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vate buildings. For the best system, address A. L. Bogart, 702 Broadway, N. Y.

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ings. \$2.50. Address M. N. Forney, 73 Broadway, N. Y. Send for James W. Queen & Co.'s Catalogue of Draw

ing Instruments and Materials; also catalogue of Microscopes, Field Glasses, Telescopes, and other optical in-struments. 924 Chestnut St., Philadelphia, Pa.

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For Best Presses, Dies, and Fruit Can Tools, Bliss & Williams, cor. of Plymouth and Jay Sts., Brooklyn, N.Y. Lead Pipe, Sheet Lead, Bar Lead, and Gas Pipe. Send for prices. Bailey, Farrell & Co., Pittsburgh, Pa.

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find directions for making durable whitewash on p, 133, vol. 34.—F. G. T. will find a recipe for a mucilage that will not mould onp. 196, vol. 34.—J. R. will find a description of the manufacture of earthenware on p. 191, vol. 32.—R. S. will find a description of a battery for plating on p. 26, vol. 32.—J. M. W. will find on p. 341, vol. 27, directions for making hydrogen. Formaking oxygen, see p. 75, vol. 32. To make carbon plates for batteries, see p. 187, vol. 32 .- J. A. L.'s queries about a hole and its plug are merely questions of definition. There is nothing to be decided in them.-R. M. C. will find directions for ebonizing wood on p. 50, vol. 33.-E. H. M. will find instances of spontaneous combustion mentioned on pp. 343, 368, vol. 34.-J. W. S. will find directions for preserving eggs on p. 306, vol. 34.-A. B. C. will find instructions for tempering rock drills on p. 202, vol. 31.-A. L. is informed that we cannot answer legal questions.-R. P. P. will find something on wooden railroads or tramroads on p. 324, vol. 29.-G. A. C. will find a recipe for blackboard composition on p. 299, vol. 28,-H. A. will find directions for enameling metals on p. 203, vol. 29.-W. H. B., J. H. W., Y. I. W., J. H. N., J. L. G., G., J. McB.. and others, who ask us to recommend books on industrial and scientific subjects, should address the booksellers who advertise in our columns, all of whom are trustworthy firms, for catalogues

(1) C. A. W. asks: How can light-colored kid gloves, that have become spotted with sea water, be dyed any other color than black? A. They can be dyed to any of the darker shades in the usual way. See p. 166, vol. 28.

What is the best thing with which to clean silver or silver-plated ware that has become black and will not brighten up with whiting? A. Use tripoli powder, mixed with a little olive oil if necessary.

(2) E. A. F. asks: Is there any process by which the liquid that drops from stovepipes can be removed from carpet? A. Use plenty of soap and water.

(3) J. S. S. asks: Is woolen clothing healthy? Fine soft wool, unless colored, will shrink; and cloth made from coarse hairy wool is too heavy to wear in thesummer, and will irritate the skin and give those who wear it a cold in the fall when they put it on, and again in the spring when taken off. Clothes made of cotton can be more thoroughly washed and boiled than those of wool, and are they not more healthy? Is not white clothing healthier and more comfortable both insummer and winter than colored? A. As a general rule, light woolen clothing, if clean, is more healthy and a better protection against colds, from sudden changes of temperature, than cotton or other vegetable fibers. In winter, dark or black clothing is best, as it is warmen than light. In summer, light colors should be worn. Some woolen fabrics, dyed with some of the coal tar colors, when permitted to remain for any length of time in direct contact with the moist cuticle, have produced poisonous effects; but not otherwise. It is for this reason advisable to use only undyed fabrics for underclothing.

(4) H. H., Jr., asks: Are there any chemicals by which glue can be made into a paste, to be used (cold) for closing quarter cracks in horses' feet? A. Heat the glue for some time in strongestacetic acid, and evaporate in the air until of the consistence desired. Such a solution of glue will not gelatinize. It dries rapidly, forming a stronger and more flexible joint than ordinary glue.

(5) J. E. M. asks: Why is it that, in a window fitted with alternate panes of blue and white glass, the former become quite warm in the sunshine, while the temperature of the white glass remains almost, if not altogether, unchanged? A. Clear glass permits the passage of all the rays of the spectrum, while blue glass intercepts all the rays except the blue. The destruction of these luminous rays determines their conversion into sensible heat, which is absorbed and radiated from the surface of the glass. The heating effect of this absorption is intensified. from the fact that the sensible heat rays of sunlight preponderate in the lower or red end of the spectrum, which is, in the present instance, intercepted. The darker the color of the glass, the greater will be the amount of heat developed.

(6) L. H. R. says: I have a flute of 8 lever keys that was laid away for about two years; at the ex-piration of that time I found it so dry that all the joints were loose. I oiled it several times, so that it is now perfectly tight; but I find that I cannot blow the lower notes at all, and can only blow the upper ones with great difficulty. After wetting the inside with water, it fills perfectly casily until dry again; but I am of opinion that this operation will, in time, have a damaging effect. Can you inform me how the difficulty arose? A. The wood has probably become rough on the interior and the bore distorted by excessive desiccation. Free all the cavities from dust, and rub the instrument inside and out with a little warm glycerin.

(7) W. L. D. asks: I dissolved a bit of German silver in nitric acid in a test tube; it gave a greenish blue solution, and after diluting with water I dropped A. The gold fish (cyprinus auratus) seldom deposit sulphuric acid into it slowly, which threw down a white copper plate, which threw down a gray metallic powder. What was the chemical action, and what were the several precipitates? A. It is probable that the alloy, or the water you added to the solution, contained lead in some form, which, combining with the sulphuric acid, produced an insoluble sulphate of lead. The deposit on the copper may be metallic arsenic from the impure nickel used in the alloy.

would fuse into a hard glass at high temperatures, Plumbago cannot be formed with lime into a crucible.

(10) J. S. says: Balsam of fir will render paper translucent. Pitch does the same in a pine plank, Why is this? A. For the same reason that water, filled with bubbles of air, loses its transparency. Neither paper nor wood is a homogeneous substance; but both become nearly so by impregnation of the fibers, and filling the interstices with translucent resin.

(11) J. R. A. says, in reply to E. A. W., who asks how to remove the clinkers from stove linings: When you have a good fire, cover the coal with three inches or more of oyster shells, and let the fire burn out, and burn the shells; you will be able to remove the clinkers, without the aid of mechanical means or injury to the firebricks, on the following morning.

(12) B. H. S. asks: 1. Of what is lightning composed? A. As to the precise nature of electricity, information concerning the putting up and mode of ap-nothing definite is at present known, other than that it plication of Turkish baths? A. The theory of the is a peculiar motion, analogous to that of heat, of the atoms in their molecular groupings, within the body which is electrically excited. In the case of lightning, the clouds, the air, and the moisture which it contains, and the surface of the earth, constitute the bodies excited. It has been shown that the cause of the electrical excitation in our atmosphere is due to a disturbance of the normal statical equilibrium by the translation of aqueous vapor from the earth's surface, and its subsequent condensation in the form of clouds and rain in the cold upper regions of the atmosphere. 2. Why are metals conductors? A. The metals are generally better conductors of electricity than the non-metals, owing to some, not yet well understood, arrangement of their molecules, which facilitates the transmission of the motion throughout the material. 3. Which is the positive pole, and which the negative, of a battery? A. The positive pole, or electrode, of a galvanic battery is the upper end of or connection with the negative plate of the cell -in the Daniell's, gravity, and similar zinc-copper batteries, this is the copper; in the Bunsen, or bichromate cell, it is the carbon plate. The negative pole, in all presentforms of batteries, is the zinc.

(13) L. C. J. says, in answer to J. H. W.'s query as to ice in a sand mould: I wish to inform him that the ice under his loose sand had melted to some extent, and the hot coal and iron came in contact, or his sand was insufficient, or not well packed or rammed. The safest plan is to have the floor beneath the cupola dry or comparatively so; but in the event of water or ice being under the cupola, put under the dry sand just before dropping the bottom.

(14) J. S. M. says: Having accidentally broken a small cast iron gear wheel, I tried to solder it with soft solder, using muriatic acid (diluted with an equal quantity of water, after having taken up all the zinc it would) as a flux, but the solder would not unite with the iron. I then added some sal ammoniac, but with the same result. I also tried to make a mat joint with tinfoil, clamping the parts together, but it all ran out. I heated the wheel in the stove and also with the blowpipe; and after several attempts I gave the job up as a failure. Can you tell me what the trouble is? A. A. You will find it impracticable to solder your wheel together unless you galvanize the surfaces.

(15) W. H. H. says: 1. Your paper of February 10, says: "Dissolve crude rubber and shellac in naphtha." I put them separately in bottles, and set them in warm water. The rubber dissolved, but the naphtha did not. What is the reason? A. We do not understandyou. Coal tar naphtha is a volatile liquid, The powdered shellac may be dissolved in it by heat and agitation. 2. How are the rubber bands sold by stationers joined together? A. By pressing the ends of the rubber band together before vulcanizing.

(16) B. F. asks: 1. The iron won from waste tin plates, even when absolutely free from tin and acids-which after chemical analysis contains no tin-gives in the blooming forge a cold short iron of little value, though the material employed for the plates must have been a very good one. Can you give reasons for this singular experience? A. A determination of the percentage of carbon in the iron would very probably reveal the cause. 2. Is there any way of treating this iron differently, so as to obtain a better material? A. It may be improved by re-puddling.

(17) R. E. B. asks: How can I prepare paper so that, when burned, it will leave a perfume similar to that from pastiles or fumigators? A. Take cascarilla bark 8 drachms, gum benzoin 4 drachms, vellow sanders 2 drachms, styrax 2 drachms, olibanum 2 drachms, charcoal dust 6 ozs., niter 11/2 drachms, mucilage ofgum tragacanth, sufficient quantity. Reduce the substances to a fine powder, form into a paste with the mucilage, coat the paper with this, and dry in an oven,

(18) F. G. H. says: I have 25 gold fish in a bath tub. What steps shall I take to make them breed?

hydration, by heat or otherwise. Moulded with sand it Half fill a wooden bath with dilute solution of muriate of tin, prepared by dissolving metallic tin in concen-trated hydrochloric acid; this will take two or three

days. Use 2 quarts of this solution to 300 quarts water for the bath. Put in the bottom of the bath a thin layer of finely granulated zinc, and then on it a cleaned iron plate, then a layer of the zinc and another iron plate, and so on alternately till the bath is full. The zinc, the iron, and the solution constitute a galvanic battery, and a coating of the tin is deposited on the iron plates in about two hours. Have ready a wrought iron bath containing molten zinc, covered with a layer of powdered sal ammoniac mixed with some earthy matter. In the bath, beneath the surface of the zinc, arrange two iron rollers, tightly compressed together, to be turned by a crank attached to one of them. Take the plates out of the tinning bath one at a time, drain them, and pass them while wet between the rollers in the zinc.

(21) A. E. D. asks: Can vou give me any Turkish bath is to relieve the body of foul matter by creating a profuse perspiration, and then washing the skin in the usual way. Tepidwater, used in the washing, closes the pores, and a cold shower or plunge bath creates a glow on the skin and stimulates the whole body. The perspiration is produced by the bather sitting in a room heated by hot dry air till moisture exudes from every pore. The matter brought to the surface by this means is frequently large in quantity.

In the SCIENTITIC AMERICAN SUPPLEMENT, p. 774, you give an illustration of a pneumatic pen. How is the ink or color spread? A. The ink should be spread with a small brush, such as is used for marking linen with a stencil plate.

(22) J. C. asks: What isthmus, if any, conects Nova Scotia peninsula to New Brunswick? A. There is an isthmus 15 miles wide between the two countries. It has no specific name that we know of.

(23) H. M. C. asks: Given the three sides of any triangle, what is its area? A. Construct the tri-angle; let fall a perpendicular from the apex to the base. Base \times half the perpendicular = area.

(24) B. A. F. asks: What would be the ressure in a steam boiler when the heat indicated by a thermometer is 320° Fah.? A. Seventy-five lbs. to the square inch.

(25) C. H. A. S. asks: Does the exact center of an iron shaft turn, if it be placed in a lathe? A. The center of a shaft is an imaginary line, which is stationary. Any part of the shaft that has breadth or thickness rotates.

(26) A. L. W. asks: Please give me direcons for brazing small pieces of thin brass together? A. Use a solder composed of copper 1 lb., zinc 1 lb. Or one of copper 32 lbs., zinc 29 lbs., tin 1 lb.

(27) G. T. asks: What is the easiest and quickest way to make small electrotypes? A. Mould the object, previously brushed over with plumbago, in a wax made of wax 3 parts, and stearin 1 part. Brush the mould with plumbago with a soft camel's hair brush. Then deposit a coating of copper by electricity as de-scribed on p. 405, vol. 32. Back the copper deposit with type metal.

(28) J. L., of Manchester, England, asks: What are the compositions and mode of use for japanning or black enameling tea trays, coal vases, etc.? A. To make good work, the metal plate should be primed with stiff size mixed with whiting. Clean the plate, and brush the priming on, let dry, polish with fine glass paper, and apply another coat; let dry, and then smooth with a moist sponge. For a black japan ground, use shellac varnish with ivory black, using finally, for a polishing coat, seed lac varnish. Harden the varnish by eans of a hot oven.

(29) J. W. B. asks: How do glass sign writers give a mirror-like finish to gold and silver letters? A. Use gold and silver leaf. Take a little fine isinglass, as much as will lie on a five cent piece, and dissolve in a little boiling water. Add as much alcohol as there is water, and strain through silk. Paint the letters on a sheet of paper with Brunswick black; fix the paper, with the writing reversed, on the glass. Use the isinglass solution as a mordant, laying it on with a camel's hair pencil, and then apply the gold leaf. Place the glass in a warm room; and when the gilding is dry, rub over with a piece of cotton wool. Pass a flat camel's hair brush, moistened with the isinglass solution, lightly over the gold letters; let the solution be hot for this operation. A second coating of gold leaf will improve the work.

(30) W. F. P. asks: How can I keep lice, etc., off geraniums? A. If the plants are in a greenhouse, fumigation with tobacco smoke is the best remedy. Tobaccostalk refuse can be used for the purpose,

(31) C. C. H. asks: How can Babbitt metal beunited with cast iron in a journal box, so that it will not be loose? Can it be soldered? A. You may solde our box with ordinary solder, and then pour the Babbitt metal. A better plan is to drill small holes at various angles in the box, then pour your Babbitt in, and it will be firm. It is not unusual to rivet the Babbitt by hammering it when cold.

or & Co., Lockport, N. Y.

For Solid Wrought iron Beams, etc., see advertisement. Address Union Iron Mills, Pittsburgh, Fa., for lithograph, etc.



J. H. P. will find something on images on the retina on p. 193, vol. 36.-R. S. B. will find something on iceb oats sailing faster than the wind on p. 107, vol. 36.-S. E. will find something on burning gas as fuel on p. 390, vol. 33.-J. O. C. will find an article on settingwagon axles on p. 299, vol. 34 .- J. J. K. will find an answer to his question as to a cannon on a car on p. 273, vol. 34. The pressure is greater on the bottom of the boiler by the weight of the contents than it is on the top.—S, will find a description of the art of taxider-my on p. 159, vol. 32.—C. C. S. will find that waterproof either alone or by mixing with something, such as sand glue will make a watertight joint between cork and or plumbago? A. Small crucibles cut out of pure causcloth. See p. 43, vol. 32.—A. F. B. can copper iron wire tic lime are sometimes used: but if not heated gradualby following the directions on p. 90, vol. 31. To nickel ly and uniformly, they are apt to crack. A crucible iron wire, see p. 186, vol. 34.-T. E. will find a recipe for moulded from lime, made plastic by the addition of waa liquid bronze for brass on p. 51, vol. 33.-J. A. R. will ter, will crack and fall to powder in the process of de- galvanized ironis produced by first tinning the sheet. | economical motor to drive a small lathe for turning

(8) E. C. M. says: I have a walking cane of whalebone about 1/2 inch thick; it was set with little ivory points to represent knots, but these are falling out and the bone cracks and splits. I know that this cannot be helped; but how can I prevent it from further breaking and scaling? A. Try impregnating it with a little warm glycerin.

(9) H. B. C. asks: Can I make a crucible

spawn when kept in vases or aquaria. In order to se precipitate. When this was completed, I immersed a cure a supply, the young healthy fish must be placed in reservoirs of considerable depth, in some places, at least, shaded with water lilies and constantly supplied with fresh water. When the spawn is deposited, it rises to the surface, and should then be collected and exposed to the sunlight until vivified by the heat. Care must be taken to collect the spawn as soon as it rises to the top of thewater, as otherwise it will soon be destroyed by the fishes themselves. The spawning season of the fish is usually in or about the month of May. The Chinese, who bring gold fish to great perfection. feed them with small balls of paste, which they scatter into the water occupied by the fish, who greedily devour them. Large quantities of gold fish spawn are annually collected along the banks of the "great river" (Yang-tse-kiang) by throwing mats or hurdles across the current.

(19) J. J. K. asks: What is used to color maps pink, yellow, green, and pale blue? A. Use water colors diluted to the required degree of paleness, with a little ox gall mixed with them.

(20) C. A. H. asks: How can I make a galvanizing surface smooth, and crystallize it after it comes from the kettle? A. The moiré appearance of

(32) W. H. asks: 1. How are slots in common wood screws cut? A. By special machinery. 2, Are they cut before the screws are threaded, or after? A. After they are threaded. 3. How many can be done in a day? A. It depends upon the size and the kind of achine used: from 2,000 to 20,000 per day.

(33) W. H. M. says: I have a common tiner's fire pot in which I burn common nut coal, as there is no charcoal to be had here. Placed horizontally through the fire pot are two sheet iron tubes about 11/4 inches in diameter, into which I place my soldering irons to be heated, I find, after heating them two or three times, that a scale forms on the copper tips, so that they have to be tinned several times a day. Can you tell me the cause of the scale forming on them, and how I can prevent it? A. Your soldering irons either get too hot, or else your solder is not fine enough.

(34) J. C. K. asks: Which is the most

wood, a steam engine or an electrical machine? One fibrous, or somewhat as if it were made up of very fine horse power will be sufficient. A. A steam engine is wires, more economical than an electric engine.

Which is the best oilstone, Arkansas or Turkey? A. It is a disputed point as to which is the best. Of Arkan-running 2% revolutions per minute, geared (with cog sas stones, the most transparent are usually the best.

solid cast steel cultivator shovels, and want the best re- olutions per minute, allowing the countershaft to remain cipe or preparation to harden them in so as to not warp at the same speed (56 revolutions), shall we consume and crack them, and to harden at as low a heat as possible? A. In tempering, all depends upon the nature of $\frac{1}{2}$ lars, we cannot answer this question positively; but the the steel. You will probably find brine at about 100° Fah. answer your purpose. The brine may be made fuel, if the change is made. of 36 lb. salt per gallon of water. Dip slowly edgewise and deep, and then hold the shovels still in the water.

(36) A. T. says I have a small steam pump just cause the mixture to heat. If the crack is large, manufacturers in our columns, caulk the mixture in; if not, a thin sheet plate may be screwed on in addition to using the mixture.

(37) C. R. H. says: 1. I have a casting of brittle type metal to which I wish to give a light brown it? A. Trya strong solution of sulphide of soda or po-tor each is given below. tassa in hot water. 2 Can you give me a good recipe (51) W. F. W. as for copperplating type metal? A. Clean the type perfectly, attachit by means of a copper wire to the negative or zinc pole of a strong battery, and immerse the type in a strong solution of sulphateof copper in water. Place a small sheet of clean copper in the sulphate of copper bath with the type (they must not touch), and connect this by means of a copper wire with the other pole of the battery. Under the above conditions, the type will speedily become covered with a film of metallic copper. Greatcare is necessary in cleaning the type to remove every trace of oil and rust, otherwise the deposition will be unequal or will drop off.

(38) P. L. D. asks: 1. Which size of locomotive cylinder is best for passenger traffic, everything else being equal, a cylinder 17 inches in diameter and of 22 inches stroke, or 16 inches in diameter and of 24 inches stroke? A. The 16 x 24 is generally considered preferable. 2. Which is the best for both freight and passenger traffic, everything else being equal, 16 inches diameter of cylinder, 24 inches stroke, and 5 feet diameter of driver, or 17 inches diameter of cylinder. 24 inches stroke, and 5½ feet diameter of driver? A. The 16 x 24 inch cylinders with 5 feet driving wheels.

(39) J. R. McN. says: I have read your article headed "Bell Metal." How are the metals melted and mixed? A. Use a blacklead crucible and a small crucible furnace with a good draught. Fuse the copper first, then add the nickel in small grains, and proceed as directed in the recipe. Stir the fused alloy from time to time with a stick of green wood.

(40) H. A. W. asks: 1. How fast is an iron turning lathe required torun when turning 1 inch wrought ety of fireclay, containing much sand and iron. It is iron? A. At about 130 revolutions per minute? 2. How probably worth about \$3.00 perton in New York.-J.R. fast should a wood turning lathe run when turning 2 B.-It is an impure clay, silicate of alumina.-D. A.inch hard wood? A. It may run at speeds varying from It contains mica and sesquioxide of iron.-F. E. S.-200 to 4,000 revolutions per minute, but about 1,000 is The soft argillaceous material contains clay, carbonate usual on an ordinary lathe.

(41) J. G. says: We have been making a few board rules for our own use, What is the best stuff to blacken the figures with? A. Use black japan varnish. It is usually applied with a stencil and brush.

(42) J. B. C. asks: What is the best method of testing the value of precious stones? A. Precious stones are usually recognized by color, shape, hardness, specific gravity, etc.

(43) S. & R. ask: Which would be the simplest and most durable way to raise a column of water, 1 foot in diameter, to the height of about 40 feet, and how much power would it take? A. We think a pump would be the cheapest and simplest device. The power will depend upon the amount of water lifted. The pressure per square inch will be about 17.5 lbs., exclusive of friction.

boat on the following plan: She is to be a double ender propeller, with 40 feet keel, of 13 feet beam and 5 feet hold, with a shaft running through the whole length and a wheel on each end, to be used as a ferryboat. Her draught 18 not to exceed 4 feet. Do you think a boat on that plan and those dimensions will succeed? Will she steer well, and will the engines work all right, the shaft running the whole length of the boat? A. We do not se any impracticable features in the plan, although we are not sure that it is the best that could be devised.

(45) M. B. says: 1. We have a well 10 feet deep and 106 feet from the house: we want to draw the water from this well by a cast iron cistern pump and a 1¼ inch lead pipe; this lead pipe has to make a bend up ward under the house of 10 feet to connect with pump.

(48) J. L. N. says: We have an engine with cylinder 28 inches in diameter and of 6 feet stroke, gearing) into a countershaft running 56 revolutions per (35) H. H. P. says: I am manufacturing minute. We increase the speed of our engine to 46 revmore or less fuel? A. Without knowing more particuchances are greatly in favor of a less consumption of

(49) W. D. C. says. I have a waterfall of 75 feet of a constant stream of water that will fill the space of 11/2 inches square. Is there any kind of arand have cracked one of the steam ports, which is of 'rangement by which I can get power from said waterfa'l, cast iron. Can I stop that crack so that it will not leak? and how much? A. Probably a water wheel will be the A. Fill the crack with fine cast iron filings well wetted most convenient machine for utilizing the power of the with water and sufficient sal ammoniac (powdered) to water. You will find the advertisements of reputable

(50) D. H. says: On p. 241, vol. 32, you give 6 angles for slats of a windmill, and there are but 5 sails or slats on each arm of the mill. Please explain. A. You cannot have examined the article very carefully, color. Is there any acid or pickle in which I could dip as the figure shows 6 slats or arms, and the proper angle

> (51) W. F. W. asks: What is the correct definition of the word compound, as applied to steam engines? Does it include simply that class in which the exhaust steam from one cylinder is utilized in a second, or would two high pressure engines, connected with a common shaft, and whose cranks were keyed at right angles with each other, also come under this head? A. Your first definition is the one commonly applied to compound or two-cylinder engines. The other describes what are usually called double engines.

> (52) R. E. McC. says: Some mechanics and I have disputed about a dead center in a revolving shaft. I claim that there is no such a point in existence; but we cannot agree on it, so I appeal to you for an answer. A. If you speak of the ordinary piston and crank connection, it is well known that there are several points called dead centers, for the reason that at these points a pressure applied to the piston produces no effect on the revolution of the shaft.

> (53) C. E. H. says: In small yacht engines, running as high as 300 revolutions per minute, can the feed pumps be advantageously worked from the crosshead as in slower moving engines, or is it necessary to work them slower by means of intermediate gearing? A. The pump can be worked at this speed, but it generally requires larger connections.

MINERALS, ETC.-Specimens have been received from the following correspondents, and examined, with the result stated:

J. E. S.-It is sandstone, containing crystals of millerite, a sulphide of nickel.—T. D. H.—It is a poor variof lime, and magnesia, colored with sesquioxide of iron and chromium, and mixed with sand. The other is Niagara limestone, and may be employed for building purposes or as a source of lime.-F. A. S.-It is a piece of

red jasper containing a small quantity of gold. It would require a quantitative analysis to determine the percentage of metal in the ore,-W. R. L.-It is graphite of good quality; graphite and plumbago are different names for the same substance.-J.-Your specimen contains manganese and iron,-C. J.-It is sesquioxide of iron with clay.

A. B. asks: How is the cut which runs around the tops and backs of violins made, and how is the wooden thread inserted in the same? How is the deep staining varnish put on, so that the grain of the wood may be seen?-H. A. asks: Please give a recipe for making paste for whitening leather military belts? (44) E. H. says: I am about to build a trunks of apple trees?—W. S. G. asks: How can I keep goats from peeling the hay into small blocks, to burn in a stove?

COMMUNICATIONS RECEIVED.

The Editor of the Scientific American acknowledges with much pleasure, the receipt of original papers and contributions upon the following subjects: On Electrical Experiments. By J. D. W. On the Steam Engine of the Future. By J. C. S. On Materialism and Spiritualism. By J. T. Also inquiries and answers from the following I.-C. H., Jr.-M. C.-C. Y. G.-C. C. D.-W. C. F.-R. B.-J. T. S.-C. H. W.-R. K.

HINTS TO CORRESPONDENTS. Correspondents whose inquiries fail to appear should m. If not then that, for good reasons, the Editor declines them. The address of the writer should always be given.

		Lock for sliding doors, R W. Semple	
Air compressor, G. H. Reynolds		Lounge reversible back, J. Sullivan	
Alkalies. recovering, J. W. Dixon Ash sifter, T. H. Badger		Lubricator, J. Harper Lumber, resawing, S. Putnam	
Axle boxes, making, G. A. Morse		Mailbag. F. R. Hunt.	
Baggage check guard. D. Untermeyer		Meat, fluid, J. L. Johnston	
Bale tie, B. Hempstead.		Meat, preserving, W. Stone	
Base ball, D. Hale		Middlings separator, G. T. Smith	
Bed bottom spring, Clements & Fowler		Miter box, J. M. Jones	187,712
Bed bottom, spring, J. F. Coder	187,816	Molding machine, S. Sawyer	
Bed bottom, spring, Gruwell & Newhouse	187,846	Mop wringer, C. A. Libby	
Bed bottom, spring, S. P. Olney	187,892	Motive power, J. Gross	187.845
Bedstead, invalid, J. Q. A. Sargent		Mowingmachine, F. Bramer (r)	7,540
Bee hive, A. H. Russell	187,911	Mowing machine, A. Stevens	
Billiard table, J. Marsden	187,878	Musical instrument sheet, P. B. Hoyt	187,860
Boat knee, D. True	187,939	Neck tie holder, F. Hovey	187,858
Bolting reel, Bennett & Smith	187,805	Neck yoke ring, C. Shuman	187,920
Box for case hardening, J. Greene (r)	7,533	Nutmeg grater, J. R. Hughes	187,861
Box nailing machine, A. P. Goodhue	187,843	Oatmeal machine, A. J. Ehrrichson (r)	7,542
Branding stamp, J. D. Trapp	187,785	Optic illusions, producing, C. W. & O. McGlennen	187,884
Broom hanger, W. Altick	187,797	Ore separator, W. M. Courtis	
Bung cutting machine, M. H. Wiley	187,951	Overalls, C. B. Moulton	
Burglar proof safe door, H. Herman	187,708	Packing, oil pump, T. B. Kelley	187,762
Butter box, N. Waterbury	187,945	Paint mill, J. F. Walter, Jr	187,788
Butter dish, A. C. Townsend		Pantaloons, S. Deutsch	
Can for oil, etc., J. G. Evenden (r)	7,531	Paper box, B. Osborn	187,895
Can, metallic, G. H. & J. H. Perkins.	187,902	Paper, damping, S. W. Wilder	
Car axle box, J. Elder	187,835	Pattern, composition, C. H. O. Radde	
Car brake, Laubach et al	187,718	Pavement, concrete, Stafford & Phillips	187,926
Car couplings, E. T. Hopkins	187,856	Pen and pencil case, C. M. Johnson (r)	
Car, safety, J. Johnson	187,761	Pen holder, D. H. Murphy	
Car springs, E. J. Horner (r)		Picture exhibitor, S. A. Peden	
Car starter, M. V. Drake		Pipe tongs, St. John, Robinson & Shepard	
Carstarter, E. R. Stillman		Plow, T. E. Kersh	
Car windows, casing for, C. H. Shattuck		Plow, T. Wiard.	
Card board, illustrated, G. T. Clare		Pocketbook fastener, J. H. Jantzen	
Chair commode, W. H. Bricker		Pocket book frame, T. Schimper	
Chair, folding, E. W. Vaill		Potato digger, etc., G. S. Pickett	
Chair, folding, J. A. Ware		Printing, mould for color, C. H. O. Radde	
Chair, nursery, E. S. French (r)		Printing press, Braunsdorf & Kaiser Printing press, C. H. O. Radde	
Cheese, making, L. B. Arnold			
Churn, O. Chase		Projectile, C. E. Ball Propeller, chain, W. B. Whiting	
Churn, S. E. Frazier		Pulley and shaft connection, R. H. St. John	
Churn, J. B. Sweetland Churn dasher, G. D. Woods		Pulley block chain, B. Arnold	
Churn, reciprocating, B. Janson		Pump, G. W. Holmes.	
		Pump, M. D. Temple	
Churn, reciprocating, J. M. Welch Churn, rotary, E. Rhoades		Pump, chain, W. H. Rutan	
Cloth, measuring, C. B. Allyn		Pump, W. H. Lang	
Coal, cutting, H. F. Brown.		Pump force, C. Green	
Coal, mining, C. L. Driesslein		Punch, hand, H. F. Osborne	
Coffee mill, D. W. Parker		Quilting frame, M. A. Mills	
Corn crib, C. E. Davis		Refrigerator, F. A. Thompson	
Corn harvester, J. Pleukharp		Retorts, preventing carbon in, W. Karr	
Corn sheller, J. M. Hawley			
Cotton cleaner, Taliaferro & Kline		Roofs, etc., watertight, E. Waters	
Cotton press, A. H. Chetlain		Saccharine syrup, H. B. Blackwell	187,747
Counterfeit coin detecter, J. A. Thompson		Saccharine solutions, making, A. Maubre	
Counterfeit coin, detecting, T. J. Towsey		Sample card, S. Gutmann	187,847
Cultivator, H. H. Pattee.		Sash balance, J. Houriet	187,857
Cups, cover for, H. H. C. Arnold	187,799	Saw gummer, J. M. Smith	
Curry comb, J. N. Rundle		Saw handle, crosscut, J. Neimeyer (r),	7,543
			7,543 187,870
Curry comb, J. N. Rundle	187,868	Saw handle, crosscut, J. Neimeyer (r) Sawmill carriages, operating, M. Lally Saw sharpening, P. D. Robbins	187,870 187,909
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp	187,868 187,918 187,867	Saw handle, crosscut, J. Neimeyer (r), Sawmill carriages, operating, M. Lally Saw sharpening, P. D. Robbins Saws, setting, D. W. Turner	187,870 187,909 187,940
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp. Curtain spring balance, A. H. Knapp. Curtain roller, extension, T. Nowell.	187,868 187,918 187,867 187,724	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally Saw sharpening, P. D. Robbins Saws, setting, D. W. Turner Scales, grain, P. H. Cherry	187,870 187,909 187,940 187,813
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp. Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring	187,868 187,918 187,867 187,724 187,829	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally Saw sharpening, P. D. Robbins Saws, setting, D. W. Turner Scales, grain, P. H. Cherry Scissors, reversible, T. A. Kelly	187,870 187,909 187,940 187,813 187,713
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang	187,868 187,918 187,867 187,724 187,829 187,802	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally Saw sharpening, P. D. Robbins Saws, setting, D. W. Turner Scales, grain, P. H. Cherry Scissors, reversible, T. A. Kelly Screw fastening, coffin, J. McCarthy	187,870 187,909 187,940 187,813 187,713 187,889
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door latch, W. A. Barlow	187,868 187,918 187,867 187,724 187,829 187,802 187,698	Saw handle, crosscut, J. Neimeyer (r), Sawmill carriages, operating, M. Lally Saw sharpening, P. D. Robbins Saws, setting, D. W. Turner Scales, grain, P. H. Cherry Scisors, reversible, T. A. Kelly Screw fastening, cofin, J. McCarthy Screw propeller, W. F. Tyson	187,870 187,909 187,940 187,813 187,713 187,889 187,941
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp Curtain roller, extension, T Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door latch, W. A. Barlow Door spring, G. E. Sutphen	187,868 187,918 187,867 187,724 187,829 187,802 187,698 187,738	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally Saw sharpening, P. D. Robbins Saws, setting, D. W. Turner Scales, grain, P. H. Cherry Scissors, reversible, T. A. Kelly Screw fastening, coffin, J. McCarthy Screw propeller, W. F. Tyson Screws, shaving heads of wood, H. A. Harvey (r)	187,870 187,909 187,940 187,813 187,813 187,713 187,889 187,941 7,534
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door latch, W. A. Barlow Door spring, G. E. Sutphen Draftsman's instrument, A. Langerfeld	187,868 187,918 187,867 187,724 187,829 187,802 187,698 187,738 187,738	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally Saw sharpening, P. D. Robbins Scales, grain, P. H. Cherry Scissors, reversible, T. A. Kelly Screw fastening, coffin, J. McCarthy Screw propeller, W. F. Tyson Screws, shaving heads of wood, H. A. Harvey (r) Seat, folding, A. B. Cogswell	187,870 187,909 187,940 187,813 187,713 187,889 187,941 7,534 187,817
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp Curtain roller, extension, T Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door latch, W. A. Barlow Door spring, G. E. Sutphen Draftsman's instrument, A. Langerfeld Earth auger, G. G. Collins	187,868 187,918 187,867 187,724 187,829 187,802 187,698 187,738 187,738 187,775	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally Saw sharpening, P. D. Robbins Scales, grain, P. H. Cherry Scissors, reversible, T. A. Kelly Screw fastening, coffin, J. McCarthy Screw propeller, W. F. Tyson Screws, shaving heads of wood, H. A. Harvey (r) Seed frill, J. H. Sale	187,870 187,909 187,940 187,813 187,813 187,813 187,889 187,941 7,534 187,817 187,913
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door latch, W. A. Barlow Door spring, G. E. Sutphen Draftsman's instrument, A. Langerfeld Earth auger, G. G. Collins Earth auger, I. Hoover	187,868 187,918 187,867 187,724 187,829 187,802 187,698 187,738 187,738 187,705 187,759	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally Saw sharpening, P. D. Robbins Saws, setting, D. W. Turner Scales, grain, P. H. Cherry Scissors, reversible, T. A. Kelly Screw fastening, coffin, J. McCarthy Screw propeller, W. F. Tyson Screws, shaving heads of wood, H. A. Harvey (r) Seat, folding, A. B. Cogswell Seed drill, J. H. Sale Seeder, O. Perry	187,870 187,909 187,940 187,813 187,713 187,889 187,941 7,534 187,817 187,913 187,901
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp. Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door latch, W. A. Barlow Door spring, G. E. Sutphen Draftsman's instrument, A. Langerfeld Earth auger, I. Hoover Egg carrier, G. D. Willis	187,868 187,918 187,867 187,724 187,829 187,802 187,698 187,738 187,738 187,755 187,759 187,952	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally	187,870 187,909 187,940 187,813 187,713 187,889 187,941 7,534 187,817 187,913 187,901 187,795
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door latch, W. A. Barlow Door spring, G. E. Sutphen Draftsman's instrument, A. Langerfeld Earth auger, G. G. Collins Earth auger, I. Hoover Egg carrier, G. D. Willis Egg carrier, P. M. Leprobon	187,868 187,918 187,867 187,724 187,829 187,802 187,698 187,738 187,738 187,738 187,755 187,755 187,755 187,872	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally Saw sharpening, P. D. Robbins Scales, grain, P. H. Cherry Scissors, reversible, T. A. Kelly Screw fastening, coffin, J. McCarthy Screw propeller, W. F. Tyson Screws, shaving heads of wood, H. A. Harvey (r) Seat, folding, A. B. Cogswell Seed drill, J. H. Sale Seeder, O. Perry Sewer cleaner, H. Allen Sewing machine, W. G. Cummins	187,870 187,909 187,940 187,813 187,713 187,889 187,941 7,534 187,817 187,913 187,913 187,901 187,795 187,822
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door latch, W. A. Barlow Door spring, G. E. Sutphen Draftsman's instrument, A. Langerfeld Earth auger, G. G. Collins Earth auger, I. Hoover Egg carrier, G. D. Willis Engine, vertical portable, J. S. Schoffeld	187,868 187,918 187,867 187,829 187,829 187,802 187,896 187,738 187,735 187,759 187,759 187,952 187,852 187,872 187,872	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally Saw sharpening, P. D. Robbins. Scales, grain, P. H. Cherry Scissors, reversible, T. A. Kelly. Screw fastening, coffin, J. McCarthy Screw propeller, W. F. Tyson. Screws, shaving heads of wood, H. A. Harvey (r) Seed drill, J. H. Sale. Seeder, O. Perry. Sewer cleaner, H. Allen. Sewing machine, W. G. Cummins. Sewing machine, W. Esty.	187,870 187,909 187,940 187,813 187,813 187,713 187,883 187,941 7,554 187,913 187,913 187,913 187,955 187,822 187,837
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp. Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door latch, W. A. Barlow Door spring, G. E. Sutphen Dora transmis instrument, A. Langerfeld Earth auger, G. G. Collins Egg carrier, G. D. Willis. Egg holder, P. M. Leprohon Engine, vertical portable, J. S. Schofield Extaust nozzle, T. Shaw	187,868 187,918 187,867 187,724 187,829 187,808 187,808 187,738 187,759 187,759 187,952 187,977 187,977 187,970	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally	187,870 187,909 187,940 187,813 187,813 187,713 187,883 187,941 7,554 187,913 187,913 187,913 187,913 187,913 187,921 187,795 187,822 187,837 187,837
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp. Curtain spring balance, A. H. Knapp Curtain spring balance, A. H. Knapp. Curtain roller, extension, T. Nowell. Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door latch, W. A. Barlow Door spring, G. E. Sutphen Draftsman's instrument, A. Langerfeld Earth auger, G. G. Collins Earth auger, I. Hoover Egg carrier, G. D. Willis. Egg holder, P. M. Leprohon Engine, vertical portable, J. S. Schoffeld Exhaust nozzle, T. Shaw Feed cooker, J. P. Martin	187,868 187,918 187,867 187,724 187,829 187,829 187,820 187,738 187,738 187,738 187,755 187,759 187,759 187,852 187,872 187,870 187,877	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally	187,870 187,909 187,909 187,940 187,813 187,783 187,941 7,534 187,913 187,913 187,901 187,955 187,874 187,874 187,830
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp Curtain roller, extension, T. Nowell. Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door latch, W. A. Barlow Dor spring, G. E. Sutphen Draftsman's instrument, A. Langerfeld Earth auger, G. G. Collins Earth auger, I. Hoover Egg conder, P. M. Leprohon Engine, vertical portable, J. S. Schofield. Exhaust nozzle, T. Shaw Feed cooker, J. P. Martin Fence, barbed, A. J. Nellis	187,868 187,918 187,867 187,724 187,829 187,638 187,638 187,759 187,759 187,759 187,872 187,872 187,877 187,877 187,877 187,877	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally Saw sharpening, P. D. Robbins. Saws, setting, D. W. Turner Scales, grain, P. H. Cherry Scissors, reversible, T. A. Kelly Screw fastening, coffin, J. McCarthy Screw propeller, W. F. Tyson Screws, shaving heads of wood, H. A. Harvey (r) Seat, folding, A. B. Cogswell Seed drill, J. H. Sale Seeder, O. Perry Sewing machine, W. G. Cummins Sewing machine, W. Esty Sewing machine, Leavitt & Drew Sewing machine, Leavitt & Drew Sewing machine, Leavitt & Drew Shade holder, B. B. Schneider	187,870 187,909 187,940 187,813 187,713 187,813 187,817 187,813 187,913 187,901 187,795 187,822 187,827 187,830 187,874
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp. Curtain spring balance, A. H. Knapp Curtain spring balance, A. H. Knapp. Curtain roller, extension, T. Nowell. Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door latch, W. A. Barlow Door spring, G. E. Sutphen Draftsman's instrument, A. Langerfeld Earth auger, G. G. Collins Earth auger, I. Hoover Egg carrier, G. D. Willis. Egg holder, P. M. Leprohon Engine, vertical portable, J. S. Schoffeld Exhaust nozzle, T. Shaw Feed cooker, J. P. Martin	187,868 187,918 187,867 187,724 187,829 187,829 187,638 187,838 187,875 187,755 187,952 187,952 187,952 187,870 187,873 187,873 187,873 187,882	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally	187,870 187,909 187,910 187,913 187,713 187,713 187,813 187,941 7,554 187,913 187,903 187,905 187,925 187,827 187,874 187,874 187,778 187,776
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp. Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door latch, W. A. Barlow Door spring, G. E. Sutphen Draftsman's instrument, A. Langerfeld Earth auger, G. G. Collins Egg carrier, G. D. Willis. Egg holder, P. M. Leprohon Engine, vertical portable, J. S. Schofield Extaut nozzle, T. Shaw Feed cooker, J. P. Martin. Fiber, etc., softening, W. Maynard	187,863 187,918 187,867 187,829 187,829 187,829 187,802 187,802 187,873 187,759 187,952 187,952 187,957 187,957 187,973 187,973 187,773 187,773	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally	187,870 187,909 187,940 187,818 187,818 187,713 187,818 187,941 7,551 187,915 187,901 187,955 187,820 187,827 187,837 187,874 187,785 187,778
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp Curtain spring balance, A. H. Knapp Curtain roller, extension, T Nowell. Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door latch, W. A. Barlow Door spring, G. E. Sutphen Draftsman's instrument, A. Langerfeld Earth auger, G. G. Collins Earth auger, I. Hoover Egg carrier, G. D. Willis Egg carrier, G. D. Willis Engine, vertical portable, J. S. Schofield Exhaust nozzle, T. Shaw Ffeed cooker, J. P. Martin Fiber, etc., softening, W. Maynard Fluting iron, T. E. King Fruit drier, L. Granger	187,863 187,918 187,867 187,724 187,829 187,802 187,638 187,839 187,759 187,759 187,759 187,759 187,875 187,877 187,877 187,877 187,877 187,733 187,882 187,875	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally	187,870 187,909 187,909 187,918 187,813 187,813 187,813 187,813 187,851 187,913 187,901 187,795 187,820 187,874 187,830 187,776 187,776 187,776 187,776 187,786
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door latch, W. A. Barlow Door spring, G. E. Sutphen Dora fixman's instrument, A. Langerfeld Earth auger, G. G. Collins Earth auger, I. Hoover Egg carrier, G. D. Wills Egg holder, P. M. Leprobon Engine, vertical portable, J. S. Schofield Exhaust nozzle, T. Shaw Fiede cooker, J. P. Martin Fiber, etc., softening, W. Maynard Filuting iron, T. E. King Fruit drier, L. Granger Fruit drier, automatic, J. H. Reynolds et al Fruit drier, A. Dickey	187,863 187,918 187,827 187,829 187,829 187,829 187,820 187,820 187,738 187,755 187,755 187,750 187,750 187,877 187,780 187,877 187,783 187,877 187,783 187,875 187,844 187,805	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally	187,870 187,909 187,910 187,913 187,813 187,813 187,913 187,913 187,931 187,935 187,935 187,935 187,837 187,837 187,837 187,836 187,776 187,776 187,786 187,786 187,867
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp. Curtain spring balance, A. H. Knapp. Curtain spring balance, A. H. Knapp. Curtain roller, extension, T. Nowell. Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang. Door latch, W. A. Barlow. Door spring, G. E. Sutphen. Draftsman's instrument, A. Langerfeld. Earth auger, G. G. Collins Earth auger, I. Hoover. Egg carrier, G. D. Willis. Egg holder, P. M. Leprohon Engine, vertical portable, J. S. Schofield. Exhaust nozzle, T. Shaw Ffeed cooker, J. P. Martin. Ffence, barbed, A. J. Nellis. Fibting iron, T. E. King. Fruit drier, L. Granger. Fruit drier, automatic, J. H. Reynolds et al. Fruit jar, A. Dickey	187,868 187,918 187,867 187,829 187,829 187,808 187,808 187,788 187,759 187,759 187,952 187,952 187,957 187,873 187,877 187,773 187,822 187,715 187,844 187,805 187,824	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally	187,870 187,909 187,909 187,910 187,818 187,713 187,981 187,913 187,913 187,913 187,913 187,913 187,923 187,822 187,824 187,830 187,778 187,946 187,957 187,956 187,957 187,95
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp Curtain spring balance, A. H. Knapp Curtain roller, extension, T Nowell. Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door latch, W. A. Barlow Door spring, G. E. Sutphen Draftsman's instrument, A. Langerfeld Earth auger, G. G. Collins Earth auger, I. Hoover Egg carrier, G. D. Willis Egg carrier, G. D. Willis Engine, vertical portable, J. S. Schofield Erhaust nozzle, T. Shaw Ffeed cooker, J. P. Martin Fiber, etc., softening, W. Maynard Fluiting iron, T. E. King Fruit drier, L. Granger Fruit drier, automatic, J. H. Reynolds et al Fruiting mill, C. T. Colby	187,868 187,918 187,867 187,872 187,829 187,829 187,829 187,738 187,759 187,755 187,755 187,755 187,872 187,872 187,873 187,873 187,882 187,715 187,882 187,825 187,825 187,827 187,822	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally	187,870 187,940 187,941 187,941 187,818 187,713 187,818 187,951 187,951 187,951 187,852 187,852 187,853 187,853 187,874 187,856 187,755 187,551 187,555 187
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp. Curtain spring balance, A. H. Knapp. Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door latch, W. A. Barlow Door apring, G. E. Sutphen Door spring, G. E. Sutphen Dorattsman's instrument, A. Langerfeld Earth auger, I. Hoover Egg carrier, G. D. Willis Egg holder, P. M. Leprohon Engine, vertical portable, J. S. Schofield Exthaust nozzle, T. Shaw Feed cooker, J. P. Martin Fiber, etc., softening, W. Maynard Filuting iron, T. E. King Fruit drier, automatic, J. H. Reynolds <i>et al.</i> Fruit jar, A. Dickey Furnace doorway, J. T. Smith	187,868 187,918 187,724 187,827 187,829 187,829 187,820 187,738 187,871 187,759 187,759 187,952 187,872 187,872 187,872 187,873 187,873 187,873 187,873 187,822 187,821 187,821	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally	187,870 187,940 187,940 187,913 187,813 187,813 187,913 187,913 187,915 187,925 187,874 187,874 187,876 187,776 187,786 187,786 187,785 187,897 187,785 187,785 187,897 187,785 187,897 187,897 187,897 187,897 187,897 187,897 187,897 187,897 187,897 187,897 187,897 187,897 187,897 187,897 187,897 187,897 187,897 187,995 187
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp. Curtain spring balance, A. H. Knapp. Curtain spring balance, A. H. Knapp. Curtain roller, extension, T. Nowell. Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang. Door latch, W. A. Barlow. Door spring, G. E. Sutphen. Draftsman's instrument, A. Langerfeld. Earth auger, G. G. Collins Earth auger, I. Hoover. Egg carrier, G. D. Willis. Egg holder, P. M. Leprohon Engine, vertical portable, J. S. Schoffeld. Exhaust nozzle, T. Shaw Feed cooker, J. P. Martin. Fence, barbed, A. J. Nellis. Fiber, etc., softening, W. Maynard. Ffuiting iron, T. E. King. Fruit drier, L. Granger. Fruit drier, automatic, J. H. Reynolds et al. Fruit jar, A. Dickey. Fulling mill, C. T. Colby Furnace doorway, J. T. Smith. Furnace heating, etc., W. Woolcock.	187,863 187,918 187,867 187,829 187,829 187,829 187,808 187,783 187,857 187,759 187,952 187,952 187,957 187,873 187,873 187,873 187,882 187,814 187,820 187,821 187,821 187,821	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally	187,870 187,909 187,909 187,940 187,813 187,713 187,913 187,913 187,913 187,901 187,901 187,953 187,950 187,755 187,837 187,874 187,876 187,786 187,876 187,876 187,775 187,697 187,774
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp Curtain spring balance, A. H. Knapp Curtain spring balance, A. H. Knapp Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door latch, W. A. Barlow Door spring, G. E. Sutphen Draftsman's instrument, A. Langerfeld Earth auger, G. G. Collins Earth auger, G. G. Collins Earth auger, G. D. Willis Egg carrier, G. D. Willis Egg chider, P. M. Leprohon Engine, vertical portable, J. S. Schofield. Exhaust nozzle, T. Shaw Ffeed cooker, J. P. Martin Fiber, etc., softening, W. Maynard Fluting iron, T. E. King Fruit drier, L. Granger Fruit drier, automatic, J. H. Reynolds <i>et al.</i> Fruit jar, A. Dickey Furnace doorway, J. T. Smith Furnaces, heating, etc., W. Woolcock Gas as fuel, utilizing, W. Hainsworth	187,868 187,918 187,867 187,829 187,829 187,829 187,820 187,820 187,759 187,759 187,759 187,952 187,952 187,872 187,872 187,872 187,873 187,875 187,822 187,821 187,820 187,829 187,829 187,829 187,829 187,829 187,829 187,829	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally	187,870 187,909 187,909 187,910 187,818 187,713 187,818 187,911 187,951 187,951 187,873 187,874 187,874 187,874 187,874 187,876 187,755 187,751 187,757
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp. Curtain spring balance, A. H. Knapp. Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door latch, W. A. Barlow Door spring, G. E. Sutphen Dorattsman's instrument, A. Langerfeld Earth auger, G. G. Collins Eagrarrier, G. D. Willis Egg carrier, G. D. Willis Egg holder, P. M. Leprohon Engine, vertical portable, J. S. Schofield Exthaust nozzle, T. Shaw Feed cooker, J. P. Martin. Fiber, etc., softening, W. Maynard. Filuting iron, T. E. King Fruit drier, L. Granger Fruit drier, automatic, J. H. Reynolds et al. Fruit jar, A. Dickey Furnace doorway, J. T. Smith. Furnaces doorway, J. T. Smith Furnaces, heating, etc., W. Woolcock Gas gas a fuel, utilizing, W. Hainsworth Gas making, S. C. Salisbury	187,868 187,918 187,827 187,827 187,829 187,829 187,829 187,738 187,738 187,759 187,755 187,755 187,752 187,872 187,872 187,872 187,873 187,882 187,873 187,882 187,884 187,882 187,884 187,884 187,882 187,884 187,884 187,883 187,884 187,883 187,883 187,834 187,834 187,834 187,834 187,734	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally. Saw sharpening, P. D. Robbins	187,870 187,940 187,941 187,818 187,818 187,818 187,818 187,951 187,951 187,952 187,873 187,874 187,874 187,874 187,876 187,755 187,877 187,850 187,751 187,751 187,751 187,751 187,751 187,751 187,751 187,751 187,751 187,751 187,751 187,751 187,751 187,751 187,751 187,751 187,751 187,850 187
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp Curtain spring balance, A. H. Knapp Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door latch, W. A. Barlow Door spring, G. E. Sutphen Dorafsman's instrument, A. Langerfeld Earth auger, G. G. Collins Earth auger, I. Hoover Egg carrier, G. D. Wills Egg holder, P. M. Leprohon Engine, vertical portable, J. S. Schofield Exhaust nozzle, T. Shaw Feed cooker, J. P. Martin Fence, barbed, A. J. Nellis Fiber, etc., softening, W. Maynard Fruit drier, L. Granger Fruit drier, automatic, J. H. Reynolds <i>et al.</i> Fruit drier, automatic, J. H. Reynolds <i>et al.</i> Fruit drier, S. Smith Furance for brick kins, J. Old Furances, heating, etc., W. Woolcock Gas ratevit cover, P. Munzinger	187,868 187,918 187,867 187,829 187,829 187,829 187,808 187,705 187,705 187,705 187,759 187,952 187,975 187,973 187,874 187,873 187,874 187,874 187,882 187,814 187,820 187,824 187,824 187,824 187,824 187,824 187,825	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally	187,870 187,909 187,909 187,910 187,813 187,917 187,913 187,913 187,917 187,913 187,901 187,913 187,901 187,921 187,921 187,827 187,827 187,826 187,826 187,755 187,687 187,755 187,687 187,755 187,755 187,755 187,687 187,755 187,855 187,755 187,755 187,755 187,855 187,755 187,755 187,855 187,957 187,755 187,857 187,857 187,957 187,957 187,857 187,957 187,957 187,857 187,957 187,755 187,757 187,757 187,757 187,757 187,757 187,757 187,757 187,757 187,757 187,757 187,757 187,757 187,757 187,757 187,757 187,757 187,757 187,757 187,857 187
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp. Curtain spring balance, A. H. Knapp. Curtain spring balance, A. H. Knapp. Curtain roller, extension, T. Nowell. Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang. Door latch, W. A. Barlow. Door spring, G. E. Sutphen. Draftsman's instrument, A. Langerfeld. Earth auger, G. G. Collins Earth auger, I. Hoover. Egg carrier, G. D. Willis. Egg holder, P. M. Leprohon Engine, vertical portable, J. S. Schofield. Exhaust nozzle, T. Shaw Ffeed cooker, J. P. Martin. Ffence, barbed, A. J. Nellis. Fibting iron, T. E. King. Fruit drier, L. Granger Fruit drier, automatic, J. H. Reynolds <i>et al.</i> Fruit gar, A. Dickey. Fulling mill, C. T. Colby Furnace doorway, J. T. Smith. Furnace for brick kilns, J. Old. Furnaces, heating, etc., W. Woolcock. Gas as a fuel, utilizing, W. Hainsworth. Gas, making, S. C. Salisbury. Gas retort cover, P. Munzinger. Gas shade holder, T. F. McGann.	187,868 187,918 187,867 187,829 187,829 187,829 187,829 187,802 187,852 187,759 187,755 187,755 187,757 187,780 187,872 187,872 187,873 187,882 187,875 187,821 187,821 187,821 187,821 187,821 187,821 187,821 187,755	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally	187,870 187,909 187,909 187,910 187,818 187,713 187,818 187,931 187,931 187,931 187,931 187,951 187,873 187,874 187,874 187,874 187,876 187,778 187,874 187,876 187,785 187,874 187,875 187,874 187,825 187,825 187,721 187,669 187,757 187,653 187,854 187,854 187,855 187,854 187,855 187,955 187,855 187
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp. Curtain spring balance, A. H. Knapp. Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door latch, W. A. Barlow Door spring, G. E. Sutphen Doraftsman's instrument, A. Langerfeld Earth auger, G. G. Collins Egg carrier, G. D. Willis. Egg holder, P. M. Leprohon Engine, vertical portable, J. S. Schoffeld Exthaust nozzle, T. Shaw Feed cooker, J. P. Martin. Fence, barbed, A. J. Nellis. Fruit drier, L. Granger Fruit drier, L. Granger Fruit drier, L. Granger Furnaces doorway, J. T. Smith Furnaces doorway, J. T. Smith Furnaces, heating, etc., W. Woolcock Gas as a fuel, utilizing, W. Mainsworth. Gas, making, S. C. Salisbury Gas erbort cover, P. Murzinger Gas shade holder, T. F. McGann Gate, N. M. Bell.	187,868 187,918 187,867 187,829 187,829 187,829 187,829 187,759 187,759 187,759 187,952 187,975 187,872 187,877 187,870 187,877 187,873 187,882 187,755 187,882 187,855 187,827 187,829 187,763 187,763 187,763	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally. Saw sharpening, P. D. Robbins	187,870 187,909 187,940 187,813 187,713 187,813 187,713 187,911 187,913 187,913 187,913 187,913 187,913 187,874 187,874 187,874 187,874 187,874 187,874 187,874 187,794 187,794 187,794 187,795 187,794 187,794 187,794 187,794 187,794 187,794 187,794 187,794 187,794 187,794 187,794 187,794 187,794 187,825 187,824 187,824 187,824 187,824 187,824 187,824 187,824 187,824 187,824 187,824 187,824 187,824 187,825 187,824 187,824 187,824 187,825 187,824 187,825 187,824 187,825 187,824 187,825 187,825 187,824 187,825 187,826 187,825 187,825 187,825 187,826 187,825 187,826 187,826 187,826 187,826 187,826 187,826 187,826 187,826 187,826 187,827 187,826 187
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp Curtain spring balance, A. H. Knapp Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door latch, W. A. Barlow Door apring, G. E. Sutphen Dorafsman's instrument, A. Langerfeld Earth auger, G. G. Collins Earth auger, I. Hoover Egg carrier, G. D. Wills Egg holder, P. M. Leprobon Engine, vertical portable, J. S. Schofield Exthaust nozzle, T. Shaw Feed cooker, J. P. Martin Fence, softening, W. Maynard Fiber, etc., softening, W. Maynard Fruit drier, L. Granger Fruit drier, automatic, J. H. Reynolds <i>et al</i> Fruit drier, automatic, J. H. Reynolds <i>et al</i> Furance doorway, J. T. Smith Furance for brick kins, J. Old Furances, heating, etc., W. Woolcock Gas, making, S. C. Sallsbury Gass, moulding, S. Oakman	187,863 187,918 187,872 187,829 187,829 187,829 187,829 187,820 187,755 187,755 187,755 187,871 187,871 187,871 187,873 187,874 187,872 187,820 187,824 187,820 187,824 187,824 187,755	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally	187,870 187,909 187,909 187,910 187,813 187,917 187,913 187,917 187,913 187,917 187,913 187,901 187,913 187,921 187,921 187,827 187,827 187,826 187,826 187,826 187,725 187,627 187,627 187,725 187,637 187,725 187,637 187,725 187,725 187,637 187,725 187,725 187,725 187,637 187,725 187,725 187,725 187,637 187,725 187,725 187,725 187,725 187,725 187,826 187,725 187,826 187,725 187,826 187,725 187,827 187
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp. Curtain spring balance, A. H. Knapp. Curtain spring balance, A. H. Knapp. Curtain roller, extension, T. Nowell. Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang. Door latch, W. A. Barlow. Door spring, G. E. Sutphen. Dorafsma's instrument, A. Langerfeld. Earth auger, G. G. Collins Earth auger, I. Hoover. Egg carrier, G. D. Wills. Egg bolder, P. M. Leprohon Engine, vertical portable, J. S. Schoffeld. Exhaust nozzle, T. Shaw Feed cooker, J. P. Martin Fence, barbed, A. J. Nellis. Fiber, etc., softening, W. Maynard Fruit drier, L. Granger. Fruit drier, automatic, J. H. Reynolds et al. Fruit drier, A. Dickey Fulling mill, C. T. Colby Furnace doorway, J. T. Smith Furnace for brick kilns, J. Old. Furnaces, heating, etc., W. Woolcock. Gas as a fuel, utilizing, W. Hainsworth. Gas, making, S. C. Salisbury Gass, moulding, S. Oakman Glove, etc., fastening, T. Masac.	187,863 187,918 187,827 187,829 187,829 187,829 187,829 187,808 187,738 187,759 187,759 187,952 187,952 187,952 187,875 187,870 187,872 187,873 187,882 187,827 187,844 187,820 187,821 187,823 187,824 187,823 187,824 187,823 187,824 187,823 187,755 187,734	Saw handle, crosscut, J. Neimeyer (r). Saw mill carriages, operating, M. Lally. Saw sharpening, P. D. Robbins. Saws, setting, D. W. Turner. Scales, grain, P. H. Cherry. Scissors, reversible, T. A. Kelly. Screw fastening, coffin, J. McCarthy. Screw propeller, W. F. Tyson. Screw, shaving heads of wood, H. A. Harvey (r) Seat, folding, A. B. Cogswell. Seed drill, J. H. Sale. Seeder, O. Perry. Sewer cleaner, H. Allen. Sewing machine, W. G. Cummins. Sewing machine, W. Esty. Sewing machine, W. Esty. Sewing machine, W. Esty. Sewing machine, Leavitt & Drew. Sewing machine, W. Esty. Shade holder, B. B. Schneider. Shade holder, B. B. Schneider. Shawi strap handle, W. Kirk. Sheet metal, spinning, J. E. Wells. Sheet metal, spinning, J. E. Wells. Sheet af fastener, S. Brumley. Shoe last fastener, S. Brumley. Shoe tip, S. Prior. State, J. Adair. State pencil sharpener, T. B. Merrill. Stall floor, G. S. Young. Starw jointing machine, Hazard & Greenwood. Steam holler, G. M. Kraft. Steam holler, B. Warker. Stove shelf attachment, S. L. Yourtee.	187,870 187,940 187,940 187,813 187,941 7,531 187,913 187,913 187,913 187,901 187,953 187,953 187,897 187,873 187,874 187,874 187,876 187,876 187,757 187,697 187,757 187,663 187,841 187,744
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp. Curtain spring balance, A. H. Knapp. Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door spring, G. E. Sutphen Doratsman's instrument, A. Langerfeld Earth auger, G. G. Collins Egg carrier, G. D. Willis. Egg holder, P. M. Leprohon Engine, vertical portable, J. S. Schofield. Exthaust nozzle, T. Shaw Feed cooker, J. P. Martin Fiber, etc., softening, W. Maynard. Fluting iron, T. E. King Fruit drier, automatic, J. H. Reynolds et al. Fruit drier, automatic, J. H. Reynolds et al. Frunace for brick kilns, J. Old. Furnaces, heating, etc., W. Woolcock Gas enter cover, P. Muzinger Gas making, S. C. Salisbury Gas making, S. Oakman Glove, etc., fastening, T. Masac Grain separator, J. D. Van Dusen	187,868 187,918 187,867 187,829 187,829 187,829 187,829 187,829 187,829 187,827 187,759 187,759 187,952 187,759 187,872 187,871 187,875 187,875 187,827 187,827 187,829 187,739 187,739	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally. Saw sharpening, P. D. Robbins	187,870 187,940 187,941 187,818 187,713 187,818 187,713 187,817 187,817 187,951 187,951 187,852 187,852 187,852 187,852 187,854 187,854 187,854 187,854 187,854 187,857 187,659 187,659 187,854 187,854 187,854 187,854 187,854 187,854 187,855 187,854 187,857 187,865 187,847 187,857 187,957 187
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp. Curtain spring balance, A. H. Knapp. Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Door latch, W. A. Barlow Door apring, G. E. Sutphen Dora fixman's instrument, A. Langerfeld. Earth auger, G. G. Collins Earth auger, I. Hoover Egg carrier, G. D. Willis Egg holder, P. M. Leprobon Engine, vertical portable, J. S. Schofield Exthaus nozzle, T. Shaw Feed cooker, J. P. Martin Fonce, barbed, A. J. Nellis Fruit drier, L. Granger Fruit drier, L. Granger Fruit drier, automatic, J. H. Reynolds <i>et al.</i> Fruit jar, A. Dickey Furnace for brick kins, J. Old Furnaces, heating, etc., W. Woolcock. Gas, making, S. C. Sallsbury Gas shade holder, T. F. McGann Gata, N. M. Bell. Grashopper killer, C. Hoos	187,863 187,918 187,872 187,872 187,829 187,829 187,829 187,829 187,870 187,759 187,871 187,759 187,872 187,917 187,873 187,873 187,872 187,872 187,872 187,820 187,755	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally. Saw sharpening, P. D. Robbins Scales, grain, P. H. Cherry Scissors, reversible, T. A. Kelly Screw fastening, coffin, J. McCarthy Screw propeller, W. F. Tyson Screws, shaving heads of wood, H. A. Harvey (r) Seat, folding, A. B. Cogswell Seed drill, J. H. Sale. Seed drill, J. H. Sale. Seed drill, J. H. Sale. Seed drill, J. H. Sale. Seewing machine, W. G. Cummins. Sewing machine, Leavitt & Drew. Shawl strap handle, W. Kirk Shave strap handle, W. Kirk Sheet metal, spinning, J. E. Wells. Shoe last fastener, S. Brumley Shoe tip, S. Prior. Skate, J. Adair Stare jointing machine, Hazard & Greenwood Steam boiler, G. K. Kraft Stove polish, D. W. Parker Stove sheif atchement, S. L. Yourtee Store sheif atchement, S. L. Yourtee Stupp extractor, J. & W. H. H. Hollen	187,870 187,909 187,909 187,910 187,813 187,917 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,921 187,755 187,837 187,837 187,837 187,836 187,755 187,637 187,755 187,637 187,755 187,637 187,755 187,755 187,637 187,755 187,754 187,754 187,859 187,857 187,857 187,857 187,744 187,709
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp Curtain spring balance, A. H. Knapp Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door latch, W. A. Barlow Door spring, G. E. Sutphen Dorafsman's instrument, A. Langerfeld Earth auger, G. G. Collins Earth auger, I. Hoover Egg carrier, G. D. Willis Egg bolder, P. M. Leprohon Engine, vertical portable, J. S. Schofield Exhaust nozzle, T. Shaw Feed cooker, J. P. Martin Feed cooker, J. P. Martin Fered cooker, J. P. Martin Freed, softening, W. Maynard Fluting iron, T. E. King Fruit drier, L. Granger Fruit drier, L. Granger Fruit drier, A. Dickey Fulling mill, C. T. Colby Furnace doorway, J. T. Smith Furnace for brick kilns, J. Old. Furnaces, heating, etc., W. Woolcock Gas as a fuel, utilizing, W. Hainsworth. Gas, making, S. C. Salisbury Gas shade holder, T. F. McGann Glass, moulding, S. Oakman Glove, etc., fastening, T. Masac Grashopper killer, C. Hoos Grashopper killer, C. Hoos Grashopper killer, C. Hoos	187,863 187,918 187,827 187,829 187,636 187,738 187,759 187,759 187,759 187,759 187,757 187,757 187,787 187,787 187,787 187,787 187,787 187,821 187,844 187,820 187,821 187,821 187,821 187,823 187,824 187,823 187,824 187,825 187,825 187,735 187,735 187,735 187,735	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally	187,870 187,940 187,940 187,813 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,921 187,923 187,827 187,827 187,826 187,826 187,826 187,826 187,827 187
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp. Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door spring, G. E. Sutphen Doratsth, W. A. Barlow Door spring, G. E. Sutphen Draftsman's instrument, A. Langerfeld Earth auger, G. G. Collins Earth auger, I. Hoover Egg carrier, G. D. Willis. Egg holder, P. M. Leprohon Engine, vertical portable, J. S. Schofield Exhaust nozzle, T. Shaw Feed cooker, J. P. Martin Fiber, etc., softening, W. Maynard. Fluting iron, T. E. King Fruit drier, L. Granger Fruit drier, L. Granger Fulling mill, C. T. Colby Furnace for brick kilns, J. Old. Furnaces, heating, etc., W. Woolcock Gas retort cover, P. Muzinger Gas staet holder, T. F. McGann Gate, N. M. Bell. Glass, moulding, S. Oakman Glove, etc., fastening, T. Masac Grain separator, J. D. Van Dusen Grain separator, J. D. Van Dusen Grain separator, J. D. Van Dusen Grain separator, J. D. Van Dusen Grainding machine, Owen <i>et al.</i> Grinding machine, Owen <i>et al.</i> Grinding machine, Owen <i>et al.</i> Grinding machine, Owen <i>et al.</i> Grinding machine, Owen <i>et al.</i> Gun carriage, T. O'Bryan	187,868 187,918 187,872 187,872 187,829 187,829 187,829 187,802 187,759 187,759 187,759 187,952 187,952 187,952 187,873 187,873 187,873 187,873 187,873 187,874 187,875 187,822 187,813 187,823 187,823 187,823 187,825 187,734 187,735 187,735 187,736 187,735 187,736 187,735 187,739 187,739 187,739 187,739	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally. Saw sharpening, P. D. Robbins	187,870 187,909 187,909 187,910 187,818 187,713 187,818 187,931 187,931 187,931 187,931 187,951 187,873 187,874 187,873 187,874 187,874 187,874 187,874 187,874 187,874 187,874 187,875 187,756 187,757 187,659 187,757 187,659 187,757 187,855 187,875 187,771 187,875 187,875 187,775 187,875 187,775 187,875 187,775 187,875 187,875 187,775 187,875 187,775 187,875 187
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp. Curtain spring balance, A. H. Knapp. Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Door latch, W. A. Barlow Door apring, G. E. Sutphen Dora fixman's instrument, A. Langerfeld. Earth auger, G. G. Collins Earth auger, I. Hoover Egg carrier, G. D. Willis. Egg holder, P. M. Leprohon Engine, vertical portable, J. S. Schofield. Exthaust nozzle, T. Shaw Feed cooker, J. P. Martin Fiber, etc., softening, W. Maynard Fluting iron, T. E. King Fruit drier, L. Granger Fruit drier, L. Granger Fruit drier, automatic, J. H. Reynolds <i>et al.</i> Fruit jar, A. Dickey Furnaces doorway, J. T. Smith Furnaces, heating, etc., W. Woolcock Gas as fuel, utilizing, W. Hainsworth Gas, making, S. C. Salisbury Gassenduct, J. Martin Gate, N. M. Bell. Grashopper killer, C. Hoos Grinding machine, Owen <i>et al.</i> Grashopper killer, C. Hoos Grinding machine, Owen <i>et al.</i> Gun carriage, T. O'Bryan Hand rubber, H. Carter	187,863 187,918 187,872 187,829 187,626 187,724 187,829 187,626 187,738 187,759 187,871 187,755 187,757 187,757 187,757 187,877 187,877 187,873 187,875 187,875 187,820 187,820 187,821 187,821 187,823 187,824 187,755 187,824 187,756 187,756 187,756 187,756 187,756 187,756 187,756 187,756 187,756 187,756 187,879 187,855 187,870 187,855 187,870	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally. Saw sharpening, P. D. Robbins. Saws, setting, D. W. Turner. Scales, grain, P. H. Cherry. Scissors, reversible, T. A. Kelly. Screw fastening, coffin, J. McCarthy. Screw propeller, W. F. Tyson. Screws, shaving heads of wood, H. A. Harvey (r) Seat, folding, A. B. Cogwell. Seed drill, J. H. Sale. Seed drill, J. H. Sale. Seed drill, J. H. Sale. Seed drill, J. H. Sale. Seewing machine, W. G. Cummins. Sewing machine, Leavitt & Drew. Sewing machine, Leavitt & Drew. Shaw strap handle, W. Kirk. Sheet metal, spinning, J. E. Wells. Shoe last fastener, S. Brumley. Shoe tast, spinning, L. W. Austin (r). Shoe tast, anaking, L. W. Austin (r). Shoe to fastener, T. B. Merrill. State pool: sharpener, T. B. Merrill. State biler, G. K. Kraft. Steam biler, G. K. Kraft. Stove sheif atchement, S. L. Yourtee. Stove sheif atchement, S. L. Yourtee. Stove sheif atchement, S. L. Yourtee. Store sheif atchement, S. L. Yourtee. Straw cutter, L. Winslow Stump extractor, J. & W. H. Hollen. Table caster, H. A. Dirkes (r). Teapot, E. Oliver Ticket case, F. R. Wolfinger.	187,870 187,909 187,909 187,910 187,813 187,911 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,921 187,725 187,837 187,837 187,837 187,837 187,836 187,736 187,736 187,736 187,755 187,637 187,755 187,637 187,755 187,637 187,755 187,755 187,755 187,755 187,755 187,757 187,857 187,757 187,857 187,757 187,757 187,857 187,757 187
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp Curtain spring balance, A. H. Knapp Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Door latch, W. A. Barlow Door spring, G. E. Sutphen Dora farms's instrument, A. Langerfeld Earth auger, G. G. Collins Earth auger, I. Hoover Egg carrier, G. D. Wills Egg bolder, P. M. Leprohon Engine, vertical portable, J. S. Schofield Exhaust nozzle, T. Shaw Feed cooker, J. P. Martin Fence, barbed, A. J. Nellis Fiber, etc., softening, W. Maynard Fruit drier, L. Granger Fruit drier, L. Granger Fruit drier, automatic, J. H. Reynolds <i>et al.</i> Fruit drier, A. Dokkey Fulling mill, C. T. Colby Furance doorway, J. T. Smith Furance for brick kins, J. Old. Furances, heating, etc., W. Woolcock Gas as a fuel, utilizing, W. Hainsworth. Gas, making, S. C. Salisbury Gas shade holder, T. F. McGann Glass, moulding, S. Oakman Glove, etc., fastening, T. Masac Grashopper killer, C. Hoos Granshopper killer, C. Hoos Grashopper killer, G. Hoos Grashopper killer, G. Hoos Grashopper killer, G. Hoos Grashopper killer, C. Hoos.	187,863 187,918 187,829 187,829 187,829 187,829 187,808 187,738 187,807 187,759 187,952 187,952 187,957 187,780 187,873 187,873 187,873 187,874 187,874 187,874 187,820 187,821 187,824 187,825 187,825 187,825 187,825 187,825 187,825 187,825 187,825 187,825 187,825 187,825 187,825 187,825 187,825 187,825 187,825 187,825 187,725 187,829 187,725 187,829 187,725 187,829 187,727 187,829	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally	187,870 187,909 187,940 187,813 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,923 187,935 187,873 187,873 187,874 187,876 187,876 187,876 187,876 187,876 187,872 187,874 187,874 187,874 187,774 187,781 187,893 187,731 187,893 187,734 187,733 187,733 187,574 187,573 187,574 187,575 187,574 187,574 187,575 187,574 187,575 187,574 187,575 187,574 187,575 187,574 187,575 187,575 187,574 187,575 187,575 187,574 187,575 187
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp. Curtain spring balance, A. H. Knapp. Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring. Disinfecting compound, H. J. Bang Door spring, G. E. Sutphen. Doratstman's instrument, A. Langerfeld. Earth auger, G. G. Collins Eagth auger, I. Hoover Egg carrier, G. D. Wills. Egg holder, P. M. Leprohon Engine, vertical portable, J. S. Schofield. Exchaust nozzle, T. Shaw Feed cooker, J. P. Martin. Fence, barbed, A. J. Nellis. Fruit drier, at Neuroscience, Schofield. Fruit drier, L. Granger Fruit drier, L. Granger Fruit drier, automatic, J. H. Reynolds et al. Fruit jar, A. Dickey. Fulling mill, C. T. Colby Furnace for brick kilns, J. Old. Furnaces, heating, etc., W. Woolcock. Gas as a fuel, utilizing, W. Hainsworth. Gas, making, S. C. Salisbury. Gas retort cover, P. Murainger Gas etaeh holder, T. F. McGann. Glove, etc., fastening, T. Masac Grain separator, J. D. Van Dusen. Grasshopper killer, C. Hoos. Grinding machine, Owen et al. Grun carriage, T. O'Bryan Hand rubber, H. Carter. Harnow, I. Shupe	187,868 187,918 187,872 187,872 187,829 187,829 187,802 187,802 187,759 187,759 187,759 187,759 187,952 187,975 187,759 187,872 187,871 187,873 187,873 187,875 187,875 187,822 187,815 187,825 187,734 187,735 187,735 187,735 187,735 187,736 187,735 187,735 187,735 187,739 187,739 187,739 187,739 187,739 187,739 187,739 187,739 187,851 187,739	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally. Saw sharpening, P. D. Robbins	187,870 187,909 187,909 187,909 187,910 187,813 187,713 187,813 187,931 187,931 187,931 187,932 187,837 187,837 187,837 187,837 187,837 187,837 187,837 187,853 187,757 187,659 187,757 187,659 187,757 187,659 187,757 187,659 187,757 187,851 187,754 187,757 187,853 187,874 187,794 187,793 187,793 187,793 187,793 187,793 187,793 187,793 187,793 187,793 187,793 187,793 187,793 187,793 187,793 187,793 187,793 187,793 187,853 187,793 187,853 187,793 187,853 187,793 187,855 187,855 187
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp. Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Door latch, W. A. Barlow Door apring, G. E. Sutphen Dora fixman's instrument, A. Langerfeld. Earth auger, G. G. Collins Earth auger, I. Hoover Egg carrier, G. D. Willis Egg bolder, P. M. Leprohon Engine, vertical portable, J. S. Schofield. Exthaust nozzle, T. Shaw Feed cooker, J. P. Martin Fiber, etc., softening, W. Maynard Fluting iron, T. E. King Fruit drier, L. Granger Fruit drier, automatic, J. H. Reynolds <i>et al.</i> Fruit drier, automatic, J. H. Reynolds <i>et al.</i> Fruit jar, A. Dickey Furnaces doorway, J. T. Smith Furnaces, heating, etc., W. Woolcock Gas as fuel, utilizing, W. Hainsworth Gas, making, S. C. Salisbury Gas shade holder, T. F. McGann Glove, etc., fastening, T. Masac Grain separator, J. D. Van Dusen Granshopper killer, C. Hoos Grinding machine, Owen <i>et al.</i> Gun carriage, T. O'Bryan Harrow, I. Shupe Harrow, I. Shupe Harrow, Totary, W. T. Nichols	187,863 187,918 187,872 187,872 187,872 187,872 187,872 187,875 187,755 187,755 187,757 187,871 187,871 187,872 187,871 187,872 187,872 187,872 187,872 187,872 187,872 187,872 187,872 187,872 187,872 187,873 187,875 187,875 187,755 187,756 187,756 187,756 187,756 187,756 187,756 187,756 187,757 187,855 187,879 187,855 187,879 187,859	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally. Saw sharpening, P. D. Robbins	187,870 187,940 187,941 187,813 187,713 187,813 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,921 187,822 187,837 187,837 187,837 187,836 187,738 187,736 187,736 187,736 187,755 187,637 187,755 187,637 187,759 187,754 187,759 187,754 187,759 187,754 187,759 187,754 187,759 187,754 187,759 187,754 187,759 187,754 187,759 187,754 187,759 187,754 187,759 187,754 187,759 187,754 187,759 187,754 187,759 187,754 187,759 187,754 187,759 187,754 187,759 187,754 187,759 187,754 187,759 187,755 187,759 187,755 187,857 187,759 187,755 187,857 187,755 187,857 187,957 187
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door latch, W. A. Barlow Door spring, G. E. Sutphen Dora fixman's instrument, A. Langerfeld Earth auger, G. G. Collins Earth auger, I. Hoover Egg carrier, G. D. Wills Egg bolder, P. M. Leprobon Engine, vertical portable, J. S. Schofield Exhaust nozzle, T. Shaw Feed cooker, J. P. Martin Fence, barbed, A. J. Nellis Fiber, etc., softening, W. Maynard Fruit drier, L. Granger Fruit drier, L. Granger Fruit drier, automatic, J. H. Reynolds et al Fruit ar, A. Dickey. Fulling mill, C. T. Colby Furance for brick kins, J. Old Furances, heating, etc., W. Woolcock Gas as a fuel, utilizing, W. Hainsworth Gas, making, S. C. Salisbury Gas shade holder, T. F. McGann Glove, etc., fastening, T. Masac Grashopper killer, C. Hoss Grashopper killer, C. Hoss Grashopper killer, C. Hoss Grann separator, J. D. Van Dusen Grashopper killer, C. Hooss Grinding machine, Owen et al. Gun carriage, T. O'Bryan Harrow, I. Shupe Harrow, vetel, W. Whipple	187,863 187,918 187,829 187,829 187,829 187,829 187,802 187,803 187,705 187,759 187,952 187,952 187,957 187,871 187,873 187,874 187,874 187,874 187,874 187,874 187,820 187,824 187,765 187,874 187,765 187,765 187,770 187,789 187,775 187,789 187,775 187,789 187,775 187,789 187,775 187,879 187,770 187,890 187,834 187,834 187,834 187,834	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally. Saw sharpening, P. D. Robbins	187,870 187,940 187,941 187,813 187,713 187,813 187,813 187,951 187,951 187,951 187,827 187,827 187,827 187,827 187,826 187,755 187,627 187,757 187,629 187,754 187,754 187,824 187,754 187,824 187,757 187,824 187,757 187,824 187,757 187,824 187,757 187,824 187,757 187,824 187,757 187,824 187,757 187,824 187,757 187,824 187,757 187,824 187,757 187,825 187,757 187,825 187,824 187,757 187,825 187,757 187,857 187
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp Curtain spring balance, A. H. Knapp Curtain spring balance, A. H. Knapp Curtain spring balance, A. H. Knapp Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Door latch, W. A. Barlow Door spring, G. E. Sutphen Dorafsman's instrument, A. Langerfeld Earth auger, G. G. Collins Earth auger, I. Hoover Egg carrier, G. D. Wills Egg bolder, P. M. Leprohon Engine, vertical portable, J. S. Schoffeld Exhaust nozzle, T. Shaw Feed cooker, J. P. Martin Friber, etc., softening, W. Maynard Fruit drier, L. Granger Fruit drier, L. Granger Fruit drier, A. Dickey Fulling mill, C. T. Colby Furnace doorway, J. T. Smith Furnace doorway, J. T. Smith Gas as a fuel, utilizing, W. Hainsworth Gas, making, S. C. Salisbury Gas shade holder, T. F. McGann Glove, etc., fastening, T. Masac Grain separator, J. D. Van Dusen Grain separator, J. D. Bran Harrow, wheel, W. Whiple Harrow, Kheel, W. Whiple Harrow, Kae, W. Whiple Harrow, Kae, W. Whiple Harvester, F. Bramer (r)	187,868 187,918 187,872 187,872 187,872 187,872 187,872 187,872 187,875 187,755 187,755 187,755 187,775 187,772 187,872 187,877 187,780 187,877 187,780 187,877 187,780 187,872 187,873 187,882 187,873 187,882 187,875 187,875 187,875 187,783 187,785 187,785 187,785 187,785 187,785 187,785 187,785 187,785 187,785 187,785 187,785 187,785 187,789 187,875 187,789 187,879 187,879 187,879 187,879 187,879 187,879 187,879 187,879 187,879 187,879 187,879 187,879 187,879 187,879	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally	187,870 187,940 187,941 187,813 187,713 187,813 187,813 187,951 187,951 187,951 187,827 187,827 187,827 187,827 187,826 187,755 187,627 187,757 187,629 187,754 187,754 187,824 187,754 187,824 187,757 187,824 187,757 187,824 187,757 187,824 187,757 187,824 187,757 187,824 187,757 187,824 187,757 187,824 187,757 187,824 187,757 187,824 187,757 187,825 187,757 187,825 187,824 187,757 187,825 187,757 187,857 187
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp. Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door akth, W. A. Barlow Door spring, G. E. Sutphen Dorattsman's instrument, A. Langerfeld. Earth auger, G. G. Collins Eagrarier, G. D. Willis Egg carrier, G. D. Willis Egg carrier, G. D. Willis Feg cooker, J. P. Martin Fiber, etc., softening, W. Maynard Fibuting iron, T. E. King Fruit drier, L. Granger Fruit drier, L. Granger Furit equ automatic, J. H. Reynolds et al. Fruit drier, automatic, J. H. Reynolds et al. Furnaces doorway, J. T. Smith Furnaces doorway, J. T. Smith Furnaces doorway, J. T. Smith Gas retort cover, P. Murzinger Gas shade holder, T. F. McGann Gates, N. M. Bell Glass, moulding, S. Oakman Glove, etc., fastening, T. Masac Grain separator, J. D. Van Dusen Grainseparator, J. D. Van Dusen Gransching, C. Colby Harrow, wheel, W. Whipple Harrow, wheel, W. Whipple Harrow, K. A. Campbell	187,868 187,918 187,867 187,829 187,829 187,829 187,829 187,820 187,827 187,827 187,759 187,759 187,759 187,759 187,872 187,872 187,872 187,872 187,873 187,882 187,875 187,827 187,827 187,829 187,827 187,829 187,827 187,829 187,827 187,829 187,827 187,829 187,827 187,829 187,827 187,829 187	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally	187,870 187,909 187,909 187,910 187,813 187,713 187,813 187,911 187,931 187,913 187,901 187,913 187,901 187,873 187,874 187,875 187,874 187,876 187,776 187,876 187,776 187,776 187,776 187,776 187,776 187,776 187,776 187,776 187,776 187,777 187,876 187,784 187,785 187,826 187,784 187,784 187,784 187,785 187,784 187,785 187,784 187,785 187,784 187,785 187,784 187,785 187,857 187,858 187,785 187,858 187,785 187,858 187,785 187,858 187
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door latch, W. A. Barlow Door apring, G. E. Sutphen Dora fixman's instrument, A. Langerfeld Earth auger, G. G. Collins Earth auger, I. Hoover Egg carrier, G. D. Wills Egg bolder, P. M. Leprobon Engine, vertical portable, J. S. Schofield Exthaust nozzle, T. Shaw Feed cooker, J. P. Martin Fence, softening, W. Maynard Fiber, etc., softening, W. Maynard Fruit drier, L. Granger Fruit drier, L. Granger Fruit drier, automatic, J. H. Reynolds <i>et al.</i> . Fruit drier, automatic, J. H. Reynolds <i>et al.</i> . Furance doorway, J. T. Smith Furances, heating, etc., W. Woolcock Gas, making, S. C. Sallsbury Gas retort cover, P. Munzinger Gass, moulding, S. Oakman Glove, etc., fastening, T. Masac Grain separator, J. D. Van Dusen Grain separator, J. D. Van Dusen Grain separator, J. D. Van Dusen Grain separator, J. D. Van Dusen Granschoper killer, C. Hoos Grinding machine, Owen <i>et al.</i> Gun carriage, T. O'Bryan Harrow, I. Shupe Harrow, K. Barmer (r) Harvester, F. Bramer (r) Harvester rake, H. Brildenthal, Jr	187,863 187,918 187,829 187,829 187,829 187,829 187,829 187,801 187,705 187,759 187,952 187,952 187,973 187,871 187,873 187,874 187,874 187,874 187,874 187,820 187,820 187,755 187,820 187,755 187,820 187,755 187,765 187,765 187,770 187,789 187,770 187,789 187,770 187,890 187,891 187,834 187,765 187,834 187,765 187,834 187,765 187,834 187,765 187,834 187,765 187,834 187,765 187,834 187,765 187,834 187,765 187,834 187,765 187,834 187,765 187,834 187,765 187,834 187,765 187,834 187,765 187,834 187,765 187,835 187,765 187,834 187,765 187,834 187,765 187,834 187,765 187,765 187,834 187,765 187,835 187,765 187,765 187,857 187,765 187,857 187,857 187,857 187,857 187,765 187,857 187,85	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally. Saw sharpening, P. D. Robbins	187,870 187,940 187,941 187,813 187,713 187,813 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,921 187,827 187,827 187,827 187,827 187,826 187,827 187,827 187,827 187,827 187,827 187,827 187,827 187,827 187,827 187,827 187,827 187,827 187,827 187,827 187,827 187,827 187,828 187,721 187,823 187,721 187,823 187,729 187,729 187,729 187,729 187,828 187,729 187,828 187,729 187,828 187,729 187,828 187,729 187,828 187,729 187,828 187,829 187,828 187,829 187,828 187,829 187,825 187
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door apring, G. E. Sutphen Door apring, G. E. Sutphen Dorafsma's instrument, A. Langerfeld Earth auger, G. G. Collins Earth auger, I. Hoover Egg carrier, G. D. Wills Egg bolder, P. M. Leprohon Engine, vertical portable, J. S. Schofield Exhaust nozzle, T. Shaw Feed cooker, J. P. Martin Fence, barbed, A. J. Nellis Fluting iron, T. E. King Fruit drier, L. Granger Fruit drier, L. Granger Fruit drier, A. Dickey Fulling mill, C. T. Colby Furnace doorway, J. T. Smith Furnace doorway, J. T. Smith Gas as a fuel, utilizing, W. Halasworth. Gas, making, S. C. Salisbury Gas shade holder, T. F. McGann Gasshouding, S. Oakman Glove, etc., fastening, T. Masac Grain separator, J. D. Van Dusen Granshopper killer, C. Hoos Grashopper killer, C. Hoos Grashopper killer, C. Hoos Granding machine, Owen et al Gun carriage, T. O'Bryan Harrow, rotary, W. T. Nichols Harrow, wheel, W. Whipple Harrow, wheel, H. Bridenthal, Jr Harvester, Re, H. Bridenthal, Jr Harvester reel, Coddington & Kennedy	187,863 187,918 187,829 187,829 187,829 187,829 187,829 187,801 187,850 187,759 187,759 187,952 187,952 187,975 187,872 187,873 187,873 187,882 187,874 187,873 187,827 187,844 187,905 187,827 187,821 187,821 187,821 187,823 187,824 187,824 187,825 187,824 187,825 187,826 187,735 187,735 187,735 187,735 187,739 187,739 187,739 187,839 187,839 187,839 187,839 187,839	Saw handle, crosscut, J. Neimeyer (r). Saw mill carriages, operating, M. Lally. Saw sharpening, P. D. Robbins. Saws, setting, D. W. Turner. Sclasors, reversible, T. A. Kelly. Screw fastening, coffin, J. McCarthy. Screw fastening, coffin, J. McCarthy. Screw propeller, W. F. Tyson. Screws, shaving heads of wood, H. A. Harvey (r) Seat, folding, A. B. Cogswell. Seed drill, J. H. Sale. Seeder, O. Perry. Sewer cleaner, H. Allen. Sewing machine, W. G. Cummins. Sewing machine, W. Esty. Sewing machine, W. Esty. Sewing machine, Leavitt & Drew. Sewing machine, U. Esty. Shade holder, B. Schneider. Shave strap handle, W. Kirk. Sheet metal, spinning, J. E. Wells. Shoe last fastener, S. Brumley. Shoe inals, making, L. W. Austin (r). Shoe tip, S. Prior. State, J. Adair. State pencil sharpener, T. B. Merrill. Stall foor, G. S. Young. Stove shelf attachment, B. L. Yourtee. Stove shelf attachment, S. L. Yourtee. Strump extractor, J. & W. H. H. Hollen. Table caster, H. A. Dirkes (r). Teapot, E. Oliver. Ticket case, F. R. Wolfinger Ticket case, F. R. Wolfinger Ticket case, F. R. Wolfinger Ticket case, F. R. Wolfinger Ticket case, F. R. Wolfinger Tive tightener, T. A. Frakes. Toaster and broiler, J. E. Wickham. Tobacco, liquids in, Smith & Messinger. Turbine water wheel, M. V. Drake. Type mould, T. Mason. Umbrella tip cup, T. G. Holer. Under waist, S. F. Follette Valvegear, engine, J. C. II. Stut.	187,870 187,940 187,941 187,813 187,713 187,813 187,713 187,941 7,534 187,991 187,991 187,993 187,991 187,893 187,894 187,895 187,874 187,876 187,876 187,876 187,776 187,876 187,776 187,776 187,776 187,776 187,776 187,776 187,776 187,776 187,776 187,775 187,876 187,784 187,785 187,826 187,827 187,784 187,784 187,785 187,784 187,785 187,784 187,785 187,784 187,793 187,793 187,793 187,935 187,838 187,839 187,838 187,8
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp. Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door akth, W. A. Barlow Door spring, G. E. Sutphen Dorattsman's instrument, A. Langerfeld Earth auger, G. G. Collins Eagrarier, G. D. Willis Egg carrier, G. D. Willis Egg choler, P. M. Leprohon Engine, vertical portable, J. S. Schofield Exhaust nozzle, T. Shaw Feed cooker, J. P. Martin Friber, etc., softening, W. Maynard Fluting iron, T. E. King Fruit drier, L. Granger Fruit drier, automatic, J. H. Reynolds et al. Fruit drier, a conduct, J. H. Reynolds et al. Fruit jar, A. Dickey Furnaces doorway, J. T. Smith Furnaces doorway, J. T. Smith Gas retort cover, P. Murzinger Gas shade holder, T. F. McGann Gate, N. M. Bell. Glass, moulding, S. Oakman Glove, etc., fastening, T. Masac Grinding machine, Owen et al. Gun carriage, T. O. Disyan Harrow, wheel, W. Whipple Harrow, wheel, W. Whipple Harrow, rotary, W. T. Nichols Harrow, wheel, W. Whipple Harrow, rete, Rasmer (r) Harvester ræke, H. H. Bridenthal, Jr Harvester ræke, C. Colling & Kannedy Harvow, wheel, W. Whipple Harvow, wheel, W. Whipple Harvow, tree, C. Codington & Kennedy Harvower, A. Campbell Harvester ræke, H. H. Bridenthal, Jr Harvester ræke, H. H. Bridenthal, Jr Harvester ræke, C. Codington & Kennedy Harvester ræke, H. B. Taylor	187,868 187,918 187,867 187,829 187,829 187,829 187,829 187,829 187,829 187,827 187,759 187,952 187,759 187,759 187,872 187,750 187,872 187,872 187,873 187,882 187,875 187,827 187,828 187,827 187,829 187,741 7,539 187,749 187,749 187,749	Saw handle, crosscut, J. Neimeyer (r). Sawmill carriages, operating, M. Lally. Saw sharpening, P. D. Robbins. Saws, setting, D. W. Turner. Sclasors, reversible, T. A. Kelly. Screw fastening, cofin, J. McCarthy. Screw propeller, W. F. Tyson. Screws, shaving heads of wood, H. A. Harvey (r) Seat, folding, A. B. Cogwell. Seed drill, J. H. Sale. Seed drill, J. H. Sale. Seed drill, J. H. Sale. Seed drill, J. H. Sale. Seewing machine, W. G. Cummins. Sewing machine, Leavitt & Drew. Sewing machine, Leavitt & Drew. Shaw strap handle, W. Kirk. Sheet metal, spinning, J. E. Wells. Shoe last fastener, S. Brumley. Shoe tast fastener, S. Brumley. Shoe tast, spinning, L. W. Austin (r). Shoe to fast making, L. W. Austin (r). Shoe to fast Marker, S. Brumley. Stare jointing machine, Hazard & Greenwood Steam boiler, G. M. Kraft. Stove sheif attachment, S. L. Yourtee. Stove sheif attachment, S. L. Yourtee. Stove sheif attachment, S. L. Yourtee. Straw cutter, L. Winslow Stump extractor, J. & W. H. Hollen. Table caster, H. A. Dirkes (r). Teapot, E. Oliver Ticket case, F. R. Wolfinger. Ticket case, F. R. Wolfinger. Tire tightener, T. A. Frakes. Toaster and broiler, J. E. Wickbam. Tobacco, liquids in, Smith & Messinger. Tube welding attachment, C. Tolmie. Turbine water wheel, M. V. Drake. Type mould, T. Mason. Umbrella tip cup, T. G. Hojer. Under waist, S. F. Follette. Valve gear engine, J. C. H. Stut. Valve gear engine, S. H. Wheeler	187,870 187,940 187,940 187,813 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,921 187,923 187,874 187,874 187,886 187,886 187,886 187,897 187,824 187,829 187,724 187,829 187,824 187,729 187,729 187,729 187,729 187,829 187
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Door latch, W. A. Barlow Door spring, G. E. Sutphen Dora spring, G. E. Sutphen Dora spring, G. E. Sutphen Dora spring, G. G. Collins Earth auger, I. Hoover Egg carrier, G. D. Wills Egg bolder, P. M. Leprohon Engine, vertical portable, J. S. Schofield Exhaust nozzle, T. Shaw Feed cooker, J. P. Martin Fence, barbed, A. J. Nellis Fiber, etc., softening, W. Maynard Fruit drier, L. Granger Fruit drier, L. Granger Fruit drier, A. Dickey Fulling mill, C. T. Colby Furnace doorway, J. T. Smith Furnace doorway, J. T. Smith Gass as a fuel, utilizing, W. Halasworth. Gas, making, S. C. Salisbury Gasshade holder, T. F. McGann Glass, moulding, S. Oakman Glove, etc., fastening, T. Masac Grain separator, J. D. Van Dusen Granshopper killer, C. Hoos Grashopper killer, C. Hoos Granding machine, Owen et al Gun carriage, T. O'Bryan Harrow, rotary, W. T. Nichols Harrow, Wheel, W. Whipple Harrow, wheel, W. Whipple Harrow, rake, H. Bridenthal, Jr Harvester, reel, Coddington & Kennedy	187,868 187,918 187,872 187,872 187,829 187,829 187,829 187,872 187,870 187,870 187,871 187,780 187,871 187,870 187,872 187,917 187,872 187,874 187,872 187,874 187,874 187,875 187,874 187,785 187,874 187,785 187,785 187,785 187,785 187,785 187,785 187,785 187,785 187,785 187,785 187,785 187,785 187,785 187,785 187,785 187,785 187,789 187,789 187,789 187,789 187,789 187,870 187,870 187,870 187,870 187,870 187,870 187,870 187,870 187,871 187,875 187,870 187,870 187,871 187,875 187,870 187,875 187,775 197,775 197,775 197,775 197,775 197,775 197,775 197,775 197,775 197,775 197,77	Saw handle, crosscut, J. Neimeyer (r). Saw mill carriages, operating, M. Lally	187,870 187,940 187,940 187,813 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,923 187,930 187,755 187,827 187,826 187,826 187,826 187,827 187,827 187,827 187,827 187,827 187,827 187,827 187,827 187,827 187,827 187,827 187,827 187,827 187,823 187,824 187,823 187,823 187,824 187,825 187,824 187,825 187,824 187,825 187,824 187,825 187,824 187,825 187,824 187,825 187,824 187,825 187,824 187,825 187,824 187,824 187,824 187,824 187,824 187,824 187,824 187,824 187,824 187,824 187,824 187,824 187,824 187,825 187
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door latch, W. A. Barlow Door spring, G. E. Sutphen Dorafsman's instrument, A. Langerfeld Earth auger, G. G. Collins Earth auger, I. Hoover Egg carrier, G. D. Wills Egg bolder, P. M. Leprohon Engine, vertical portable, J. S. Schofield Exhaust nozzle, T. Shaw Feed cooker, J. P. Martin Feed cooker, J. P. Martin Feed cooker, J. P. Martin Freed cooker, J. P. Martin Fruit giron, T. E. King Fruit drier, L. Granger Fruit drier, L. Granger Fruit drier, A. Dickey Fulling mill, C. T. Colby Furnace doorway, J. T. Smith Furnace doorway, J. T. Smith Furnace for brick kins, J. Old Furnaces, heating, etc., W. Woolcock Gas as a fuel, utilizing, W. Halasworth. Gas, making, S. C. Salisbury Glass, moulding, S. Oakman Glove, etc., fastening, T. Masac Grain separator, J. D. Van Dusen Grasshopper killer, C. Hoos Granshopper killer, C. Hoos Grainding machine, Owen et al Gun carriage, T. O'Bryan Harrow, rotary, W. T. Nichols Harrow, wheel, W. Whipple Harrow, wheel, W. Whipple Harrow, wheel, W. Whipple Harrow, take, H. Bridenthal, Jr Harvester, A. Campbell Harvester, F. Bramer (r) Harvester, Ream (r) Harvester, Ream (r) Harvester, S. Canbell Hartow, Heel, W. Hipple Hartow, J. Shupe Hartow, J. Shupe Hartow, D. F. Roach Har pouncing machine, E. B. Taylor Hay loader, D. F. Roach Har Jouncing machine, E. B. Taylor Hay loader, D. F. Roach Hoe fastening, J. H. Starnees	187,868 187,918 187,829 187,829 187,829 187,829 187,829 187,829 187,850 187,759 187,759 187,952 187,952 187,952 187,871 187,872 187,873 187,872 187,873 187,827 187,827 187,824 187,827 187,824 187,829 187,829 187,829 187,829 187,829 187,829 187,829 187,734 187,735 187,735 187,739 187,739 187,839 187,839 187,739 187,839 187,739 187,839 187,739 187,839 187,739 187,839 187,739 187,739 187,839 187,739 187,839 187,739 187,739 187,839 187,739 187,739	Saw handle, crosscut, J. Neimeyer (r). Saw mill carriages, operating, M. Lally. Saw sharpening, P. D. Robbins. Saws, setting, D. W. Turner. Scissors, reversible, T. A. Kelly. Screw fastening, coffin, J. McCarthy. Screw propeller, W. F. Tyson. Screws, shaving heads of wood, H. A. Harvey (r) Seat, folding, A. B. Cogswell. Seed drill, J. H. Sale. Seeder, O. Perry. Sewer cleaner, H. Allen. Sewing machine, W. G. Cummins. Sewing machine, W. Esty. Sewing machine, W. Esty. Sewing machine, Leavitt & Drew. Sewing machine, U. Esty. Shade holder, B. B. Schneider. Shav strap handle, W. Kirk. Sheet metal, spinning, J. E. Wells. Shoe last fastener, S. Brumley. Shoe in fastener, S. Brumley. Shoe in fastener, S. Brumley. Store jointing machine, Hazard & Greenwood. State jointing machine, Hazard & Greenwood. State store, etc., A. de Beaumont. Store car. J. H. Prentice. Store polish, D. W. Parker. Store shelf attachment, S. L. Yourtee. Store shelf attachment, S. L. Yourtee. Store shelf attachment, S. L. Yourtee. Straw cuter, L. Winslow Stump extractor, J. & W. H. H. Hollen. Ticket case, F. R. Wolfinger Ticket case, F. R. Wolfinger Ticket case, F. R. Wolfinger Ticket case, F. R. Wolfinger Ticket case, F. R. Wolfinger Tive tightener, T. A. Frakes. Tobacco, liquids in, Smith & Messinger. Turbine water wheel, M. V. Drake. Type mould, T. Mason. Umbrella tip cup, T. G. Holjer. Under waist, S. F. Follette. Vapor burner, F. A. Sawyer. Vegetable cutter, K. Sawyer. Vegetable cutter, Keitz & Elichholzer.	187,870 187,909 187,909 187,813 187,713 187,813 187,713 187,813 187,911 187,813 187,913 187,913 187,913 187,913 187,822 187,837 187,874 187,874 187,874 187,874 187,876 187,776 187,776 187,776 187,776 187,776 187,776 187,776 187,776 187,777 187,784 187,776 187,775 187,697 187,757 187,697 187,757 187,826 187,757 187,826 187,757 187,697 187,757 187,826 187,757 187,757 187,757 187,826 187,757 187,757 187,757 187,757 187,757 187,757 187,757 187,757 187,757 187,757 187,757 187,757 187,757 187,826 187,751 187,793 187,793 187,937 187,825 187,839 187,839 187,835 187,837 187,853 187,853 187,851 187,851 187,851 187,851 187,851 187,851 187,851 187,851 187,851 187,851 187,851 187,851 187,851 187,851 187,851 187,851 187,851 187,857 187
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp. Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Door akth, W. A. Barlow Door akth, W. A. Barlow Door akth, W. A. Barlow Door agning, G. E. Sutphen Doratsman's instrument, A. Langerfeld Earth auger, I. Hoover Egg carrier, G. D. Willis Egg bolder, P. M. Leprobon Engine, vertical portable, J. S. Schofield Exthaut nozzle, T. Shaw Feed cooker, J. P. Martin Fence, softening, W. Maynard Fiber, etc., softening, W. Maynard Fruit drier, L. Granger Fruit drier, L. Granger Fruit drier, automatic, J. H. Reynolds <i>et al.</i> Fruit drier, automatic, J. H. Reynolds <i>et al.</i> Fruit jar, A. Dickey Furnace for brick kins, J. Old Furnaces, heating, etc., W. Woolcock. Gas, making, S. C. Sallsbury Gas retort cover, P. Munzinger Grain separator, J. D. Van Dusen Grain separator, J. D. Sarban Harrow, Totary, W. T. Nichols Harrow, Totary, W. T. Nichols Harrow, wheel, W. Whipple Harrow, wheel, W. Whipple Harrow, Take, F. Bramer (r) Harvester rake, H. H. Bridenthal, Jr Harvester rake, H. H. Bridenthal, Jr Harvester r	187,868 187,918 187,872 187,872 187,829 187,829 187,829 187,802 187,875 187,759 187,952 187,952 187,952 187,952 187,759 187,872 187,873 187,873 187,873 187,874 187,875 187,874 187,875 187,825 187,825 187,825 187,826 187,827 187,826 187,827 187,826 187,827 187,826 187,827 187,826 187,827 187,826 187,827 187,826 187,826 187,826 187,826 187,827 187,826 187,827 187,826 187,827 187,826 187,826 187,826 187,826 187,826 187,826 187,826 187,826 187,826 187,826 187,826 187,826 187,826 187,826 187,827 187,826 187,85	Saw handle, crosscut, J. Neimeyer (r). Saw mill carriages, operating, M. Lally. Saw sharpening, P. D. Robbins. Saws, setting, D. W. Turner. Sclasors, reversible, T. A. Kelly. Screw fastening, coffin, J. McCarthy. Screw propeller, W. F. Tyson. Screws, shaving heads of wood, H. A. Harvey (r) Seat, folding, A. B. Cogwell. Seed drill, J. H. Sale. Seed drill, J. H. Sale. Seed drill, J. H. Sale. Seed drill, J. H. Sale. Seewing machine, W. G. Cummins. Sewing machine, Leavitt & Drew. Sewing machine, Leavitt & Drew. Sewing machine, Leavitt & Drew. Shaw strap handle, W. Kirk. Sheet metal, spinning, J. E. Wells. Shoe last fastener, S. Brumley. Shoe tast fastener, S. Brumley. Shoe tip, S. Prior. Skate, J. Adair Stare jointing machine, Hazard & Greenwood Steam biler, G. K. Kraft. Stove polish, D. W. Parker Stove shelf attachment, S. L. Yourtee. Stove shelf attachment, S. L. Yourtee. Stup er, J. H. Dirkes(r). Teapot, E. Oliver Ticket case, F. R. Wolfinger Ticket case, F. R. Wolfinger Tubine water wheel, M. V. Drake. Type mould, T. Mason Umbrella tip cup, T. G. Hojer Valvegear, engine, J. C. H. Stut. Valvegear, engine, S. H. Wheeler Vapor burner, F. A. Sawyer. Vegetable cutter, Reitz & Eichholzer Vegetable cutter, Reitz & Eichholzer	187,870 187,940 187,940 187,813 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,921 187,923 187,874 187,874 187,886 187,886 187,886 187,826 187,826 187,826 187,827 187,826 187,827 187,826 187,827 187,827 187,828 187,829 187,826 187,827 187,826 187,827 187,826 187,827 187,826 187,827 187,826 187,827 187,826 187,827 187,826 187,827 187,826 187,827 187,826 187,827 187,826 187,827 187,826 187,827 187,826 187,827 187,827 187,827 187,826 187,827 187
Curry comb, J. N. Rundle. Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp. Curtain spring balance, A. H. Knapp. Curtain roller, extension, T. Nowell. Desk, drawer, E. N. Doring. Disinfecting compound, H. J. Bang. Door latch, W. A. Barlow. Door spring, G. E. Sutphen. Doratsma's instrument, A. Langerfeld. Earth auger, G. G. Collins. Earth auger, I. Hoover. Egg carrier, G. D. Wills. Egg holder, P. M. Leprohon Engine, vertical portable, J. S. Schofield. Exhaust nozzle, T. Shaw Feed cooker, J. P. Martin. Fence, barbed, A. J. Nellis. Fluting iron, T. E. King. Fruit drier, L. Granger. Fruit drier, L. Granger. Fruit drier, automatic, J. H. Reynolds <i>et al.</i> Fruit drier, a Granger. Fruit drier, S. Schlisbury. Gas sa fuel, utilizing, W. Hainsworth. Gas, making, S. C. Salisbury. Gas shade holder, T. F. McGann. Glass, moulding, S. Oakman. Glove, etc., fastening, T. Masac. Grain separator, J. D. Van Dusen. Grasshopper killer, C. Hoos. Granseparker, M. Shipe. Harrow, I. Shupe. Harrow, I. Shupe. Harrow, I. Shupe. Harrow, I. Shupe. Harrow, I. Shupe. Harrow, rotary, W. T. Nichols. Harrow, I. Shupe. Harrow, trap, M. T. Nichols. Harrow, trap, M. Shupe. Harrow, trap, M. Shupe. Harrow, trap, M. T. Nichols. Harrow, taty, W. T. Nichols. Harrow, the H. Carter. Harroest rimming, G. F. Eberhard Harrow, I. Shupe. Harrow, the H. Bratres. Hoisting apparatus, J. J. Endres. Horse banket clasp. A. Z. Neff. Horse bank rake, Lufkin & Allen.	187,863 187,972 187,869 187,724 187,829 187,636 187,738 187,759 187,759 187,952 187,952 187,957 187,759 187,952 187,973 187,872 187,873 187,874 187,874 187,874 187,874 187,820 187,874 187,821 187,824 187,825 187,824 187,825 187,824 187,825 187,824 187,825 187,827 187,825 187,827 187,839 187,836 187	Saw handle, crosscut, J. Neimeyer (r). Saw mill carriages, operating, M. Lally	187,870 187,940 187,941 187,941 187,813 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,921 187,753 187,874 187,874 187,874 187,886 187,876 187,869 187,721 187,869 187,721 187,869 187,721 187,869 187,721 187,869 187,721 187,869 187,721 187,869 187,721 187,869 187,721 187,869 187,721 187,869 187,721 187,853 187,744 187,754 187,753 187,754 187,753 187,753 187,754 187,753 187,753 187,754 187,753 187,874 187,753 187,874 187,753 187,853 187,954 187,955 187,755 187,755 187,755 187,755 187,855 187,555 187
Curry comb, J. N. Rundle Curtain fixture, A. H. Knapp. Curtain fixture, W. C. Sharp Curtain spring balance, A. H. Knapp. Curtain roller, extension, T. Nowell Desk, drawer, E. N. Doring Disinfecting compound, H. J. Bang Door latch, W. A. Barlow Door spring, G. E. Sutphen Doratsman's instrument, A. Langerfeld Earth auger, G. G. Collins Earth auger, G. G. Collins Egg carrier, G. D. Willis Egg bolder, P. M. Leprohon Engine, vertical portable, J. S. Schofield Exhaust nozzle, T. Shaw Feed cooker, J. P. Martin Fiber, etc., softening, W. Maynard Filuting iron, T. E. King Fruit drier, automatic, J. H. Reynolds et al. Fruit drier, automatic, J. H. Reynolds et al. Fruit drier, automatic, J. H. Reynolds et al. Furnaces doorway, J. T. Smith Furnaces doorway, J. T. Smith Furnaces doorway, J. T. Smith Gas retort cover, P. Murzinger Gas shade holder, T. F. McGann Gass, making, S. C. Salisbury Gass, moulding, S. Oakman Glove, etc., fastening, T. Masac Grain separator, J. D. Van Dusen Grasshopper killer, C. Hoos Grinding machine, Owen et al. Gun carriage, T. O. Bryan Harrow, wheel, W. Whiple Harrow, wheel, W. Whiple Harrow, wheel, W. Whiple Harrow, the Sharemer (r) Harrow, tast, B. Kannes Harrow, barren (r) Harrow, baren, Campbell Harroweter rake, H. H. Bridenthal, Jr Haro	187,868 187,918 187,872 187,829 187,829 187,829 187,829 187,829 187,829 187,829 187,857 187,759 187,952 187,952 187,957 187,872 187,873 187,873 187,873 187,873 187,875 187,875 187,875 187,822 187,875 187,820 187,820 187,820 187,820 187,820 187,820 187,820 187,820 187,820 187,820 187,820 187,820 187,830 187,735 187,835 187,739 187,835 187,739 187,830 187,839 187,739 187,830 187,739 187,830 187,739 187,830 187,739 187,830 187,739 187,830 187,739 187,830 187,739 187,830 187,739 187,830 187,739 187,830 187,739 187,830 187,739 187,830 187,739 187,830 187,739 187,830 187,739 187,830 187,739 187,830 187,730 187,830 187,730 187,830 187,730 187,830 187,730 187,830 187,730 187,830 187,730 187,830 187,730	Saw handle, crosscut, J. Neimeyer (r). Saw mill carriages, operating, M. Lally	187,870 187,909 187,909 187,909 187,910 187,813 187,713 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,913 187,923 187,827 187,827 187,827 187,827 187,826 187,826 187,827 187,827 187,827 187,827 187,827 187,827 187,827 187,827 187,827 187,827 187,827 187,827 187,827 187,827 187,827 187,827 187,828 187,721 187,828 187,827 187,828 187,721 187,828 187,721 187,828 187,827 187,828 187,729 187,729 187,828 187,828 187,829 187,828 187,829 187,828 187,829 187
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OFFICIAL.	,	Indicator, Curtiss & Curtis Insect powder machine, P. Kitchell	187.717
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FOR WHICH		Kerosene burner, E J. M. Becker Knitting machine, W. H. Abel Knob latch, M. C. Niles	187,696
Letters Patent of the United States Granted in the Week Ending	were	Lamp, L. J. Atwood Lamp, J. Lewtas	187.800 187,764
February 27, 1877,		Lamp, R. S. Merrill Lamp burner, W. L. Carter	187,810
AND EACH BEARING THAT DAT	ГЕ.	Lamp, cast metal, L. P. Fries Lamp chimney and shade, T. B. Atterbury (r) Lamp extinguisher, B. H. Robb	7,529
[Those marked(r) are reissued patents.]		Lamp for carriages, G. E. Whitmore Lamp, kerosene, S. Dodsworth	187,949
A complete copy of any patent in the annexe including both the specifications and drawings,		Lamp reflector, W. D. Cummings Last, L. Darozir	187,824
furnished from this office for one dollar. In ord please state the number and date of the patent d	lering,	Lasting jack, C. H. Collins Lathe, D. Heer (r) Lawn mower, T. Coldwell	7,535
and remit to Munn & Co., 37 Park Row, New Yor	k city.	Lifting jack, C. Gaillard, Jr. Link, detachable, S. Stevens.	187,707
Air compressor, G. H. Reynolds	187,906	Lock for sliding doors, R W. Semple Lounge reversible back, J. Sullivan	187,932
Alkalies. recovering, J. W. Dixon Ash sifter, T. H. Badger Axle boxes, making, G. A. Morse	187,801	Lubicator, J. Harper Lumber, resawing, S. Putnam Mailbag, F. R. Hunt	187,904
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Bed bottom, spring, S. P. Olney Bedstead, invalid, J. Q. A. Sargent Bee hive, A. H. Russell	187,777	Mowing machine, F. Bramer (r) Mowing machine, A. Stevens	7,540
Billiard table, J. Marsden Boat knee, D. True	187,878 187,939	Musical instrument sheet, P. B. Hoyt Neck tie holder, F. Hovey	187,858
Bolting reel, Bennett & Smith Box for case hardening, J. Greene (r) Box nailing machine, A. P. Goodhue	7,533	Neck yoke ring, C. Shuman Nutmeg grater, J. R. Hughes Oatmeal machine, A. J. Ehrrichson (r)	187,861
Branding stamp, J. D. Trapp Broom hanger, W. Altick	187,785	Optic illusions, producing, C. W. & O. McGlennen Ore separator, W. M. Courtis	187,884
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Can for oil, etc., J. G. Evenden (r) Can, metallic, G. H. & J. H. Perkins Car axle box, J. Elder	187,902	Paper, damping, S. W. Wilder Pattern, composition, C. H. O. Radde	187,790
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Churn, reciprocating, J. M. Welch Churn, rotary, E. Rhoades Cloth, measuring, C. B. Allyn	187,907	Pump, M. D. Temple Pump, chain, W. H. Rutan Pump, W. H. Lang	187,733
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Door latch, W. A. Barlow Door spring, G. E. Sutphen	187,698	Screw propeller, W. F. Tyson Screws, shaving heads of wood, H. A. Harvey (r)	187,941
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Earth auger, I. Hoover Egg carrier, G. D. Willis Egg holder, P. M. Leprohon	187,952	Seeder, O. Perry Sewer cleaner, H. Allen Sewing machine, W. G. Cummins	187,795
Engine, vertical portable, J. S. Schoffeld Exhaust nozzle, T. Shaw	187,917	Sewing machine, W. G. Cummus	187,837
Feed cooker, J. P. Martin Fence, barbed, A. J. Nellis	187,877 187,723	Sewing machine quilter, J. Douglass Shade holder, B. B. Schneider	187,830 187,778
Fiber, etc., softening, W. Maynard Fluting iron, T. E. King Fruit d ^r ier, L. Granger	187,715	Shawl strap handle, W.Kirk Sheet metal, spinning, J. E. Wells Sheet metal vessel, Milligan & Booth	187,946
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Fulling mill, C. T. Colby Furnace doorway, J. T. Smith	187,820 187,922	Shoe tip, S. Prior Skate, J. Adair	187,775 187,697
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Gas, making, S. C. Salisbury	187,734	Steam boiler, G. M. Kraft Steam boiler heater, etc., A. de Beaumont	187,869
Gas shade holder, T. F. McGann	187,765 187,804	Steam and vacuum pump, J. E. Gary Stove, car. J. H. Prentice	187,774
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Grasshopper killer, C. Hoos Grinding machine, Owen et al	187,855	Stump extractor, J. & W. H. H. Hollen Tsble caster, H. A. Dirkes (r)	187,709 7,541
Gun carriage, T. O'Bryan Hand rubber, H. Carter	187,890 187,811	Teapot, E. Oliver Ticket case, F. R. Wolfinger Tire tightener, T. A. Frakes	187,793
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Harvester, A. Campbell Harvester rake, H. H. Bridenthal, Jr	187,809 187,700	Type mould, T. Mason Umbrella tip cup, T. G. Hojer	187,880 187,853
Harvester reel, Coddington & Kennedy Hat pouncing machine, E. B. Taylor Hay loader, D. F. Roach	187,783	Under waist, S. F. Follette Valvegear, engine, J. C. II. Stut. Valve gear engine, S. H. Wheeler	187,931
Hay loader, D. F. Roach Hoe fastening, J. H. Starnes Hoisting apparatus, J. J. Endres	187,925	Vapor burner, F. A. Sawyer Vegetable cutter, Reitz & Eichholzer	187,9 1 5 187,731
Horse blanket clasp, A. Z. Neff Horse hay rake, Lufkin & Allen	187,888 187,876	Vehicle wheel, J. E. Howell Ventilating and warming, T. Winans	187,859 187, 792
Horseshoe, Billings & Decker Horseshoe nails, making, R. E. Cady Horseshoes, making, C. H. Perkins	187,808	Vest and shirtfront, Loffler & Weil Wagon bolster, stay rod, C. A. Weed Wagon brake, R. Hurd	187,953
Hose, inserting rings in, S. H. Loring	187,875 187,742	Wagon brake, J. M. Van Derzee Wash board, D. I. George	187,786 187, 842
Bydraulic elevators, E. H. Hunt	187,711	Watch cases, making, F. Ecaubert	187,753

Can we draw water such a distance by said pump? A. With a good pump the plan is practicable. 2. Would a lead pipe of the above size collapse? A. Make the bends with as large radii as possible, and becareful to straighten the pipe before laying it. It will, of course, be desirable to use heavy pipe.

yacht 40 feet long and of 8 feet beam, for which we have a double engine with cylinders of 5 inches bore and 6 inches stroke. We would like to know the size and form of boiler best adapted for the engine. A. You can use a vertical boiler, 40 inches in diameter, and 6 feet high.

(47) J. S. says: Since the Ashtabula bridge disaster, there is a great deal said about iron becoming crystallized from repeated vibration, caused by jars, strains, etc. In that sense, is the term "crystallized" used correctly? Is not iron in all conditions crystallized? jar. vibration, strain, and constant use, the cohesion of in the column of a pearance of the iron. Good iron when broken looks tained-

Inquiries relating to patents, or to the patentability of inventions, assignments, etc., will not be published here. All such questions, when initials only are given, are thrown into the waste basket, as it would fill half of (46) E. R. says: We are building a steam our paper to print them all; but we generally take pleasure in answering briefly by mail, if the writer's address is given.

Hundreds of inquiries analogous to the following are sent: "Who sells plumbago, for stove polish? Who sells a steam engine, small enough to run a single sewing machine? Who rolls weldless steel tyres? Who makes earth-boring tools? Who makes paper barrels? Who sells small water wheels for running sewing machines, and who sells electric motors for a similar pur-pose? Who exhibited dental suction disks at the Centennial? Whosells small engines, suitable for pleasure As I understand it, the strength of iron depends on the boats? Who sells electric batteries, for plating?" All perfect cohesion of the crystals which compose it. By such personal inquiries are printed, as will be observed, " Business and Personal," which is spethe crystals becomes impaired, and the strength weak-ened; and in that condition I think it wrong to call it mentioned at the head of that column. Almost any decrystallized. A. The term is correct as describing the sired information can in this way be expeditiously ob-