.  Electrical conductor, E. H. Johnson.  Electrical synchronal escapement, J. F. McLaughlin.  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe.  Excelsior, machine for making, J. A. Adams.  Extension table, G. Schmitt.  Extension table, G. Schmitt.  Extension mill, H. Summerfeld.  Fanning mill, H. Summerfeld.  Faucet for oil cans, G. W. Banker.  Feed grinder, I. & J. C. Jay  Feed rolls, top pressure for, G. W. Church.  Feed water heater, A. M. Rowe  Fence, flood, A. Buracker.  Fence, flood, A. Buracker.  Fence post, J. H. Buscher.  Fence post, J. F. Hanna.  Fences, machine for weaving wire, Brown & Blake.  Fire alarm, A. Sewel.  Fire alarm, A. Sewel.  Fire alarm, A. Sewel.  Fire arm, breech-loading, J. M. & M. S. Browning.  Firearms, rear sight for, J. C. Kelton.  Fire box lining, A. S. Newby.  Fire extinguisher, J. M. Palmer.  Fireplace, D. P. Lewis et al.  Floors, etc., covering for, E. F. Nenninger.  Flour packing machine, J. B. Allfree.  Folding seat, S. W. Knott.  Foot guard, Spalding & Adams.  Fountain trap, G. W. Wicks.	359,690 359,739 359,982 359,783 359,783 359,748 359,770 359,726 359,806 359,707 359,80
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume  Electric currents, underground conduit for powerful, G. B. Pennock  Electric lighting system, F. A. Cheney  Electric machine, dynamo, R. J. Sheehy  Electric machine, dynamo, N. Tesla  Electric machine regulator, dynamo, C. L. Buckingham  Electrical conductor, E. H. Johnson  Electrical synchronal escapement, J. F. McLaughlin  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe  Extension table, G. Schmitt  Eyeglasses, E. De Celles  Fanning mill, H. Summerfeld	359,690 359,789 359,892 359,894 359,713 359,894 359,770 359,726 359,806 359,767 359,807 359,807 359,807 359,807 359,807 359,807 359,807 359,807 359,807 359,807 359,807 359,807 359,808 359,701 359,808
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume  Electric currents, underground conduit for powerful, G. B. Pennock  Electric lighting system, F. A. Cheney  Electric machine, dynamo, R. J. Sheehy  Electric machine, dynamo, N. Tesla  Electric machine regulator, dynamo, C. L. Buckingham  Electrical conductor, E. H. Johnson  Electrical synchronal escapement, J. F. McLaughlin  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe  Excelsior, machine for making, J. A. Adams  Extension table, G. Schmitt  Eyeglasses, E. De Celles  Fanning mill, H. Summerfeld  Faucet for oil cans, G. W. Banker  Feed grinder, I. & J. C. Jay  Feed rolls, top pressure for, G. W. Church  Feed water heater, A. M. Rowe  Fence, J. A. Devore  Fence post, J. H. Buscher  Fence post, J. H. Buscher  Fence post, J. H. Buscher  Fence, wire, J. F. Hanna  Fences, machine for weaving wire, Brown & Blake  Fire and burglar alarm, electric, S. Taussig  Firearm, breech-loading, J. M. & M. S. Browning.  Firearm, prear sight for, J. C. Kelton  Fire box lining, A. S. Newby  Fire escape, Stanhope & Esty  Fire extinguisher, J. M. Palmer  Fireplace, D. P. Lewis et al  Floors, etc., covering for, R. F. Nenninger  Floot guard, Spalding & Adams  Foot guard, Spalding & Adams  Foot guard, Spalding & Adams  Foot guard, Spalding & Adams  Frame for portable structures, A. W. Tourgee	359,690 359,739 359,982 359,783 359,894 359,718 359,770 359,726 359,806 359,707 359,80
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume  Electric currents, underground conduit for powerful, G. B. Pennock  Electric lighting system, F. A. Cheney  Electric machine, dynamo, R. J. Sheehy  Electric machine, dynamo, N. Tesla  Electric machine regulator, dynamo, C. L. Buckingham  Electrical conductor, E. H. Johnson  Electrical synchronal escapement, J. F. McLaughlin  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe  Extension table, G. Schmitt  Eyeglasses, E. De Celles  Fanning mill, H. Summerfeld	359,690 359,739 359,692 359,793 359,894 359,718 359,707 359,726 359,707 359,657 359,657 359,85
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume.  Electric currents, underground conduit for powerful, G. B. Pennock.  Electric lighting system, F. A. Cheney.  Electric machine, dynamo, R. J. Sheehy.  Electric machine, dynamo, N. Tesla.  Electric machine regulator, dynamo, C. L. Buckingham.  Electrical conductor, E. H. Johnson.  Electrical synchronal escapement, J. F. McLaughlin.  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe.  Excelsior, machine for making, J. A. Adams.  Extension table, G. Schmitt.  Eyeglasses, E. De Celles.  Fanning mill, H. Summerfeld.  Sieglasses, E. De Celles.  Faucet for oil cans, G. W. Banker.  Feed grinder, I. & J. C. Jay Feed rolls, top pressure for, G. W. Church.  Feed water heater, A. M. Rowe.  Fence, J. A. Devore.  Fence building machine, W. H. H. Fauber.  Fence post, J. H. Buscher.  Fence post, J. H. Buscher.  Fence post, J. H. Buscher.  Fence, wire, J. F. Hanna.  Fences, machine for weaving wire, Brown & Blake.  Fire alarm, A. Sewel.  Fire and burglar alarm, electric, S. Taussig.  Firearm, breech-loading, J. M. & M. S. Browning.  Firearm, preech-loading, J. C. Kelton.  Fire extinguisher, J. M. Palmer.  Fire place, D. P. Lewis et al.  Floors, etc., covering for, R. F. Nenninger.  Floot guard, Spalding & Adams.  Fountain trap, G. W. Wicks.  Frame. See Lamp frame. Umbrella frame.  Frame for portable structures, A. W. Tourgee.  Fruit picker, B. D. Eaton.  Furnace. See Cellular furnace. Hot air furnace.	359,690 359,739 359,692 359,793 359,894 359,718 359,707 359,726 359,707 359,657 359,657 359,85
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume.  Electric currents, underground conduit for powerful, G. B. Pennock.  Electric lighting system, F. A. Cheney.  Electric machine, dynamo, R. J. Sheehy.  Electric machine, dynamo, N. Tesla.  Electric machine regulator, dynamo, C. L. Buckingham.  Electrical conductor, E. H. Johnson.  Electrical synchronal escapement, J. F. McLaughlin.  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe.  Excelsior, machine for making, J. A. Adams.  Extension table, G. Schmitt.  Expeglasses, E. De Celles.  Fanning mill, H. Summerfeld.  Faucet for oil cans, G. W. Banker.  Feed grinder, I. & J. C. Jay Feed rolls, top pressure for, G. W. Church.  Feed water heater, A. M. Rowe.  Fence, J. A. Devore.  Fence building machine, W. H. H. Fauber.  Fence post, J. H. Buscher.  Fence, wire, J. F. Hanna.  Fences, machine for weaving wire, Brown & Blake.  Fire aiarm, A. Sewel.  Fire aiarm, A. Sewel.  Fire are aiarm, A. Sewel.  Fire are sight for, J. C. Kelton.  Fire extinguisher, J. M. Palmer.  Fire polating and J. B. Allfree.  Floolding seat, S. W. Knott.  Foot guard, Spalding & Adams.  Fountain trap, G. W. Wicks.  Frame. See Lamp frame. Umbrella frame.  Frame for portable structures, A. W. Tourgee.  Fruit jar, J. Perkins.  Fruit jicker, B. D. Eaton.  Fruit jar, J. Perkins.	359,690 359,739 359,692 359,783 359,894 359,718 359,707 359,707 359,707 359,607 359,806 359,806 359,807 359,807 359,807 359,807 359,807 359,807 359,607 359,80
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume  Electric currents, underground conduit for powerful, G. B. Pennock  Electric lighting system, F. A. Cheney.  Electric machine, dynamo, R. J. Sheehy.  Electric machine, dynamo, N. Tesla  Electric machine regulator, dynamo, C. L. Buckingham.  Electrical conductor, E. H. Johnson.  Electrical synchronal escapement, J. F. McLaughlin.  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe.  Excelsior, machine for making, J. A. Adams  Extension table, G. Schmitt.  Eyeglasses, E. De Celles.  Fanning mill, H. Summerfeld	359,690 359,739 359,892 359,894 359,718 359,894 359,770 359,726 359,805 359,805 359,805 359,807 359,80
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume.  Electric currents, underground conduit for powerful, G. B. Pennock.  Electric lighting system, F. A. Cheney.  Electric machine, dynamo, R. J. Sheehy.  Electric machine, dynamo, N. Tesla.  Electric machine regulator, dynamo, C. L. Buckingham.  Electrical conductor, E. H. Johnson.  Electrical synchronal escapement, J. F. McLaughlin.  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe.  Excelsior, machine for making, J. A. Adams.  Extension table, G. Schmitt.  Expeglasses, E. De Celles.  Fanning mill, H. Summerfeld.  Faucet for oil cans, G. W. Banker.  Feed grinder, I. & J. C. Jay Feed rolls, top pressure for, G. W. Church.  Feed water heater, A. M. Rowe.  Fence, J. A. Devore.  Fence building machine, W. H. H. Fauber.  Fence post, J. H. Buscher.  Fence, wire, J. F. Hanna.  Fences, machine for weaving wire, Brown & Blake.  Fire aiarm, A. Sewel.  Fire aiarm, A. Sewel.  Fire are aiarm, A. Sewel.  Fire are sight for, J. C. Kelton.  Fire extinguisher, J. M. Palmer.  Fire polating and J. B. Allfree.  Floolding seat, S. W. Knott.  Foot guard, Spalding & Adams.  Fountain trap, G. W. Wicks.  Frame. See Lamp frame. Umbrella frame.  Frame for portable structures, A. W. Tourgee.  Fruit jar, J. Perkins.  Fruit jicker, B. D. Eaton.  Fruit jar, J. Perkins.	369,690 369,739 369,692 369,739 369,892 369,718 369,894 369,716 369,726 359,806 359,707 369,677 369,677 369,677 369,677 369,677 369,677 369,677 369,677 369,677 369,677 369,677 369,677 369,678 369,788 369,798 369,798 369,898 369,898 369,898 369,898 369,898 369,898 369,898 369,799 369,898 369,799 369,898 369,799 369,898 369,799 369,898 369,799 369,898 369,799 369,898 369,799 369,898 369,799 369,898 369,799 369,898 369,799 369,898 369,799 369,898 369,799
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume.  Electric currents, underground conduit for powerful, G. B. Pennock.  Electric lighting system, F. A. Cheney.  Electric machine, dynamo, R. J. Sheehy.  Electric machine, dynamo, N. Tesla.  Electric machine regulator, dynamo, C. L. Buckingham.  Electrical conductor, E. H. Johnson.  Electrical synchronal escapement, J. F. McLaughlin.  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe.  Excelsior, machine for making, J. A. Adams.  Extension table, G. Schmitt.  Eyeglasses, E. De Celles.  Fanning mill, H. Summerfeld.  Faucet for oil cans, G. W. Banker.  Feed grinder, I. & J. C. Jay  Feed rolls, top pressure for, G. W. Church.  Feed water heater, A. M. Rowe  Fence, Jo. A. Devore.  Fence, flood, A. Buracker.  Fence, epost, J. H. Buscher.  Fence, wire, J. F. Hanna.  Fences, machine for weaving wire, Brown & Blake.  Fire alarm, A. Sewel.  Fire alarm, A. Sewel.  Fire alarm, A. Sewel.  Fire alarm, A. Sewel.  Fire extinguisher, J. M. Palmer.  Fireplace, D. P. Lewis et al.  Floors, etc., covering for, E. F. Nenninger.  Flour packing machine, J. B. Allfree.  Foloding seat, S. W. Knott.  Foot guard, Spalding & Adams.  Fountain trap, G. W. Wicks.  Frame See Lamp frame. Umbrella frame.  Frame for portable structures, A. W. Tourgee.  Fruit jar, J. Perkins.  Fruit jar, J. Perkins.  Fruit picker, B. D. Eaton.  Furnaces, attachment for smelting, E. R., Jr., & O. R. Moffet.  Game counter, C. W. Le Count.  Garment supporter, R. J. Kyle.	359,690 359,739 359,692 359,738 359,894 359,718 359,894 359,707 359,707 359,807 359,807 359,807 359,807 359,807 359,707 359,807 359,707 359,807 359,607 359,80
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume.  Electric currents, underground conduit for powerful, G. B. Pennock.  Electric lighting system, F. A. Cheney.  Electric machine, dynamo, R. J. Sheehy.  Electric machine, dynamo, N. Tesla.  Electric machine regulator, dynamo, C. L. Buckingham.  Electrical conductor, E. H. Johnson.  Electrical synchronal escapement, J. F. McLaughlin.  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe.  Excelsior, machine for making, J. A. Adams.  Extension table, G. Schmitt.  Exyeglasses, E. De Celles.  Fanning mill, H. Summerfeld.  539,944, Fastener, metallic, J. Felbel.  Faucet for oil cans, G. W. Banker.  Feed grinder, I. & J. C. Jay Feed rolls, top pressure for, G. W. Church.  Feed water heater, A. M. Rowe  Fence, J. A. Devore.  Fence post, J. H. Buscher.  Fence post, J. H. Buscher.  Fence post, J. H. Buscher.  Fence post, J. M. Panna.  Fences, machine for weaving wire, Brown & Blake.  Fire alarm, A. Sewel.  Fire and burglar alarm, electric, S. Taussig.  Firearm, breech-loading, J. M. & M. S. Browning.  Fire and burglar alarm, electric, S. Taussig.  Firearm, preech-loading, J. M. & M. S. Browning.  Fire and burglar alarm, electric, S. Taussig.  Firearm, preech-loading, J. M. & M. S. Browning.  Fire and burglar alarm, electric, S. Taussig.  Firearm, preech-loading, J. M. & M. S. Browning.  Fire and burglar alarm, electric, S. Taussig.  Firearm, preech-loading, J. M. & M. S. Browning.  Fire box lining, A. S. Newby.  Fire escape, Stanbope & Esty.  Fire escape, Stanbope & Esty.  Fire post lining, A. S. Newby.  Fire escape, Stanbope & Esty.  Fire post lining, A. S. Newby.  Fire escape, Stanbope & Esty.  Fire post lining, A. S. Newby.  Fire escape, Stanbope & Esty.  Fire post lining, A. S. Newby.  Fire escape, Stanbope & Esty.  Fire post lining, A. S. Newby.  Fire escape, Stanbope & Esty.  Fire post lining, A. S. Newby.  Fire escape, Stanbope & Esty.  Fire post lining, A. S. Newby	359,690 359,789 359,892 359,788 359,894 359,770 359,726 359,806 359,707 359,707 359,807 359,807 359,807 359,807 359,807 359,807 359,807 359,807 359,807 359,807 359,807 359,807 359,807 359,807 359,807 359,808
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume.  Electric currents, underground conduit for powerful, G. B. Pennock.  Electric lighting system, F. A. Cheney.  Electric machine, dynamo, R. J. Sheehy.  Electric machine, dynamo, N. Tesla.  Electric machine regulator, dynamo, C. L. Buckingham.  Electrical conductor, E. H. Johnson.  Electrical synchronal escapement, J. F. McLaughlin.  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe.  Excelsior, machine for making, J. A. Adams.  Extension table, G. Schmitt.  Eyeglasses, E. De Celles.  Fanning mill, H. Summerfeld.  Fastener, metallic, J. Felbel.  Faucet for oil cans, G. W. Banker.  Feed grinder, I. & J. C. Jay  Feed rolls, top pressure for, G. W. Church.  Feed water heater, A. M. Rowe.  Fence, J. A. Devore.  Kence building machine, W. H. H. Fauber.  Fence post, J. H. Buscher.  Fence post, J. H. Buscher.  Fence, wire, J. F. Hanna.  Fences, machine for weaving wire, Brown & Blake.  Fire alarm, A. Sewel.  Fire alarm, A. Sewel.  Fire alarm, A. Sewel.  Fire aram, breech-loading, J. M. & M. S. Browning.  Firearm, breech-loading, J. M. & M. S. Browning.  Firearm, rear sight for, J. C. Kelton.  Fire box lining, A. S. Newby.  Fire escape, Stanhope & Esty.  Fire escape, Spanding & Adams.  Foot guard, Spalding & Adams.  Foot guard, Spalding & Adams.  Foot guard, Spalding & Adams.  Fountain trap, G. W. Wicks.  Frame See Lamp frame. Umbrella frame.  Frame for portable structures, A. W. Tourgee.  Fruit jar, J. Perkins.  Fruit picker, B. D. Eaton.  Fruit picker, B. D. Eaton.  Frunaces, attachment for smelting, E. R., Jr., & O. R. Moffet.  Game board, A. E. Seliger.  Game counter, C. W. Le Count.  Garment supporter, F. W. Lowe.  Gas engine, L. T. Cornell	369,690 369,739 369,892 369,893 369,894 369,718 369,707 369,726 369,707 369,657 369,657 369,857 369,857 369,857 369,857 369,857 369,858 369,767 369,858 369,767 369,858 369,768 369,858 369,624 369,858
Electric conductors, coupling for, F. C. Plume Electric conductors, coupling for, F. C. Plume Electric currents, underground conduit for powerful, G. B. Pennock Electric lighting system, F. A. Cheney Electric machine, dynamo, R. J. Sheehy Electric machine, dynamo, N. Tesla Electric machine regulator, dynamo, C. L. Buckingham Electrical conductor, E. H. Johnson Electrical synchronal escapement, J. F. McLaughlin Engine. See Carding engine. Gas engine. Steam engine. Engines, device for draining the cylinders of, J. Briscoe Excelsior, machine for making, J. A. Adams Extension table, G. Schmitt Eyeglasses, E. De Celles Fanning mill, H. Summerfeld	359,690 359,789 359,892 359,894 359,770 359,726 359,806 359,767 359,806 359,767 359,806 359,767 359,806 359,767 359,806 359,767 359,806 359,767 359,806 359,767 359,806 359,767 359,806 359,767 359,806 359,771 359,806 359,808 359,809 359,800 359,700 359,700 359,700 359,700 359,700 359,700
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume.  Electric currents, underground conduit for powerful, G. B. Pennock.  Electric lighting system, F. A. Cheney.  Electric machine, dynamo, R. J. Sheehy.  Electric machine, dynamo, N. Tesla.  Electric machine, dynamo, N. Tesla.  Electric machine regulator, dynamo, C. L. Buckingham.  Electrical conductor, E. H. Johnson.  Electrical synchronal escapement, J. F. McLaughlin.  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe.  Excelsior, machine for making, J. A. Adams.  Extension table, G. Schmitt.  Eyeglasses, E. De Celles.  Fanning mill, H. Summerfeld.  Faucet for oil cans, G. W. Banker.  Feed grinder, I. & J. C. Jay  Feed rolls, top pressure for, G. W. Church.  Feed water heater, A. M. Rowe.  Fence, J. A. Devore.  Fence building machine, W. H. F. Fauber.  Fence post, J. H. Buscher.  Fence post, J. H. Buscher.  Fence post, J. F. Hanna.  Fences, machine for weaving wire, Brown & Blake.  Fire alarm, A. Sewel.  Fire alarm, A. Sewel.  Fire alarm, A. Sewel.  Fire arm, breech-loading, J. M. & M. S. Browning.  Firearm, rear sight for, J. C. Kelton.  Fire box lining, A. S. Newby.  Fire escape, Stanhope & Esty.  Fire extinguisher, J. M. Palmer.  Fire post, J. M. Palmer.  Fire post, J. M. S. Newby.  Fire escape, Stanhope & Esty.  Fire extinguisher, J. M. Palmer.  Fire post, J. P. Levis et al.  Floors, etc., covering for, R. F. Nenninger.  Flour packing machine, J. B. Allfree.  Foot guard, Spalding & Adams.  Fountain trap, G. W. Wicks.  Frame for portable structures, A. W. Tourgee.  Fruit jar, J. Perkins.  Fruit picker, B. D. Eaton.  Game board, A. E. Seliger.  Game counter, C. W. Le Count.  Garment supporter, F. W. Lowe.  Gas engine, L. T. Cornell.  Gas pressure regulator and cut-off, H. J. Hyams.  Gas pressu	359,690 359,789 359,892 359,894 359,770 359,726 359,806 359,767 359,806 359,767 359,806 359,767 359,806 359,767 359,806 359,767 359,806 359,767 359,806 359,767 359,806 359,767 359,806 359,767 359,806 359,771 359,806 359,808 359,809 359,800 359,700 359,700 359,700 359,700 359,700 359,700
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume.  Electric currents, underground conduit for powerful, G. B. Pennock.  Electric lighting system, F. A. Cheney.  Electric machine, dynamo, R. J. Sheehy.  Electric machine, dynamo, N. Tesla.  Electric machine regulator, dynamo, C. L. Buckingham.  Electrical conductor, E. H. Johnson.  Electrical conductor, E. H. Johnson.  Electrical synchronal escapement, J. F. McLaughlin.  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe.  Excelsior, machine for making, J. A. Adams.  Extension table, G. Schmitt.  Expeglasses, E. De Celles.  Fanning mill, H. Summerfeld.  Fastener, metallic, J. Felbel.  Faucet for oil cans, G. W. Banker.  Feed grinder, I. & J. C. Jay  Feed rolls, top pressure for, G. W. Church.  Feed water heater, A. M. Rowe.  Feence building machine, W. H. H. Fauber.  Fence, flood, A. Buracker.  Fence, flood, A. Buracker.  Fence, wire, J. F. Hanna.  Fence, wire, J. F. Hanna.  Fence, wire, J. F. Hanna.  Flence, wire, J. F. Hanna.	359,690 359,739 359,892 359,783 359,894 359,718 359,707 359,726 359,707 359,607 359,607 359,807
Electric circuit regulator, J. A. Powers.  Electric conductors, coupling for, F. C. Plume.  Electric currents, underground conduit for powerful, G. B. Pennock.  Electric lighting system, F. A. Cheney.  Electric machine, dynamo, R. J. Sheehy.  Electric machine, dynamo, N. Tesla.  Electric machine regulator, dynamo, C. L. Buckingham.  Electrical conductor, E. H. Johnson.  Electrical synchronal escapement, J. F. McLaughlin.  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe.  Excelsior, machine for making, J. A. Adams.  Extension table, G. Schmitt.  Eyeglasses, E. De Celles.  Fanning mill, H. Summerfeld.  Faucet for oil cans, G. W. Banker.  Feed grinder, I. & J. C. Jay  Feed rolls, top pressure for, G. W. Church.  Feed water heater, A. M. Rowe.  Fence, J. A. Devore.  Fence building machine, W. H. H. Fauber.  Fence post, J. H. Buscher.  Fence post, J. H. Buscher.  Fence, wire, J. F. Hanna.  Fences, machine for weaving wire, Brown & Blake.  Fire alarm, A. Sewel.  Fire alarm, A. Sewel.  Fire alarm, A. Sewel.  Fire arm, breech-loading, J. M. & M. S. Browning.  Firearm, rear sight for, J. C. Kelton.  Fire box lining, A. S. Newby.  Fire escape, Stanbope & Esty.  Fire extinguisher, J. M. Palmer.  Fire post, D. P. Lewis et al.  Floors, etc., covering for, R. F. Nenninger.  Flour packing machine, J. B. Allfree.  Folding seat, S. W. Knott.  Foot guard, Spalding & Adams.  Fountain trap, G. W. Wicks.  Frame. See Lamp frame. Umbrella frame.  Frame for portable structures, A. W. Tourgee.  Fruit jar, J. Perkins.  Fruit picker, B. D. Eaton.  Fruit picker, B. D. Eaton.  Fruit picker, B. D. Eaton.  Game board, A. E. Seliger.  Game counter, C. W. Le Count.  Garment supporter, F. W. Lowe.  Gas engine, L. T. Cornell  Gas pressure regulator and cut-off, E. J. Hyams.  Gas pressure regulator and cut-off, Sollenberger  & Wood.  Gate, P. Steele.	359,690 359,739 359,892 359,783 359,894 359,770 359,770 359,775 359,807
Electric circuit regulator, J. A. Powers.  Electric courrents, underground conduit for powerful, G. B. Pennock.  Electric lighting system, F. A. Cheney.  Electric machine, dynamo, R. J. Sheehy.  Electric machine, dynamo, N. Tesla.  Electric machine, dynamo, N. Tesla.  Electric machine regulator, dynamo, C. L. Buckingham.  Electrical conductor, E. H. Johnson.  Electrical synchronal escapement, J. F. McLaughlin.  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe.  Excelsior, machine for making, J. A. Adams.  Extension table, G. Schmitt.  Expeglasses, E. De Celles.  Fanning mill, H. Summerfeld.  Fastener, metallic, J. Felbel.  Faucet for oil cans, G. W. Banker.  Feed grinder, I. & J. C. Jay  Feed rolls, top pressure for, G. W. Church.  Feed water heater, A. M. Rowe.  Fence, J. A. Devore.  Fence building machine, W. H. H. Fauber.  Fence, flood, A. Buracker.  Fence, groot, A. W. Newton.  Fence, wire, J. F. Hanna.  Fire alarm, A. Sewel.  Fire alarm, A. Sewel.  Fire alarm, A. Sewel.  Fire arm, breech-loading, J. M. & M. S. Browning.  Firearm, breech-loading, J. M. & M. S. Browning.  Firearm, breech-loading, J. M. & M. S. Browning.  Firearm, rear sight for, J. C. Kelton.  Fire extinguisher, J. M. Palmer.  Fire box lining, A. S. Newby.  Fire extinguisher, J. M. Palmer.  Fire place, D. P. Lewis et al.  Flour packing machine, J. B. Allfree.  Folding seat, S. W. Knott.  Foot guard, Spalding & Adams.  Fountain trap, G. W. Wicks.  Frame See Lamp frame. Umbrella frame.  Frame for portable structures, A. W. Tourgee.  Fruit jar, J. Perkins.  Fruit picker, B. D. Eaton.  Furnace. See Cellular furnace. Hot air furnace.  Furnaces, attachment for smelting, E. R., Jr., & O. R. Moffet.  Game counter, C. W. Le Count.  Game board, A. E. Seliger.  Game counter, C. W. Le Count.  Game board, A. E. Seliger.  Game counter, C. W. Le Count.  Gas pressure regulator and cut-off, F. J. Hyams.  Gas pressur	359,690 359,739 359,692 359,783 359,894 359,718 359,707 359,726 359,707 359,607 359,807
Electric conductors, coupling for, F. C. Plume Electric currents, underground conduit for powerful, G. B. Pennock Electric lighting system, F. A. Cheney Electric machine, dynamo, R. J. Sheehy Electric machine, dynamo, N. Tesla Electric machine regulator, dynamo, C. L. Buckingham Electrical conductor, E. H. Johnson Electrical synchronal escapement, J. F. McLaughlin Electrical conductor, E. H. Johnson Electrical synchronal escapement, J. F. McLaughlin Engine, See Carding engine. Gas engine. Steam engine. Engines, device for draining the cylinders of, J. Briscoe Excelsior, machine for making, J. A. Adams Extension table, G. Schmitt Eyeglasses, E. De Celles Fanning mill, H. Summerfeld Fastener, metallic, J. Felbel Faucet for oil cans, G. W. Banker Feed grinder, I. & J. C. Jay Feed rolls, top pressure for, G. W. Church Feed water heater, A. M. Rowe Feence, flood, A. Buracker Fence, flood, A. Buracker Fence, flood, A. Buracker Fence post, J. H. Buscher Fence, wire, J. F. Hanna Fences, machine for weaving wire, Brown & Blake Fire alarm, A. Sewel Fire alarm, A. Sewel Fire alarm, A. Sewel. Fire arm, breech-loading, J. M. & M. S. Browning. Firearms, rear sight for, J. C. Kelton Fire box lining, A. S. Newby Fire extinguisher, J. M. Palmer Fire extinguisher, J. M. Palmer Fire place, D. P. Lewis et al Floors, etc., covering for, R. F. Nenninger Floors, etc., covering for, R. F. Nenninger Floor packing machine, J. B. Allifree Foot guard, Spalding & Adams Fountain trap, G. W. Wicks Frame. See Lamp frame. Umbrella frame. Frame for portable structures, A. W. Tourgee Fruit jar, J. Perkins Fruit jar, J. Perkins Fruit jar, J. Perkins Fruit picker, B. D. Eaton Furnaces, attachment for smelting, E. R., Jr., & O. R. Moffet Gas pressure regulator and cut-off, F. J. Hyams Gas pressure regulator and cut-off, Sollenberger & Woody Gas engine, L. T. Cornell Gass panes, machine for polishing, J. Schuster	359,690 359,739 359,892 359,894 359,770 359,726 359,894 359,767 359,876 359,877 359,877 359,877 359,877 359,877 359,877 359,878
Electric circuit regulator, J. A. Powers.  Electric courductors, coupling for, F. C. Plume.  Electric currents, underground conduit for powerful, G. B. Pennock.  Electric lighting system, F. A. Cheney.  Electric machine, dynamo, R. J. Sheehy.  Electric machine, dynamo, N. Tesla.  Electric machine, dynamo, N. Tesla.  Electric machine regulator, dynamo, C. L. Buckingham.  Electrical conductor, E. H. Johnson.  Electrical synchronal escapement, J. F. McLaughlin.  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe.  Excelsior, machine for making, J. A. Adams.  Extension table, G. Schmitt.  Eyeglasses, E. De Celles.  Fanning mill, H. Summerfeld.  Seyelasses, E. De Celles.  Fanning mill, F. Summerfeld.  Feed grinder, I. & J. C. Jay  Feed rolls, top pressure for, G. W. Church.  Feed water heater, A. M. Rowe.  Fence, J. A. Devore.  Fence building machine, W. H. H. Fauber.  Fence post, J. H. Buscher.  Fence post, J. H. Buscher.  Fence post, J. H. Buscher.  Fence post, J. F. Hanna.  Fences, machine for weaving wire, Brown & Blake.  Fire alarm, A. Sewel.  Fire alarm, A. Sewel.  Fire aram, breech-loading, J. M. & M. S. Browning.  Firearm, breech-loading, J. M. & M. S. Browning.  Firearm, breech-loading, J. M. & M. S. Browning.  Fire extinguisher, J. M. Palmer.  Fire place, D. P. Lewis et al.  Floors, etc., covering for, R. F. Nenninger.  Floor packing machine, J. B. Allfree.  Foot guard, Spalding & Adams.  Fountain trap, G. W. Wicks.  Frame. See Lamp frame. Umbrella frame.  Frame for portable structures, A. W. Tourgee.  Fruit picker, B. D. Eaton.  Furnace. See Cellular furnace. Hot air furnace.  Frame for portable structures, A. W. Tourgee.  Fruit jar, J. Perkins.  Fruit picker, B. D. Eaton.  Garment supporter, F. W. Lowe.  Gas engine, L. T. Cornell  Gas pressure regulator and cut-off, E. J. Hyams.  Gas pressure regulator and cut-off, Sollenberger  & Woody.  Gate. See Sewinging gate.  Gate, J. Roberts, Sr.  Gate, P. Steele.  Glass panes, machine for pollshing, J.	359,690 359,739 359,892 359,783 359,894 359,770 359,726 359,767 359,677 359,677 359,857 359,857 359,857 359,857 359,857 359,858 359,777 359,857 359,858 359,878
Electric circuit regulator, J. A. Powers.  Electric courductors, coupling for, F. C. Plume.  Electric currents, underground conduit for powerful, G. B. Pennock.  Electric lighting system, F. A. Cheney.  Electric machine, dynamo, R. J. Sheehy.  Electric machine regulator, dynamo, C. L. Buckingham.  Electric machine regulator, dynamo, C. L. Buckingham.  Electrical conductor, E. H. Johnson.  Electrical synchronal escapement, J. F. McLaughlin.  Engine. See Carding engine. Gas engine. Steam engine.  Engines, device for draining the cylinders of, J. Briscoe.  Excelsior, machine for making, J. A. Adams.  Extension table, G. Schmitt.  Eyeglasses, E. De Celles.  Fanning mill, H. Summerfeld.  Fastener, metallic, J. Felbel.  Faucet for oil cans, G. W. Banker.  Feed grinder, I. & J. C. Jay  Feed rolls, top pressure for, G. W. Church.  Feed water heater, A. M. Rowe.  Fence, J. A. Devore.  Fence building machine, W. H. H. Fauber.  Fence post, J. H. Buscher.  Fence post, J. H. Buscher.  Fence post, A. W. Newton.  Fence post, A. W. Newton.  Fence, machine for weaving wire, Brown & Blake.  Fire alarm, A. Sewel.  Fire and burglar alarm, electric, S. Taussig.  Firearm, breech-loading, J. M. & M. S. Browning.  Firearm, preech-loading, J. M. & M. S. Browning.  Fire box lining, A. S. Newby.  Fire escape, Stanhope & Esty.  Fire box lining, A. S. Newby.  Fire escape, Stanhope & Esty.  Fire place, D. P. Lewis et al.  Floors, etc., covering for, R. F. Nenninger.  Flour packing machine, J. B. Allfree.  Foundain trap, G. W. Wicks.  Frame for portable structures, A. W. Tourgee.  Fruit jar, J. Perkins.  Frame for portable structures, A. W. Tourgee.  Fruit jar, J. Perkins.  Frame for portable structures, A. W. Tourgee.  Fruit jar, J. Perkins.  Frame for portable structures, A. W. Tourgee.  Fruit jar, J. Perkins.  Fountain trap, G. W. Wicks.  Frame for portable structures, A. W. Tourgee.  Fruit jar, J. Perkins.  Fountain trap, G. W. Wicks.  Frame for portable structures, A. W. Tourgee.  Fruit jar, J. Perkins.  Gas pressure regulator and cut-o	359,690 359,739 359,892 359,894 359,713 359,894 359,713 359,894 359,776 359,767 359,876 359,876 359,876 359,876 359,876 359,876 359,876 359,876 359,876 359,876 359,877 359,876 359,877 359,876 359,877 359,878 359,877 359,878
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Fable.       See Extension table.         Fable slide, extension, H. O. Hall.	359,782	=
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Wheel. See Saw wheel. Wheel, W. E. Smith		· pa : ac : le
Wheat, machine for cleaning or scouring, A. E. Jernander		- 80 - 86 - fo
	<b>359,77</b> 5	

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