Business and Lersonal.

The Charge for Insertion under this head is One Dollar a line for each insertion; about eight words to a line. Advertisements must be received at publication office as early as Thursday morning to appear in next issue. The publishers of this paper guarantee to adver-

Large variety of Patterns, just what a new foundry needs. Vertical Double Engine, 40 H. P. Roots' Square Rotary Engine 15 H. P. Combined Punch and Shears. Drill Press. Quantity of machinists' and blacksmiths' small tools. For sale, cheap. Mrs. John Ollis, Admx., Bloomington, Ills.

Chard's Extra Heavy Machinery Oil,

Chard's Anti-Corrosive Cylinder Oil. Chard's Patent Lubricene and Gear Greas

R. J. Chard, Sole Proprietor, 6 Burling Slip, New York. Mr. Harrison Phorbus, proprietor of the Hygeia Hotel. Old Point Comfort, Va., writes to the H. W. Jones Manufacturing Company, 87 Maiden Lane, New York: "I desire to express my entire satisfaction with your paints, which I have been using a number of years. I now have thirteen acres of wood-work covered with your paints, and as they have successfully withstood the usual effects of saltair, and are in every way satisfactory, I shall continue using them."

Walrus Leather and Walrus Wheels for all metal polishing. Greene, Tweed & Co., 118 Chambers St., N.Y. Clark Rubber Wheels adv. See page 172.

Vacuum Cylinder Oils. See adv., page 173.

The Golden Age—the present—when Esterbrook's Steel Pens, the most popular in use, are within the reach

Wanted. - Single or double engine, 1,000 horses power. Description and price to C. W. Copeland, 24 Park Place.

We have been told that a retail clothing dealer in Chicago has intimated that he is, or has been, connected with Baldwin the Clothier. If such has been the case, or is, Baldwin the Clothier has no knowledge of the con-

Fine Gray Iron Castings to order. A. Winterburn Foundry, 16 De Witt St., Albany, N. Y.

Wanted, first-class large Planer, new or second-hand. Address Lambertville Iron Works, Lambertville, N. J. C. B. Rogers & Co., Norwich, Conn., Wood Working Machinery of every kind. See adv., page 140.

Recipes and Information on all Industrial Processes. Park Benjamin's Expert Office, 50 Astor House, N. Y.

Experts in Patent Causes and Mechanical Counsel. Park Benjamin & Bro., 50 Astor House, New York

Telephones repaired, parts of same for sale. Send stamp for circulars. P.O. Box 205, Jersey City, N.J.

Corrugated Wrought Iron for Tires on Traction Engines, etc. Sole mfrs., H. Lloyd, Son & Co., Pittsb'g, Pa. Malleable and Gray Iron Castings, all descriptions, by Erie Malleable Iron Company, limited, Erie, Pa.

Apply to J. H. Blaisdell for all kinds of Wood and Norking Machinery. 107 Liberty St., New York. Send for illustrated catalogue.

Our new Stylographic Pen (just patented), having the duplex interchangeable point section, is the very latest improvement. The Stylographic Pen Co., Room 13, 169 Broadway, N. Y.

Skinner & Wood, Erie, Pa., Portable and Stationary Engines, are full of orders, and withdraw their illustra ted advertisement. Send for their new circulars

Sweetland & Co., 126 Union St., New Haven, Conn. manufacture the Sweetland Combination Chuck.

Safety Linen Hose for Hotels, Warehouses, and Fac tories, as protection from fire. Greene, Tweed & Co., NY Power, Foot, and Hand Presses for Metal Workers Lowest prices. Peerless Punch & Shear Co. 52 Dey St., N. Y

The Brown Automatic Cut-off Engine; unexcelled for workmanship, economy, and durability. Write for information. C. H. Brown & Co., Fitchburg, Mass.

For the best Stave, Barrel, Keg, and Hogshead Machinery, address H. A. Crossley, Cleveland, Ohio.

Best Oak Tanned Leather Belting. Wm. F. Fore paugh, Jr., & Bros., 531 Jefferson St., Philadelphia, Pa. National Steel Tube Cleaner for boiler tubes. Adjust- obtain such information without remuneration. able, durable. Chalmers-Spence Co., 40 John St., N. Y.

appearance as Whole Pulleys. Yocom & Son's Shafting office. Price 10 cents each. Works, Drinker St., Philadelphia. Pa.

Stave, Barrel, Keg, and Hogshead Machinery a spe cialty, by E. & B. Holmes, Buffalo, N. Y.

Nickel Plating.-Sole manufacturers cast nickel anodes, pure nickel salts. importers Vienna lime, crocus, etc. Condit, Hanson & Van Winkle, Newark, N. J., and 92 and 94 Liberty St., New York.

Peck's Patent Drop Press. See adv., page 140.

Presses, Dies and Tools for working Sheet Metal. etc. Hydraulic Jacks, Presses and Pumps Polishing Buffing Machinery. Patent Punches, Shears, etc. E. Lyon & Co., 470 Grand St., New York.

Sheet Metal Presses, Ferracute Co., Bridgeton, N. J. Wright's Patent Steam Engine, with automatic cut off. The best engine made. For prices, address William Wright, Manufacturer, Newburgh, N. Y.

For Mill Mach'y & Mill Furnishing, see illus. adv. p.147. concave.

Blake "Lion and Eagle" Imp'd Crusher. See p. 141.

Special Wood-Working Machinery of every variety. Levi Houston, Montgomery, Pa. See ad. page 142.

Saw Mill Machinery. Stearns Mfg. Co. See p. 141.

For Separators, Farm & Vertical Engines, see adv.p.157.

For Pat. Safety Elevators, Hoisting Engines. Friction

For Patent Shapers and Planers, see ills. adv. p. 156.

Mineral Lands Prospected, Artesian Wells Bored, by Pa. Diamond Drill Co. Box 123, Pottsville, Pa. See p. 157.

Binders, and Paper Mills. Large knife work a specialty.

Also manufacturers of Soloman's Parallel Vise. Taylor. Stiles & Co., Riegelsville, N. J.

The Lace Cutter illustrated on another page can be purchased from Greene, Tweed & Co., 118 Chambers St., New York, N. Y.; Jackson & Tyler, 33 German St., Baltimore, Md.; Joseph Sharp, 59 Walnut St., Cincinnati Ohio.

Moulder wanted, to take charge and make fine snap work. Must be temperate. Send photograph and recommendation. Perkins & Co., Grand Rapids, Mich.

Situation wanted, by Machinist and Tool Maker; 25 tisers a circulation of not less than 50,000 copies every years' experience in all branches. Had charge of large machine shop and brass works. Improved tools for brass work a speciality. J. H. Morris, Box 773, N. Y.

National Institute of Steam and Mechanical Engineering, Bridgeport, Conn. Blast Furnace Construction and A. Sulphur is soluble in bisulphide of carbon. Management. The metallurgy of iron and steel. Prac-

tion when competent. Send for pamphlet. Silent Injector, Blower, and Exhauster. See adv. p. 173.

Portable Railroads. Sugar Mills. Horizontal & Beam Steam Engines. Atlantic Steam Engine W'ks, B'klyn, N.Y. For Shafts, Pulleys, or Hangers, call and see stock kept at 79 Liberty St., N. Y. Wm. Sellers & Co.

The Chester Steel Castings Co., office 407 Library St., Philadelphia, Pa., can prove by 15,000 Crank Shafts, and 10,000 Gear Wheels, now in use, the superiority of their Castings over all others. Circular and price list free.

Brass & Copper in sheets, wire & blanks. See ad. p. 172. Air Compressors. Clayton Stm. PumpW'ks,Bk'lyn,N.Y. A 41/2 in. 2 Jaw Chuck, Independent or Universal, for Brass Finishers. Address A. F. Cushman, Hartford, Ct.

Diamond Engineer, J. Dickinson, 64 Nassau St., N.Y. The Improved Hydraulic Jacks, Punches, and Tube Expanders. R. Dudgeon, 24 Columbia St., New York. For Superior Steam Heat. Appar., see adv., page 173. Eagle Anvils, 10 cents per pound. Fully warranted.

Millstone Dressing Machine. See adv., page 173. Gear Wheels for Models (list free); experimental and model work, dies and punches, metal cutting, manufacturing, etc. D. Gilbert & Son, 212 Chester St., Phila., Pa.

lar to N. Y. Elastic Truss Co., 683 Broadway, New York. Steam Engines; Eclipse Safety Sectional Boiler Lambertville Iron Works, Lambertville, N. J. See ad. p. 141.

H. A. Lee's Moulding Machines, Worcester, Mass. Improved Steel Castings; stiff and durable; as soft

and easily worked as wrought iron; tensile strength not less than 65,000 lbs. to sq. in. Circulars free. Pittsburg Steel Casting Company, Pittsburg, Pa.

New Economizer Portable Engine. See illus. adv. p. 173. Rollstone Mac. Co.'s Wood Working Mach'y ad. p. 172.

Wm. Sellers & Co., Phila., have introduced a new injector, worked by a singlemotion of a lever.

Ore Breaker, Crusher, and Pulverizer. Smaller sizes run by horse power. See p. 173. Totten & Co., Pittsburg.

For Yale Mills and Engines, see page 173.

Reed's Sectional Covering for steam surfaces; any one can apply it; can be removed and replaced without injury. J. A. Locke, Agt., 32 Cortlandt St., N. Y.



HINTS 'TO CORRESPONDENTS

No attention will be paid to communications unless ecompanied with the full name and address of the writer.

Names and addresses of correspondents will not be iven to inquirers.

We renew our request that correspondents, in referring to former answers or articles, will be kind enough to in F and G. On A B lay off A C = A F, and on the proname the date of the paper and the page, or the number of the question.

lished, they may conclude that, for good reasons, the Editor declines them.

Persons desiring special information which is purely of a personal character, and not of general interest should remit from \$1 to \$5, according to the subject, as we cannot be expected to spend time and labor to

Any numbers of the Scientific American Supple-Split P lleys at low prices, and of same strength and ment referred to in these columns may be had at this

> (1) G. A. A. asks: Which is the best pipe to use for heating a room with steam: two rows of one inch pipe or one row of two inch pipe? A. If the radiating surface in the two cases is the same theoretically there should be no difference, but practically we believe the smaller pipes have proved more efficient.

that described in the SUPPLEMENT, No. 142.in the artithat I could tell if it was charged powerful enough? A. be thenumbers of the lenses required to construct a spy glass like that on page 68, SCEENTIFIC AMERICAN, No. 5, Vol. 43? A. Only two lenses are required. The object glass should be achromatic, the eye lens is double

(3) Dr. A. M. C. says: I want to make a sidewalk 10 feet long, 236 feet wide. What can I use in place of stone or wood, something that is durable and hard? A. You might use ordinary cement, three inches thick, which any mason can put down for you. See SUPPLEMENTS, 33, 36, and 82.

(4) W. H. D. asks: 1. Will a magnet that Clutch Pulleys, Cut-off Coupling, see Frisbie's ad. p. 157. will lift a one pound weight make a small machine that will make a small current to show how it works? A Yes. 2. Will sheet glass covered with tin foil on both sides make a Leyden jar, and by combining a large number together, having the negative sides connected and Machine Knives for Wood-working Machinery, Book all the positive sides connected, make a powerful battery? A. Yes, but the jars are better. 3. Would not sheet lead answer as a substitute for tin foil? A. Tin

method of preventing woodwork in mills saturated manufactured from swamp muck? A. Muck contains a with oils from taking fire in the event of a blaze touch- large per cent of certain nitrogenous compounds, the ing the woodwork. A. Woodwork strongly impregnated products of the decomposition of which in the soil are with tungstate of soda or silicate of soda (by treatment readily assimilated by plants. The amount of nitrogen in strong aqueous solution of these salts) becomes un. in the muck is an index of its richness in these foods.

(6) G. E. writes: 1. I have bought some woolen underclothing which are so much filled with sulphur that they are very unpleasant to wear. Is the sulphur injurious to health? A. Yes, if present in considerable quantity. 2. What will remove the sulphur? bisulphide used is pure the small quantity adhering to tical Instruction in Steam Engineering, and a good situathe cloth after wringing will quickly and completely evaporate on exposure to the air.

> (7) R. P. asks if there is any indelible preparation for stenciling on unplaned lumber, such as posts, etc., in black or other colors? A. Use a strong turpentine solution of asphaltum, tempered with common printer's ink.

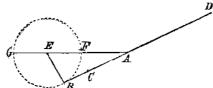
> (8) J. G. asks what are the plates on which photographic pictures commonly called tintypes are taken coated with? A. The plates are flowed evenly with japan varnish, and the coating hardened in a japan ner's oven. The varnish may be procured at almost any paint store.

(9) P. T. asks how to take stains made by little iodine, then with ammonia water, and rinse in clean water.

(10) E. H. writes: 1. Referring to your description of Blake's transmitter, on p. 274, vol. 41, Scien-TIFIC AMERICAN, how is the brass button filled with carbon? A. The brass is spun over the carbon. 2. Is it the carbon that weighs three pennyweights, or brass and carbon together? A. Both.

(11) W. S. H. asks: Can you give a simple The best Truss ever used. Send for descriptive circutest for oxygen water; that is, water supposed to contain the case of nitroglycerine from the liquid to the gaseous an extra amount of oxygen-all it will take up? water is called by some oxygenaqua. A. Filla quart bottle, provided with a perforated cork (tightly fitting) to admit a glass tube, with the water; heat nearly to boiling, and collect the gases given off in a small test tube, by displacement, over the pneumatic trough. Examinethe gas with an ignited taper or splint of wood. Momentary increase in the intensity of combustion indicates an unusual amount of oxygen in the water. Compare results with ordinary well or cistern water.

> (12) E. T. S., St. Clair, Mich., says: In your issue of August 14, G. G., in the article, "Evolution of Ideas," speaks of the "golden cut." Will you please illustrate what is meant? A. To divide by the "golden cut" is an expression used by mathematicians for dividing by "extreme and mean ratio," and this means, as G. G. correctly remarks, the dividing (of a line, for example) in such a manner that the whole has the same relation to the larger part as the larger part to the smaller, and vice versa. Let A B be the given line which is to be divided by the "golden cut." At B draw to AB the perpendicular B E, equal to one-half of A B. With E as center and A B as radius describe a circumference. Draw the straightline_A E G, cutting the circumference



longation of B A lay off A D = A G. Then the line A B ning down to water fifteen feet below; would not the is divided interally at C (and externally at D) by the Correspondents whose inquiries do not appear after "golden cut," or in extreme and mean ratio. For since reasonable time should repeat them. If not then pub. AB is a tangent and AG a secant, AB is, according to a well known thesis of geometry, a mean proportional between A G and A F.

The first proportion by composition gives:

AG + AB : AG : : AB + AF : ABSince AG = AD and AB = FG we have BD: AD:: AD: AB.

to have the same strength and elasticity as leather? Can it be moulded into a form 6x2x1 inches, and so liquid, usually under pressure. It is not usually aptreated that it will have the same qualities as leather plied with a brush, as you suggest, and is not suitable (several pieces glued together) would of these dimensions? A. See "Vulcanized Fiber," p. 10, vol. 38, Scien-(2) O. V. D. asks: 1. How many pounds TIFIC AMERICAN. 2. How can I make the edges of Fruit & other can tools. Bliss & Williams. B'klyn, N. Y. ought a three-eighths inch bar magnet hold up, like leather cut by a disk very smooth, and how can I polish ment was, as I thought, greatly injured by dropping them? A T rua hastad iron aran ivoruar hana cle "How to Make a Working Telephone," Fig. 4, so nishing tool. 3. How can I make a cement that will be of the diploma. Framing would not hide the blots. Not About three-fourths its own weight. 2. What would pieces of leather together? A. See p. 2510, No. 158, tartaric acid for the purpose of removing the stain. SCIENTIFIC AMERICAN SUPPLEMENT.

> (14) C. W. H. writes: I wish to learn how to mix shellac in liquid form, to be used in shellacking a cedar boat; that is, how much alcohol to a certain amount of shellac should be used, and how it should be applied so as to obtain a thin hard coating that will wear well. A. Place two pounds of orange shellac in a jug or demijohn, and pour over it one gallon of 95per cent alcohol; allow it to stand for a day or so, shaking it occasionally, and stirring if it becomes solid at the bottom. When the shellac is entirely dissolved strain the varnish through a piece of flannel. Apply with a flat, soft brush

> 2. (for rolling)—copper 6. zinc 2. nickel 216. The specimen metal sent is lead superficially rolled with tin.

journal of July 31, p. 69, an article pertaining to the value | know if I get correct time with it in latitude 38° 50'; if

(5) J. S. M. inquires as to the best of swamp muck. Please inform me how nitrogen is Free nitrogen is not readily obtainable from muck. In analysis it is usua!ly determined in the form of ammonia (NH₄OH).

(17) M. F. P. writes: I would like to get the details of lacquering brass goods, such as lamps, springs, etc., to keep them bright and prevent them from tarnishing. See pp. 395 (15), vol. 42; 44 (39), vol. 38; 44 (53), and 188 (52), vol. 37; 242, vol. 34; 139 (41), and 326, vol. 32, Scientific American, and p. 620, No. 38, Scientific American Supplement.

(18) J. J. M. asks (1) if a dynamo-electric machine will run of itself, or if a battery is applied to it. A. A dynamo-electric machine will generate an electric current without the aid of a battery. 2. What number of wire would I need to make bobbins 2 inches long, 1 inch in diameter? A. It depends on the style of the machine. See article on small electric machine in SUPPLEMENT 161.

(19) C. E. W. writes: I have both copper and brass moulds for small articles, but meet with failure in the metals not running sharp in the small lines. Have tried smoking, but does not work. What can I do to remedy it? I use the most fusible alloys. A. Payson's indelible ink out of linen? A. Moisten with a Heat the moulds well before pouring, and coat them smoothly with black lead.

> (20) G. M. B. asks: 1. How is nitroglycerine made. A. Nitroglycerine is prepared by bringing glycerine drop by drop into a cooled mixture of very strong nitric and sulphuric acids. The nitroglycerine collects at the bottom of the vessel and is subsequently freed from the acids by carefully washing in a copious supply of water. 2. Is the explosion caused by the rapid transformation of a solid into a gas? A. Yes, in state. 3. Would not iron, wood, or any substance cause explosion if instantaneously changed into a gaseous form? A. Yes. 4. Are the nitrates the only explosive substances known? A. No, gunpowder prepared with chlorate of potash explodes more violently than that in which niter is used.

> (21) H. B. C. writes: Will you please inform me the best way to cut carnelian and moss agates? A. Some specimens may be readily cut by means of a thin rotating iron disk charged with emery and water. Extremely hard specimens require diamond dust. It should be mixed with a little olive oil and applied sparingly to the edge of the disk. To cut plane surfaces and facets on these stones use a flat lead lap wheel charged with emery and water. Polish with rotten stone and water applied to a pewter lap.

> (22) E. F. L. asks how to cut and finish carnelians and agates. I have a United States dental lathe. A. See reply to H. B. C. above.

> (23) C. & W. write: 1. We are putting in a sixty horse power locomotive pattern boiler. Shell 60 inches in diameter. We use the exhaust steam in a dry house. As we cannot use exhaust steam for heating water, we have extended the space behind the tubes four feet, and propose putting in a coil of $400\,\mathrm{feet}$ of 11/4 inch pipe through which water will be forced. The heat after passing through the tubes will strike this coil. Is the plan a good one? A. Your plan would heat a limited quantity of water. 2. Is it advisable to use steam jet instead of scraper, for cleaning tubes? A. The steam jet is used very successfully. 3. Should we run exhaust steam through a boiler, say thirty minutes, then close all openings except a pipe runsteam condense and partially fill the boiler? If so, how full? 3. Yes, probably fill the boiler entirely.

(24) W. E. F. writes: In your Scientific American and the Supplement you speak of preservingiron in water and ships' bottoms by the application of creosote. Is it oil of creosote as sold by druggists, and can it be applied with a brush on the outside? I am putting in a flume 90 feet long by 22x12; can I so coat the timbers? Also, I have a fine yacht: can I, when I haul her out for the season, and get her well dried under cover, paint her inside and out with oil of creosote and hope to make ther last longer? A. Commercial creosote is commonly a mixture of creosote, picamar, and light tar oil. The colorless transparent liquid usually sold by pharmacists is the purified creosote. (13) F. P. S. asks: 1. Can paper be made the same strength and elasticity as leather? In former is the substance used for wood. The wood is impregnated with the creosote by immersing it in the for inside woodwork.

(25) H. A. C. writes: A diploma on parchwriting ink near and adjoining the printing on the side a great deal stronger than glue, for cementing several knowing what I was doing I used a strong solution of This only served to change the color of the blots from black to blue. It was much fainter.however.than before. and appeared to be in the parchment rather than on it, as before. The parchment had shrunken somewhat now after drying, but as the spot was not larger than a silver quarter, it was not noticeable. I now took chloride of lime to remove the blue stain, but this solution served to shrink the parchment where it was wet to a considerable extent. Not having any means of stretching the spot, and not knowing what to use for that purpose, I laid the diploma away as soon as it dried and have never since opened it. Will you tell me how can I get the spot back to its former dimensions? A You may try the following: Moisten the spot with (15) F. E. T. asks: What is nickel silver water, and rub it over gently at first with the white of jewelry? I wish to get some of the metal, but find none an egg mixed with a small quantity of freshly prepared advertised. A. German silver (a nickel silver) is com- flour paste. Press between blotting paper with a warm posed of: 1. (for casting)-copper 5, zinc 21/2, nickel, 21/2; iron. A little alum and a trace of oil may be added to the paste if found necessary.

(26) E. Y. D. writes: I have a sun dial (16) C. T. F. writes: I observe in your made in Germany for 48° 15' latitude, and I want to

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Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chain bolt, H. E. Russell, Jr. Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford Clamp for attaching handles to earthenware and	231,219 231,351 231,172 231,195 231,245 231,242	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart. Registering machine, W. N. Durant Ribbon, wire stiffening, T. Kohn. Rock drill support and clamp, H. Richmann Rooflng, metallic, J. M. Hess.	231,324 231,369 231,158 231,176 231,238 231,317
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chain bolt, H. E. Russell, Jr Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush	231,219 231,351 231,172 231,195 231,245 231,242 231,263	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart	231,324 231,369 231,158 231,176 231,238 231,317 231,281
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chain bolt, H. E. Russell, Jr Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush Cock, stop, C. H. Cushing	231,219 231,351 231,172 231,195 231,245 231,242 231,263 221,283	Refrigerator, C. P. Jackson Refrigerator and dumb waiter, combined, C. E. Stewart Registering machine, W. N. Durant Ribbon, wire stiffening, T. Kohn Rock drill support and clamp, H. Richmann Roofing, metallic, J. M. Hess. Rotary engine, D. L. Cross Safes and vaults, obstructing metal, A. J. Klein.	231,324 231,369 231,158 231,176 231,238 231,317 231,281 231,231
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chain bolt, H. E. Russell, Jr. Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush Cock, stop, C. H. Cushing Collar sweat pad, horse, E. R. Jones	231,219 231,351 231,172 231,195 231,245 231,245 231,263 221,283 231,326	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart. Registering machine, W. N. Durant Ribbon, wire stiffening, T. Kohn. Rock drill support and clamp, H. Richmann Roofing, metallic, J. M. Hess. Rotary engine, D. L. Cross. Safes and vaults, obstructing metal, A. J. Klein. Sash fastener, W. S. Owen.	231,324 231,369 231,158 231,176 231,238 231,317 231,281 231,231 231,352
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chain boit, H. E. Russell, Jr. Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush Cock, stop, C. H. Cushing Collar sweat pad, horse, E. R. Jones Cultivator tooth. spring, H. Springer	231,219 231,351 231,172 231,195 231,245 231,245 231,263 221,283 231,326 231,368	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart. Registering machine, W. N. Durant. Ribbon, wire stiffening, T. Kohn. Rock drill support and clamp, H. Richmann. Roofing, metallic, J. M. Hess. Rotary engine, D. L. Cross. Safes and vaults, orstructing metal, A. J. Klein. Sash fastener, W. S. Owen. Saw filing machine, gin, A. F. McAllister	231,324 231,369 231,158 231,176 231,238 231,317 231,281 231,231 231,352 231,340
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chain bolt, H. E. Russell, Jr Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush Cock, stop, C. H. Cushing Collar sweat pad, horse, E. R. Jones Cultivator tooth, spring, H. Springer Curtain fixture, A. Cosand	231,219 231,351 231,172 231,195 231,245 231,242 231,263 221,283 231,326 231,368 231,379	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart	231,324 231,369 231,158 231,176 231,238 231,317 231,281 231,231 231,352 231,340 231,341
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan. Chain boit, H. E. Russell, Jr. Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford. Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush Cock, stop, C. H. Cushing Collar sweat pad, horse, E. R. Jones Cultivator tooth, spring, H. Springer Curtain fixture, A. Cosand Damper, stove pipe, W. Scully	231,219 231,351 231,172 231,195 231,245 231,242 231,242 231,263 221,283 231,326 231,368 231,368 231,279 231,241	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart. Registering machine, W. N. Durant. Ribbon, wire stiffening, T. Kohn. Rock drill support and clamp, H. Richmann. Roofing, metallic, J. M. Hess. Rotary engine, D. L. Cross. Safes and vaults, onstructing metal, A. J. Klein. Sash fastener, W. S. Owen. Saw filing machine, gin, A. F. McAllister. Saw mill head block, J. P. McKinley. Saw mill, reciprocating, D. C. Prescott.	231,324 231,369 231,158 231,176 231,238 231,317 231,281 231,231 231,352 231,340 231,341 231,192
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chain bolt, H. E. Russell, Jr Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush Cock, stop, C. H. Cushing Collar sweat pad, horse, E. R. Jones Cultivator tooth, spring, H. Springer Curtain fixture, A. Cosand Damper, stove pipe, W. Scully Dentures, method of and apparatus for making,	231,219 231,351 231,172 231,195 231,245 231,242 231,263 231,368 231,368 231,279 231,241	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart. Registering machine, W. N. Durant. Ribbon, wire stiffening, T. Kohn. Rock drill support and clamp, H. Richmann. Roofing, metallic, J. M. Hess. Rotary engine, D. L. Cross. Safes and vaults, obstructing metal, A. J. Klein. Sash fastener, W. S. Owen. Saw filing machine, gin, A. F. McAllister. Saw mill head block, J. P. McKinley. Saw mill, reciprocating, D. C. Prescott. Saw mill, reciprocating, W. M. Wilkin	231,324 231,369 231,158 231,176 231,238 231,317 231,281 231,231 231,352 231,340 231,341 231,192 231,249
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chair bott, H. E. Russell, Jr Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush Cock, stop. C. H. Cushing Collar sweat pad, horse, E. R. Jones Cultivator tooth, spring, H. Springer Curtain fixture, A. Cosand Damper, stove pipe, W. Scully Dentures, method of and apparatus for making, R. Telschow	231,219 231,351 231,172 231,195 231,245 231,242 231,263 221,283 231,366 231,368 231,279 231,241 231,375	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart. Registering machine, W. N. Durant. Ribbon, wire stiffening, T. Kohn. Rock drill support and clamp, H. Richmann. Roofing, metallic, J. M. Hess. Rotary engine, D. L. Cross. Safes and vaults, orstructing metal, A. J. Klein. Sash fastener, W. S. Owen. Saw filing machine, gin, A. F. McAllister. Saw mill head block, J. P. McKinley. Saw mill, reciprocating, D. C. Prescott. Saw mill, reciprocating, W. M. Wilkin. Scraper, earth, A. R. Byrkett.	231,324 231,369 231,158 231,176 231,238 231,317 231,231 231,231 231,352 231,340 231,341 231,192 231,249 231,148
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chain bolt, H. E. Russell, Jr Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush Cock, stop, C. H. Cushing Collar sweat pad, horse, E. R. Jones Cultivator tooth, spring, H. Springer Cuttain fixture, A. Cosand Damper, stove pipe, W. Scully Dentures, method of and apparatus for making, R. Telschow Disks of varying thickness, apparatus for gauging	231,219 231,351 231,172 231,195 231,245 231,242 231,263 221,283 231,366 231,368 231,279 231,241 231,375	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart	231,324 231,369 231,158 231,176 231,231 231,231 231,231 231,231 231,352 231,340 231,341 231,241 231,342 231,341 231,341 231,248
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush Cock, stop, C. H. Cushing Collar sweat pad, horse, E. R. Jones Cultivator tooth, spring, H. Springer Curtain fixture, A. Cosand Damper, stove pipe, W. Scully Dentures, method of and apparatus for making, P. Telschow Disks of varying thickness.apparatus for gauging and assorting, M. M. Rhodes	231,219 231,351 231,172 231,195 231,295 231,242 231,242 231,263 221,283 231,368 231,375 231,375 231,375	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart. Registering machine, W. N. Durant. Ribbon, wire stiffening, T. Kohn. Rock drill support and clamp, H. Richmann. Roofing, metallic, J. M. Hess. Rotary engine, D. L. Cross. Safes and vaults, obstructing metal, A. J. Klein. Sash fastener, W. S. Owen. Saw filing machine, gin, A. F. McAllister. Saw mill head block, J. P. McKinley. Saw mill, reciprocating, D. C. Prescott. Saw mill, reciprocating, W. M. Wilkin. Scraper, earth, A. R. Byrkett. Scroll, adjustable, A. Paul. Sewing machine, A. S. Dinsmore.	231,324 231,369 231,158 231,176 231,231 231,231 231,231 231,352 231,340 231,341 231,192 231,249 231,249 231,148 231,155
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush Cock, stop, C. H. Cushing Collar sweat pad, horse, E. R. Jones Cultivator tooth, spring, H. Springer Curtain fixture, A. Cosand Damper, stove pipe, W. Scully Dentures, method of and apparatus for making, P. Telschow Disks of varying thickness, apparatus for gauging and assorting, M. M. Rhodes Ditcher and scraper, combined, G. Palmer (r)	231,219 231,351 231,172 231,195 231,242 231,242 231,243 221,283 231,368 231,375 231,375 231,375 231,375	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart. Registering machine, W. N. Durant. Ribbon, wire stiffening, T. Kohn. Rock drill support and clamp, H. Richmann. Roofing, metallic, J. M. Hess. Rotary engine, D. L. Cross. Safes and vaults, orstructing metal, A. J. Klein. Sash fastener, W. S. Owen. Saw filing machine, gin, A. F. McAllister. Saw mill head block, J. P. McKinley. Saw mill, reciprocating, D. C. Prescott. Saw mill, reciprocating, W. M. Wilkin. Scraper, earth, A. R. Byrkett. Scroll, adjustable, A. Paul. Sewing machine, A. S. Dinsmore. Sewing machine, Deventage in the statement of the sewing machine of the sewing machine, A. D. Pentz.	231,324 231,369 231,158 231,176 231,238 231,317 231,281 231,281 231,352 231,340 231,341 231,192 231,148 231,148 231,148 231,155 231,189
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chair bott, H. E. Russell, Jr Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush	231,219 231,351 231,172 231,195 231,245 231,242 231,263 221,283 231,326 231,368 231,279 231,241 231,375 231,359 9,344 231,160	Refrigerator, C. P. Jackson Refrigerator and dumb waiter, combined, C. E. Stewart Registering machine, W. N. Durant Ribbon, wire stiffening, T. Kohn. Rock drill support and clamp, H. Richmann Roofing, metallic, J. M. Hess Rotary engine, D. L. Cross Safes and yaults, orstructing metal, A. J. Klein Sash fastener, W. S. Owen Saw filing machine, gin, A. F. McAllister Saw mill, reciprocating, D. C. Prescott Saw mill, reciprocating, W. M. Wilkin Scraper, earth, A. R. Byrkett Scroll, adjustable, A. Paul Sewing machine, A. S. Dinsmore Sewing machine power attachment, A. D. Pentz. Sewing machine buttle bobbin, C. F. Denison.	231,324 231,369 231,158 231,176 231,238 231,317 231,281 231,281 231,352 231,340 231,341 231,192 231,148 231,148 231,148 231,155 231,189
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush Cock, stop, C. H. Cushing Collar sweat pad, horse, E. R. Jones Cultivator tooth, spring, H. Springer Curtain fixture, A. Cosand Damper, stove pipe, W. Scully Dentures, method of and apparatus for making, P. Telschow Ditcher and scraper, combined, G. Palmer (r) Doffer combs, mechanism for operating, G. Fowler Drag or harrow, sulky, M. H. Woodruff	231,219 231,351 231,172 231,195 231,195 231,245 231,242 231,263 221,283 231,326 231,326 231,326 231,326 231,326 231,359 9344 231,359 9,344 231,359 9,344 231,359	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart. Registering machine, W. N. Durant. Ribbon, wire stiffening, T. Kohn. Rock drill support and clamp, H. Richmann. Roofing, metallic, J. M. Hess. Rotary engine, D. L. Cross. Safes and yaults, obstructing metal, A. J. Klein. Sash fastener, W. S. Owen. Saw filing machine, gin, A. F. McAllister. Saw mill head block, J. P. McKinley. Saw mill, reciprocating, D. C. Prescott. Saw mill, reciprocating, W. M. Wilkin. Scraper, earth, A. R. Byrkett. Scroll, adjustable, A. Paul. Sewing machine, A. S. Dinsmore. Sewing machine shuttle bobbin, C. F. Denison. Sewing machines, braid guide for straw braid,	231,324 231,369 231,158 231,176 231,238 231,317 231,231 231,352 231,352 231,341 231,352 231,149 231,148 231,155 231,188 231,155 231,188
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush Cock, stop, C. H. Cushing Collar sweat pad, horse, E. R. Jones Cultivator tooth, spring, H. Springer Curtain fixture, A. Cosand Damper, stove pipe, W. Scully Dentures, method of and apparatus for making, P. Telschow Disks of varying thickness, apparatus for gauging and assorting, M. M. Rhodes Ditcher and scraper, combined, G. Palmer (r) Doffer combs, mechanism for operating, G. Fowler Drag or harrow, sulky, M. H. Woodruff Drying kiln, E. & B. Holmes	231,219 231,351 231,172 231,195 231,245 231,242 231,263 221,283 231,326 231,368 231,375 231,375 231,375 231,375 231,369 9,344 231,160 231,368 231,369 9,344 231,160	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart. Registering machine, W. N. Durant. Ribbon, wire stiffening, T. Kohn. Rock drill support and clamp, H. Richmann. Roofing, metallic, J. M. Hess. Rotary engine, D. L. Cross. Safes and vaults, orstructing metal, A. J. Klein. Sash fastener, W. S. Owen. Saw filing machine, gin, A. F. McAllister. Saw mill head block, J. P. McKinley. Saw mill, reciprocating, D. C. Prescott. Saw mill, reciprocating, W. M. Wilkin. Scraper, earth, A. R. Byrkett. Scroll, adjustable, A. Paul. Sewing machine, A. S. Dinsmore. Sewing machine shuttle bobbin, C. F. Denison. Sewing machines, braid guide for straw braid, G. F. Stone.	231,324 231,369 231,158 231,176 231,238 231,231 231,231 231,231 231,352 231,340 231,149 231,148 231,128 231,155 231,189 231,285 231,285
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell	231,219 231,351 231,172 231,172 231,172 231,245 231,242 231,263 221,283 231,326 231,368 231,279 231,241 231,375 231,359 9,344 231,385 231,160 231,385 231,160 231,385	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart. Registering machine, W. N. Durant. Ribbon, wire stiffening, T. Kohn. Rock drill support and clamp, H. Richmann. Roofing, metallic, J. M. Hess. Rotary engine, D. L. Cross Safes and vaults, orstructing metal, A. J. Klein. Sash fastener, W. S. Owen. Saw filing machine, gin, A. F. McAllister Saw mill head block, J. P. McKinley. Saw mill, reciprocating, D. C. Prescott. Saw mill, reciprocating, W. M. Wilkin. Scraper, earth, A. R. Byrkett. Scroll, adjustable, A. Paul. Sewing machine, A. S. Dinsmore. Sewing machine, Swing Swing Machine, Swing Mach	231,324 231,369 231,158 231,176 231,238 231,231 231,231 231,231 231,352 231,340 231,149 231,148 231,128 231,155 231,189 231,285 231,285
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chain bolt, H. E. Russell, Jr. Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush Cock, stop, C. H. Cushing Collar sweat pad, horse, E. R. Jones Cultivator tooth, spring, H. Springer Curtain fixture, A. Cosand Damper, stove pipe, W. Scully Dentures, method of and apparatus for making, P. Telschow Ditcher and scraper, combined, G. Palmer (r) Doffer combs, mechanism for operating, G. Fowler Drag or harrow, sulky, M. H. Woodruff Drying kiln, E. & B. Holmes Fare register. J. B. Benton Fare register, J. N. Hardy	231,219 231,351 231,172 231,172 231,172 231,245 231,245 231,242 231,263 221,283 231,326 231,326 231,327 231,341 231,375 231,359 9,344 231,160 231,385 231,168 231,168 231,168 231,165	Refrigerator, C. P. Jackson Refrigerator and dumb waiter, combined, C. E. Stewart Registering machine, W. N. Durant Registering machine, W. N. Durant Ribbon, wire stiffening, T. Kohn Rock drill support and clamp, H. Richmann Roofing, metallic, J. M. Hess Rotary engine, D. L. Cross Safes and vaults, orstructing metal, A. J. Klein. Sash fastener, W. S. Owen Saw filing machine, gin, A. F. McAllister Saw mill head block, J. P. McKinley Saw mill, reciprocating, D. C. Prescott Saw mill, reciprocating, W. M. Wilkin Scraper, earth, A. R. Byrkett Scroll, adjustable, A. Paul Sewing machine power attachment, A. D. Pentz Sewing machines, braid guide for straw braid, G. F. Stone Shaft bearing, H. L. Moulton Shaft coupling for two-wheeled vehicles, W. R.	231,324 231,369 231,176 231,238 231,217 231,281 231,281 231,281 231,281 231,340 231,341 231,192 231,341 231,188 231,188 231,188 231,188 231,188 231,188 231,188 231,188 231,188 231,188 231,188 231,188
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush Collar sweat pad, horse, E. R. Jones Cultivator tooth, spring, H. Springer Cultivator tooth, spring, H. Springer Curtain fixture, A. Cosand Damper, stove pipe, W. Scully Dentures, method of and apparatus for making, P. Telschow Disks of varying thickness, apparatus for gauging and assorting, M. M. Rhodes Ditcher and scraper, combined, G. Palmer (r) Doffer combs, mechanism for operating, G. Fowler Drag or harrow, sulky, M. H. Woodruff Drying kiln, E. & B. Holmes Fare register, J. N. Hardy Faucet, Kohler & Arnold	231,219 231,351 231,172 231,172 231,195 231,245 231,242 231,263 221,283 231,368 231,279 231,241 231,375 231,375 231,360 231,360 231,160 231,160 231,168 231,207 231,168 231,168 231,178	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart. Registering machine, W. N. Durant. Ribbon, wire stiffening, T. Kohn. Rock drill support and clamp, H. Richmann. Roofing, metallic, J. M. Hess. Rotary engine, D. L. Cross. Safes and vaults, obstructing metal, A. J. Klein. Sash fastener, W. S. Owen. Saw filing machine, gin, A. F. McAllister. Saw mill head block, J. P. McKinley. Saw mill, reciprocating, D. C. Prescott. Saw mill, reciprocating, W. M. Wilkin. Scraper, earth, A. R. Byrkett. Scroll, adjustable, A. Paul. Sewing machine shuttle bobbin, C. F. Denison. Sewing machine, braid guide for straw braid, G. F. Stone. Shaft bearing, H. L. Moulton. Shaft coupling for two-wheeled vehicles, W. R. Clark.	281,324 281,369 281,158 281,176 281,281 281,281 281,281 281,281 281,352 281,352 281,340 281,341 281,249 281,148 281,148 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188 281,188
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chain boit, H. E. Russell, Jr. Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush Cock, stop, C. H. Cushing Collar sweat pad, horse, E. R. Jones. Cultivator tooth. spring, H. Springer. Curtain fixture, A. Cosand Damper, stove pipe, W. Scully Dentures, method of and apparatus for making, R. Telschow Disks of varying thickness, apparatus for gauging and assorting, M. M. Rhodes Ditcher and scraper, combined, G. Palmer (f) Doffer combs, mechanism for operating, G. Fowler Drag or harrow, sulky, M. H. Woodruff. Drying kiln, E. & B. Holmes Fare register, J. B. Benton Fare register, J. N. Hardy Faucet, Kohler & Arnold Faucet, R. W. Tavener.	231,219 231,351 231,172 231,179 231,245 231,242 231,263 221,283 231,326 231,368 231,279 231,241 231,375 231,359 9,344 231,160 231,385 231,160 231,165 231,165 231,165 231,165 231,165 231,165 231,165	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart. Registering machine, W. N. Durant. Ribbon, wire stiffening, T. Kohn. Rock drill support and clamp, H. Richmann. Roofing, metallic, J. M. Hess. Rotary engine, D. L. Cross. Safes and vaults, orstructing metal, A. J. Klein. Sash fastener, W. S. Owen. Saw filing machine, gin, A. F. McAllister. Saw mill head block, J. P. McKinley. Saw mill, reciprocating, D. C. Prescott. Saw mill, reciprocating, W. M. Wilkin. Scraper, earth, A. R. Byrkett. Scroll, adjustable, A. Paul. Sewing machine power attachment, A. D. Pentz. Sewing machine shuttle bobbin, C. F. Denison. Sewing machine, braid guide for straw braid, G. F. Stone. Shaft bearing, H. L. Moulton. Shaft coupling for two-wheeled vehicles, W. R. Clark. Sheet metal pipes, grooving, C. Letterman (r)	231,324 231,369 231,158 231,176 231,276 231,281 231,281 231,281 231,321 231,340 231,341 231,341 231,341 231,188 231,188 231,188 231,189 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 241,249 241,249 241,249 241,249 241,249 241,249 241,249 241
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chain bolt, H. E. Russell, Jr. Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford. Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush Cock, stop, C. H. Cushing Collar sweat pad, horse, E. R. Jones. Cultivator tooth, spring, H. Springer Curtain fixture, A. Cosand Damper, stove pipe, W. Scully. Dentures, method of and apparatus for making, R. Telschow Ditcher and scraper, combined, G. Palmer (f). Doffer combs, mechanism for operating, G. Fowler Drag or harrow, sulky, M. H. Woodruff. Drying kiln, E. & B. Holmes Fare register, J. B. Benton Fare register, J. N. Hardy Faucet, Kohler & Arnold Faucet, R. W. Tavener. Fence, B. T. Hazen.	231,219 231,351 231,172 231,172 231,245 231,245 231,2463 221,283 231,366 231,368 231,279 231,241 231,375 231,375 231,375 231,368 231,279 231,241 231,375 231,375 231,375 231,375 231,375 231,375 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 231,385 23	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart. Registering machine, W. N. Durant. Ribbon, wire stiffening, T. Kohn. Rock drill support and clamp, H. Richmann. Roofing, metallic, J. M. Hess. Rotary engine, D. L. Cross. Safes and vaults, ostructing metal, A. J. Klein. Sash fastener, W. S. Owen. Saw filing machine, gin, A. F. McAllister. Saw mill head block, J. P. McKinley. Saw mill, reciprocating, D. C. Prescott. Saw mill, reciprocating, W. M. Wilkin. Scraper, earth, A. R. Byrkett. Scroll, adjustable, A. Paul. Sewing machine power attachment, A. D. Pentz. Sewing machines, braid guide for straw braid, G. F. Stone. Shaft bearing, H. L. Moulton. Shaft coupling for two-wheeled vehicles, W. R. Clark. Sheet metal pipes, grooving, C. Letterman (r) Sheet metal tube joint, G. C. Bowker	281,324 281,369 281,158 281,176 281,281 281,281 281,281 281,281 281,352 281,340 281,340 281,341 281,192 281,249 281,155 281,189 281,189 281,285 281,370 281,342 281,342 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush Cock, stop, C. H. Cushing Collar sweat pad, horse, E. R. Jones Cultivator tooth, spring, H. Springer Curtain fixture, A. Cosand Damper, stove pipe, W. Scully Dentures, method of and apparatus for making, P. Telschow Disks of varying thickness, apparatus for gauging and assorting, M. M. Rhodes Ditcher and scraper, combined, G. Palmer (p Doffer combs, mechanism for operating, G. Fowler Drag or harrow, sulky, M. H. Woodruff Drying kiln, E. & B. Holmes Fare register, J. N. Hardy Faucet, Kohler & Arnold Faucet, R. W. Tavener Fence, B. T. Hazen Fence wires, applying barbs to, E. Children	231,219 231,351 231,172 231,172 231,195 231,245 231,242 231,263 221,283 231,368 231,279 231,241 231,375 231,359 9,344 231,160 231,207 231,168 231,207 231,168 231,217 231,178 231,246 231,3178 231,2172	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart. Registering machine, W. N. Durant. Ribbon, wire stiffening, T. Kohn. Rock drill support and clamp, H. Richmann. Roofing, metallic, J. M. Hess. Rotary engine, D. L. Cross. Safes and vaults, obstructing metal, A. J. Klein. Sash fastener, W. S. Owen. Saw filing machine, gin, A. F. McAllister. Saw mill head block, J. P. McKinley. Saw mill, reciprocating, D. C. Prescott. Saw mill, reciprocating, W. M. Wilkin. Scraper, earth, A. R. Byrkett. Scroll, adjustable, A. Paul. Sewing machine shuttle bobbin, C. F. Denison. Sewing machine, braid guide for straw braid, G. F. Stone. Shaft bearing, H. L. Moulton Shaft bearing, H. L. Moulton Shaft coupling for two-wheeled vehicles, W. R. Clark. Sheet metal pipes, grooving, C. Letterman (r). Shete metal tube joint, G. C. Bowker. Shoe nail, J. Hyslop, Jr.	281,324 281,369 281,158 281,176 281,281 281,281 281,281 281,281 281,352 281,340 281,340 281,341 281,192 281,249 281,155 281,189 281,189 281,285 281,370 281,342 281,342 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281,343 281
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chain bolt, H. E. Russell, Jr. Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush Cock, stop, C. H. Cushing Collar sweat pad, horse, E. R. Jones. Cultivator tooth, spring, H. Springer Curtain fixture, A. Cosand Damper, stove pipe, W. Scully Dentures, method of and apparatus for making, P. Telschow Disks of varying thickness, apparatus for gauging and assorting, M. M. Rhodes. Ditcher and scraper, combined, G. Palmer (r) Doffer combs, mechanism for operating, G. Fowler Drag or harrow, sulky, M. H. Woodruff. Drying kiln, E. & B. Holmes Fare register, J. B. Benton Fare register, J. N. Hardy Faucet, Kohler & Arnold Faucet, R. W. Tavener. Fence, B. T. Hazen Fence wires, applying barbs to, E. Children Fertilizer drill, J. Taylor	231,219 231,351 231,172 231,175 231,245 231,242 231,263 221,283 231,368 231,279 231,241 231,375 231,359 9,344 231,160 231,168 231,207 231,145 231,313 231,246 231,313 231,246 231,313 231,272 231,374	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart. Registering machine, W. N. Durant. Ribbon, wire stiffening, T. Kohn. Rock drill support and clamp, H. Richmann. Roofing, metallic, J. M. Hess. Rotary engine, D. L. Cross. Safes and vaults, orstructing metal, A. J. Klein. Sash fastener, W. S. Owen. Saw filing machine, gin, A. F. McAllister. Saw mill head block, J. P. McKinley. Saw mill, reciprocating, D. C. Prescott. Saw mill, reciprocating, W. M. Wilkin. Scraper, earth, A. R. Byrkett. Scroll, adjustable, A. Paul. Sewing machine, A. S. Dinsmore. Sewing machine, buttle bobbin, C. F. Denison. Sewing machine, buttle bobbin, C. F. Denison. Sewing machine, buttle bobbin, C. F. Denison. Sewing machine, buttle bobbin, C. F. Stone. Shaft bearing, H. L. Moulton. Shaft coupling for two-wheeled vehicles, W. R. Clark. Sheet metal tube joint, G. C. Bowker. Shoe nail, J. Hyslop, Jr. Shoe quarters, machine for marking and punch-	231,324 231,369 231,158 231,176 231,238 231,317 231,281 231,281 231,321 231,340 231,341 231,182 231,192 231,148 231,188 231,188 231,188 231,188 231,285 231,322 231,322 231,322 231,322 231,322 231,322
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chain bolt, H. E. Russell, Jr. Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford. Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush Cock, stop, C. H. Cushing Collar sweat pad, horse, E. R. Jones. Cultivator tooth, spring, H. Springer Curtain fixture, A. Cosand Damper, stove pipe, W. Scully. Dentures, method of and apparatus for making, R. Telschow Ditcher and scraper, combined, G. Palmer (f). Doffer combs, mechanism for operating, G.Fowler Drag or harrow, sulky, M. H. Woodruff. Drying kiln, E. & B. Holmes Fare register, J. B. Benton Fare register, J. N. Hardy Faucet, Kohler & Arnold Faucet, R. W. Tavener. Fence, b. T. Hazen Fence wires, applying barbs to, E. Children Fertilizer drill, J. Taylor. Fifth wheel, T. L. Andrews	231,219 231,351 231,172 231,172 231,195 231,245 231,242 231,268 231,368 231,375 231,375 231,375 231,375 231,375 231,375 231,468 231,168 231,178 231,168 231,178 231,178 231,243 231,243 231,243 231,343 231,374 231,374	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart. Registering machine, W. N. Durant. Registering machine, W. N. Durant. Rock drill support and clamp, H. Richmann. Rocking metallic, J. M. Hess. Rotary engine, D. L. Cross. Safes and vaults, onstructing metal, A. J. Klein. Sash fastener, W. S. Owen. Saw filing machine, gin, A. F. McAllister. Saw mill head block, J. P. McKinley. Saw mill, reciprocating, D. C. Prescott. Saw mill, reciprocating, W. M. Wilkin. Scraper, earth, A. R. Byrkett. Scroll, adjustable, A. Paul. Sewing machine, A. S. Dinsmore. Sewing machine power attachment, A. D. Pentz. Sewing machine shuttle bobbin, C. F. Denison. Sewing machines, braid guide for straw braid, G. F. Stone. Shaft bearing, H. L. Moulton. Shaft coupling for two-wheeled vehicles, W. R. Clark. Sheet metal pipes, grooving, C. Letterman (r). Sheet metal tube joint, G. C. Bowker Shoe nail, J. Hyslop, Jr. Shoe quarters, machine for marking and punching holes in, P. R. Pickering.	281,324 281,369 281,158 281,176 281,281 281,281 281,281 281,281 281,352 281,340 281,340 281,340 281,341 281,155 281,148 281,155 231,189 231,285 231,382 231,382 231,382 231,382 231,382 231,382 231,382 231,382 231,382 231,382 231,382 231,382 231,382 231,382 231,382 231,382 231,382 231,382 231,382 231,382 231,382 231,382 231,382 231,382 231,382 231,382 231,382 231,382 231,382 231,382 231,382 231,382
Casks, cleansing beer, G. S. & J. M. Fanning Celling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush Cock, stop, C. H. Cushing Collar sweat pad, horse, E. R. Jones Cultivator tooth, spring, H. Springer Curtain fixture, A. Cosand Damper, stove pipe, W. Scully Dentures, method of and apparatus for making, R. Telschow Disks of varying thickness, apparatus for gauging and assorting, M. M. Rhodes Ditcher and scraper, combined, G. Palmer (r) Doffer combs, mechanism for operating, G.Fowler Drag or harrow, sulky, M. H. Woodruff Drying kiln, E. & B. Holmes Fare register, J. N. Hardy Faucet, Kohler & Arnold Faucet, R. W. Tavener Fence, b. T. Hazen Fence wires, applying barbs to, E. Children Ferlitizer drill, J. Taylor Fifth wheel, T. L. Andrews File holder, T. B. Pinn	231,219 231,351 231,172 231,172 231,195 231,245 231,242 231,263 221,283 231,368 231,279 231,241 231,375 231,359 9,344 231,168 231,207 231,368 231,207 231,168 231,213 231,178 231,246 231,313 231,272 231,374 231,145 231,374	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart. Registering machine, W. N. Durant. Registering machine, W. N. Durant. Ribbon, wire stiffening, T. Kohn. Rock drill support and clamp, H. Richmann. Roofing, metallic, J. M. Hess. Rotary engine, D. L. Cross. Safes and vaults, obstructing metal, A. J. Klein. Sash fastener, W. S. Owen. Saw filing machine, gin, A. F. McAllister. Saw mill head block, J. P. McKinley. Saw mill, reciprocating, D. C. Prescott. Saw mill, reciprocating, W. M. Wilkin. Scraper, earth, A. R. Byrkett. Scroll, adjustable, A. Paul. Sewing machine shuttle bobbin, C. F. Denison. Sewing machines, braid guide for straw braid, G. F. Stone. Shaft bearing, H. L. Moulton. Shaft coupling for two-wheeled vehicles, W. R. Clark. Sheet metal pipes, grooving, C. Letterman (r). Sheet metal tube joint, G. C. Bowker. Shoe nail, J. Hyslop, Jr. Shoe quarters, machine for marking and punching holes in, P. R. Pickering.	281,324 281,369 281,158 231,176 231,238 231,317 231,281 231,352 231,340 231,341 231,352 231,148 231,148 231,148 231,148 231,148 231,148 231,148 231,155 231,189 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231,442 231
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chain bolt, H. E. Russell, Jr. Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford. Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush Cock, stop, C. H. Cushing Collar sweat pad, horse, E. R. Jones. Cultivator tooth, spring, H. Springer Curtain fixture, A. Cosand Damper, stove pipe, W. Scully. Dentures, method of and apparatus for making, R. Telschow Ditcher and scraper, combined, G. Palmer (f). Doffer combs, mechanism for operating, G.Fowler Drag or harrow, sulky, M. H. Woodruff. Drying kiln, E. & B. Holmes Fare register, J. B. Benton Fare register, J. N. Hardy Faucet, Kohler & Arnold Faucet, R. W. Tavener. Fence, b. T. Hazen Fence wires, applying barbs to, E. Children Fertilizer drill, J. Taylor. Fifth wheel, T. L. Andrews	231,219 231,351 231,172 231,172 231,195 231,245 231,242 231,263 221,283 231,368 231,279 231,241 231,375 231,359 9,344 231,160 231,385 231,168 231,207 231,165 231,313 231,313 231,313 231,313 231,313 231,314 231,315 231,313 231,314 231,315 231,315 231,315 231,315 231,315 231,315 231,315 231,315 231,315 231,315 231,315 231,315 231,315 231,315 231,315 231,315 231,315	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart. Registering machine, W. N. Durant. Registering machine, W. N. Durant. Rock drill support and clamp, H. Richmann. Rocking metallic, J. M. Hess. Rotary engine, D. L. Cross. Safes and vaults, onstructing metal, A. J. Klein. Sash fastener, W. S. Owen. Saw filing machine, gin, A. F. McAllister. Saw mill head block, J. P. McKinley. Saw mill, reciprocating, D. C. Prescott. Saw mill, reciprocating, W. M. Wilkin. Scraper, earth, A. R. Byrkett. Scroll, adjustable, A. Paul. Sewing machine, A. S. Dinsmore. Sewing machine power attachment, A. D. Pentz. Sewing machine shuttle bobbin, C. F. Denison. Sewing machines, braid guide for straw braid, G. F. Stone. Shaft bearing, H. L. Moulton. Shaft coupling for two-wheeled vehicles, W. R. Clark. Sheet metal pipes, grooving, C. Letterman (r). Sheet metal tube joint, G. C. Bowker Shoe nail, J. Hyslop, Jr. Shoe quarters, machine for marking and punching holes in, P. R. Pickering.	281,324 281,369 231,158 231,176 231,281 231,281 231,281 231,281 231,321 231,332 231,341 231,249 231,148 231,148 231,148 231,148 231,188 231,249 231,188 231,249 231,188 231,249 231,188 231,249 231,341 231,249 231,249 231,341 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,249 231,342 231,342 231,342 231,342 231,343 231,240 231,344 231,344 231,346 231,346
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chain bolt, H. E. Russell, Jr. Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush Cock, stop, C. H. Cushing Collar sweat pad, horse, E. R. Jones. Cultivator tooth, spring, H. Springer. Curtain fixture, A. Cosand Damper, stove pipe, W. Scully Dentures, method of and apparatus for making, R. Telschow Disks of varying thickness, apparatus for gauging and assorting, M. M. Rhodes. Ditcher and scraper, combined, G. Palmer (r). Doffer combs, mechanism for operating, G. Fowler Drag or harrow, sulky, M. H. Woodruff. Drying kiln, E. & B. Holmes Fare register, J. B. Benton Fare register, J. N. Hardy Faucet, Kohler & Arnold Faucet, R. W. Tavener. Fence, D. T. Hazen Fence wires, applying barbs to, E. Children Fertilizer drill, J. Taylor. Fifth wheel, T. L. Andrews File holder, T. B. Pinn Filter, J. Kroog.	231,219 231,351 231,172 231,172 231,195 231,245 231,242 231,242 231,268 231,368 231,279 231,241 231,375 231,375 231,369 9,344 231,369 231,168 231,168 231,178 231,168 231,178 231,168 231,178 231,168 231,178 231,140 231,313 231,272 231,314 231,313 231,272 231,313 231,273 231,313 231,273 231,313	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart. Registering machine, W. N. Durant. Ribbon, wire stiffening, T. Kohn. Rock drill support and clamp, H. Richmann. Roofing, metallic, J. M. Hess. Rotary engine, D. L. Cross. Safes and vaults, ostructing metal, A. J. Klein. Sash fastener, W. S. Owen. Saw filing machine, gin, A. F. McAllister. Saw mill head block, J. P. McKinley. Saw mill, reciprocating, D. C. Prescott. Saw mill, reciprocating, W. M. Wilkin. Scraper, earth, A. R. Byrkett. Scroll, adjustable, A. Paul. Sewing machine shuttle bobbin, C. F. Denison. Sewing machine, braid guide for straw braid, G. F. Stone. Shaft bearing, H. L. Moulton. Shaft coupling for two-wheeled vehicles, W. R. Clark. Sheet metal pipes, grooving, C. Letterman (r). Sheet metal tube joint, G. C. Bowker. Shoe nail, J. Hyslop, Jr Shoe quarters, machine for marking and punching holes in, P. R. Pickering.	281,324 281,369 281,158 281,176 281,281 281,281 281,281 281,281 281,352 281,340 281,352 281,340 281,340 281,449 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281,249 281
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chain bolt, H. E. Russell, Jr. Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford. Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush Cock, stop, C. H. Cushing Collar sweat pad, horse, E. R. Jones. Cultivator tooth, spring, H. Springer Cultain fixture, A. Cosand Damper, stove pipe, W. Scully. Dentures, method of and apparatus for making, R. Telschow Disks of varying thickness, apparatus for gauging and assorting, M. M. Rhodes. Ditcher and scraper, combined, G. Palmer (r). Doffer combs, mechanism for operating, G. Fowler Drag or harrow, sulky, M. H. Woodruff. Drying kiln, E. & B. Holmes Fare register. J. B. Benton Fare register, J. N. Hardy Faucet, Kohler & Arnold Faucet, R. W. Tavener. Fence wires, applying barbs to, E. Children Fertilizer drill, J. Taylor. Fifth wheel, T. L. Andrews File holder, T. B. Pinn Filter, J. Kroog. Fire engine boiler, T. S. La France.	231,219 231,351 231,172 231,172 231,195 231,245 231,242 231,368 231,279 231,241 231,375 231,375 231,375 231,375 231,168 231,207 231,178 231,246 231,272 231,374 231,272 231,374 231,272 231,374 231,272 231,374 231,375 231,374 231,375 231,374 231,374 231,374 231,374 231,374 231,374 231,374 231,374 231,374 231,374 231,374 231,374 231,374 231,374 231,374 231,374 231,374 231,374 231,374 231,374 231,374 231,374 231,374 231,374 231,374 231,374 231,374 231,374 231,374 231,374 231,374 231,374 231,374	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart. Registering machine, W. N. Durant. Registering machine, W. N. Durant. Rock drill support and clamp, H. Richmann. Rocking metallic, J. M. Hess. Rotary engine, D. L. Cross. Safes and vaults, onstructing metal, A. J. Klein. Sash fastener, W. S. Owen. Saw filing machine, gin, A. F. McAllister. Saw mill head block, J. P. McKinley. Saw mill, reciprocating, D. C. Prescott. Saw mill, reciprocating, W. M. Wilkin. Scraper, earth, A. R. Byrkett. Scroll, adjustable, A. Paul. Sewing machine, A. S. Dinsmore. Sewing machine power attachment, A. D. Pentz. Sewing machines, braid guide for straw braid, G. F. Stone. Shaft bearing, H. L. Moulton. Shaft coupling for two-wheeled vehicles, W. R. Clark. Shoe metal pipes, grooving, C. Letterman (r). Sheet metal pipes, grooving, C. Letterman (r). Shoe nail, J. Hyslop, Jr. Shoe quarters, machine for marking and punching holes in, P. R. Pickering. Shoe tree, C. Stoddard. Show box, I. Neuburger. Shuttle, I. Eaton.	281,324 281,369 281,158 231,176 281,281 281,281 281,281 281,281 281,352 281,340 281,341 281,249 281,148 281,148 281,148 281,155 231,189 231,285 231,342 231,242 231,342 231,342 231,342 231,342 231,342 231,342 231,342
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chair brace, Sorenson & Stanton Chair brace, Sorenson & Stanton Chair brace, Sorenson & Stanton Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush Cock, stop, C. H. Cushing Colar sweat pad, horse, E. R. Jones Cultivator tooth, spring, H. Springer Curtain fixture, A. Cosand Damper, stove pipe, W. Scully Dentures, method of and apparatus for making, P. Telschow Ditcher and scraper, combined, G. Palmer (r) Doffer combs, mechanism for operating, G.Fowler Drag or harrow, sulky, M. H. Woodruff. Drying kiln, E. & B. Holmes Fare register, J. B. Benton Fare register, J. B. Benton Fare register, J. N. Hardy Faucet, Kohler & Arnold Fence, b. T. Hazen Fence wires, applying barbs to, E. Children Fertith wheel, T. L. Andrews File holder, T. B. Pinn Fire extinguisher, D. T. Perkins	231,219 231,351 231,172 231,172 231,172 231,245 231,245 231,268 221,283 231,326 231,368 231,279 231,241 231,375 231,368 231,272 231,168 231,207 231,168 231,207 231,168 231,2172 231,3174 231,3175 231,3175 231,3175 231,3175 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,3174 231,31	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart. Registering machine, W. N. Durant. Ribbon, wire stiffening, T. Kohn. Rock drill support and clamp, H. Richmann. Roofing, metallic, J. M. Hess. Rotary engine, D. L. Cross. Safes and vaults, obstructing metal, A. J. Klein. Sash fastener, W. S. Owen. Saw filing machine, gin, A. F. McAllister. Saw mill head block, J. P. McKinley. Saw mill, reciprocating, D. C. Prescott. Saw mill, reciprocating, W. M. Wilkin. Scraper, earth, A. R. Byrkett. Scroll, adjustable, A. Paul. Sewing machine shuttle bobbin, C. F. Denison. Sewing machines, braid guide for straw braid, G. F. Stone. Shaft bearing, H. L. Moulton. Shaft bearing, H. L. Moulton. Shaft coupling for two-wheeled vehicles, W. R. Clark. Sheet metal pipes, grooving. C. Letterman (r). Sheet metal tube joint, G. C. Bowker. Shoe nail, J. Hyslop, Jr. Shoe quarters, machine for marking and punching holes in, P. R. Pickering. Shoe tree, C. Stoddard. Show box, I. Neuburger. Shuttle. I. Eaton.	281,324 281,369 231,158 231,176 231,281 231,281 231,281 231,281 231,352 231,352 231,340 231,341 231,249 231,148 231,1249 231,148 231,125 231,189 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,346 231,346 231,346
Casks, cleansing beer, G. S. & J. M. Fanning Celling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush Cock, stop, C. H. Cushing Collar sweat pad, horse, E. R. Jones Cultivator tooth, spring, H. Springer Curtain fixture, A. Cosand Damper, stove pipe, W. Scully Dentures, method of and apparatus for making, P. Telschow Disks of varying thickness, apparatus for gauging and assorting, M. M. Rhodes Ditcher and scraper, combined, G. Palmer (r) Doffer combs, mechanism for operating, G. Fowler Drag or harrow, sulky, M. H. Woodruff Drying kiln, E. & B. Holmes Fare register, J. N. Hardy Faucet, Kohler & Arnold Faucet, Kohler & Arnold Fence, b. T. Hazen Fence bers, applying barbs to, E. Children Ferifth wheel, T. L. Andrews File holder, T. B. Pinn Fire extinguisher, D. T. Perkins Flue stopper, J. B. Jewell	231,219 231,351 231,172 231,175 231,245 231,242 231,263 221,283 231,368 231,279 231,241 231,375 231,369 9,344 231,160 231,168 231,207 231,145 231,313 231,246 231,313 231,272 231,374 231,140 231,355 231,374 231,140 231,555 231,386 231,190 231,1252	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart. Registering machine, W. N. Durant. Ribbon, wire stiffening, T. Kohn. Rock drill support and clamp, H. Richmann. Roofing, metallic, J. M. Hess. Rotary engine, D. L. Cross. Safes and vaults, obstructing metal, A. J. Klein. Sash fastener, W. S. Owen. Saw filing machine, gin, A. F. McAllister. Saw mill head block, J. P. McKinley. Saw mill, reciprocating, D. C. Prescott. Saw mill, reciprocating, W. M. Wilkin. Scraper, earth, A. R. Byrkett. Scroll, adjustable, A. Paul. Sewing machine shuttle bobbin, C. F. Denison. Sewing machine, braid guide for straw braid, G. F. Stone. Shaft bearing, H. L. Moulton Shaft coupling for two-wheeled vehicles, W. R. Clark. Sheet metal pipes, grooving, C. Letterman (r). Sheet metal pipes, grooving, C. Letterman (r). Sheet metal pipes, prooving, C. Bowker. Shoe anail, J. Hyslop, Jr. Shoe quarters, machine for marking and punching holes in, P. R. Pickering. Show box, I. Neuburger. Shuttle, I. Eaton. Sifter, flour, G. A. Wells Sled, bob, C. E. Cain.	281,324 281,369 231,158 231,176 231,281 231,281 231,281 231,281 231,352 231,352 231,340 231,341 231,249 231,148 231,1249 231,148 231,125 231,189 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,342 231,346 231,346 231,346
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chain bolt, H. E. Russell, Jr. Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush Cock, stop, C. H. Cushing Collar sweat pad, horse, E. R. Jones. Cultivator tooth, spring, H. Springer Curtain fixture, A. Cosand Damper, stove pipe, W. Scully Dentures, method of and apparatus for making, R. Telschow Disks of varying thickness, apparatus for gauging and assorting, M. M. Rhodes. Ditcher and scraper, combined, G. Palmer (r) Doffer combs, mechanism for operating, G. Fowler Drag or harrow, sulky, M. H. Woodruff. Drying kiln, E. & B. Holmes Fare register, J. B. Benton Fare register, J. B. Hardy Faucet, Kohler & Arnold Faucet, R. W. Tavener. Fence, b. T. Hazen Fence wires, applying barbs to, E. Children Fertilizer drill, J. Taylor Fifth wheel, T. L. Andrews File holder, T. B. Pinn Filter, J. Kroog Fire engine boiler, T. S. La France. Fire extinguisher, D. T. Perkins Flue stopper, J. B. Jewell.	231,219 231,351 231,172 231,172 231,172 231,245 231,242 231,263 221,283 231,366 231,279 231,241 231,375 231,359 9,344 231,375 231,385 231,168 231,272 231,374 231,246 231,272 231,374 231,272 231,374 231,374 231,316 231,316	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart. Registering machine, W. N. Durant. Registering machine, W. N. Durant. Rock drill support and clamp, H. Richmann. Rocking metallic, J. M. Hess. Rotary engine, D. L. Cross. Safes and vaults, onstructing metal, A. J. Klein. Sash fastener, W. S. Owen. Saw filing machine, gin, A. F. McAllister. Saw mill head block, J. P. McKinley. Saw mill, reciprocating, D. C. Prescott. Saw mill, reciprocating, W. M. Wilkin. Scraper, earth, A. R. Byrkett. Scroll, adjustable, A. Paul. Sewing machine, A. S. Dinsmore Sewing machine power attachment, A. D. Pentz. Sewing machines, braid guide for straw braid, G. F. Stone. Shaft bearing, H. L. Moulton. Shaft coupling for two-wheeled vehicles, W. R. Clark. Sheet metal pipes, grooving, C. Letterman (r). Sheet metal tube joint, G. C. Bowker. Shoe nail, J. Hyslop, Jr. shoe quarters, machine for marking and punching holes in, P. R. Pickering. Show box, I. Neuburger. Shuttle, I. Eaton. Sifter, flour, G. A. Wells Sled, bob, C. E. Cain. Sole fastenings, machine for driving, O.R.Chaplin	281,324 281,369 281,158 231,176 281,281 281,281 281,281 281,281 281,281 281,352 281,340 281,341 281,192 281,189 281,189 281,189 281,285 281,370 281,370 281,382 281,285 281,370 281,382 281,285 281,382 281,382 281,285 281,382 281,382 281,285 281,382 281,285 281,382 281,285 281,382 281,382 281,285 281,285 281,285 281,285 281,285 281,285 281,382 281,285 281,285 281,285 281,285 281,285 281,285 281,285 281,285 281,285 281,285 281,285 281,285 281,285 281,285 281,285 281,285 281,285 281,285 281,285 281,285 281,285
Casks, cleansing beer, G. S. & J. M. Fanning Ceiling, fireproof, J. D. Ottiwell Cement compound, H. Jordan Chain bolt, H. E. Russell, Jr. Chair brace, Sorenson & Stanton Check rower attachment, J. M. Shackelford. Clamp for attaching handles to earthenware and glass vessels, C. J. Brackebush Cock, stop, C. H. Cushing Collar sweat pad, horse, E. R. Jones Cuttivator tooth, spring, H. Springer Curtain fixture, A. Cosand Damper, stove pipe, W. Scully. Dentures, method of and apparatus for making, P. Telschow Ditcher and scraper, combined, G. Palmer (r). Doffer combs, mechanism for operating, G. Fowler Drag or harrow, sulky, M. H. Woodruff. Drying kiln, E. & B. Holmes Fare register, J. B. Benton Fare register, J. N. Hardy Faucet, Kohler & Arnold Faucet, R. W. Tavener. Fence, b. T. Hazen. Fence wires, applying barbs to, E. Children Fertilizer drill, J. Taylor Fifth wheel, T. L. Andrews File holder, T. B. Pinn Filter, J. Kroog. Fire extinguisher, D. T. Perkins Flue stopper, J. B. Jewell. Folding table, F. F. Atkinson. Fruit picker, F. M. Taylor	231,219 231,351 231,172 231,172 231,172 231,245 231,242 231,263 221,283 231,366 231,368 231,279 231,241 231,375 231,369 231,260 231,385 231,160 231,381 231,212 231,313 231,178 231,246 231,313 231,272 231,3140 231,313 231,3140 231,313 231,3140 231,313 231,3140 231,313 231,3140 231,313 231,3140 231,313 231,3140 231,313 231,3140 231,313 231,3140 231,313 231,313 231,313 231,313 231,313 231,313 231,313 231,313 231,313 231,313	Refrigerator, C. P. Jackson. Refrigerator and dumb waiter, combined, C. E. Stewart. Registering machine, W. N. Durant. Ribbon, wire stiffening, T. Kohn. Rock drill support and clamp, H. Richmann. Roofing, metallic, J. M. Hess. Rotary engine, D. L. Cross. Safes and vaults, obstructing metal, A. J. Klein. Sash fastener, W. S. Owen. Saw filing machine, gin, A. F. McAllister. Saw mill head block, J. P. McKinley. Saw mill, reciprocating, D. C. Prescott. Saw mill, reciprocating, W. M. Wilkin. Scraper, earth, A. R. Byrkett. Seroll, adjustable, A. Paul. Sewing machine, A. S. Dinsmore. Sewing machine shuttle bobbin, C. F. Denison. Sewing machine, Spraid guide for straw braid, G. F. Stone. Shaft bearing, H. L. Moulton. Shaft coupling for two-wheeled vehicles, W. R. Clark. Sheet metal tube joint, G. C. Bowker. Shoe nail, J. Hyslop, Jr. Shoe quarters, machine for marking and punching holes in, P. R. Pickering. Show box, I. Neuburger. Shutle, I. Eaton. Sifter, flour, G. A. Wells Sled, bob, C. E. Cain. Sole fastenings, machine for driving, O.R.Chaplin Sound, device for refracting, reinforcing, and modulating, A. C. Engert Spirts, rectifying, C. Kalthoff.	231,324 231,369 231,158 231,176 231,281 231,281 231,281 231,281 231,340 231,341 231,281 231,148 231,148 231,148 231,188 231,189 231,285 231,340 231,281 231,282 231,340 231,341 231,285 231,342 231,343 231,249 231,343 231,343 231,343 231,343 231,343 231,343 231,344 231,345 231,346 231,346 231,347 231,348 231,348 231,348 231,348 231,348 231,348 231,348 231,348 231,348 231,348 231,348 231,348 231,349 231,349 231,349
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not, why? And howmuch difference will there be at			Ī
12 o'clock noon? A. We should infer yours to be a horizontal sundial, and will give correct time only in			; !
latitude for which it was made, save when sun in meridian; because the gnomon or style by which the	Glazier's tool, I. W. Heysinger Gleaner and binder, W. N. Whiteley	231.225	18
shadow is cast must be placed parallel with the polar axis of the ϵ arth, and the base upon which the shadow	Gold, apparatus for saving float. J. Wilkins Gong and alarm, door. F. N. Cottle	231,205	1 8
is cast parallel with the horizon, both of which cannot be done when a change of latitude is made. If the	Governor, J. D. Churchill	231,157	
style of your dial is set truly in the meridian of your place, and depressed to correspond with your latitude,	Grate, J. B. Faris Grate, fireplace, Brown & Miller	231.206	. 8
it will give you 6 o'clock A.M. and 6 o'clock P.M also the exact sun or true time, at noon.	Grinding mill, E. G. Good Grinding mill, Patterson & Hale. Hammer, steam. T. R. Morgan.	231,354	
MINERALS, ETC.—Specimens have been re-	Harrow, C. E. Wyman.	231,257	8
ceived from the following correspondents, and	Harrow, spring tooth. H. A. Kiltz Harrow tooth, spring, C. D. Carter.	231,175	1
examined, with the results stated: W. N. W.—Galena—lead sulphide, a rich lead ore. It	Rayrake horse, Reed & Rogers	231,211	2
probably carries a little silver-worth assaying.	Hedge trimmer. Cunningham & Bailey	231.184	1
COMMUNICATIONS RECEIVED.	Hoe, J. W. Gladding Horse power. S. Scott Horse rake, J. Hollingsworth	231.364	1
On the Motion of the planets. By A. K. On a New Theory of Planetary Movement. By J. H.S.	Ice grooving plow, H. Ware	231,201	
On Declination of the Magnetic Needle. By J. L. R. No Current in Magnets By W. B. F., M.D	Indexing books. spring clip for, C. L. Norton Ironing board, G. D. File	231,349 231,298	:
On Protecting Oil Tanks from Lightning. ByW.	Knob attachment, S. HarrisLabel, J. H. Small231,365,	231.366	
[OFFICIAL.]	Lamp, student, E. A. Parker Latch, C. E. Billings Latch, reversible, C. S. Jennings	231,260	. 1
INDEX OF INVENTIONS	Lightning rod coupling, J. H. Weston Limekiln, Hughes & Foulk	231,203	. 7
FOR WHICH	Lock casings, machine for making, Brooks & Willard		1
Letters Patent of the United States were Granted in the Week Ending	Locomotive ash pan, C. Bresnahan Locomotive fire box, W. H. Rushforth		. 1
August 17, 1880,	Locomotive lift pipe, T. Plain Locomotive, tank, G. Lentz	231,337	
AND EACH BEARING THAT DATE. [Those marked (r) are reissued patents.]	Log conveyer, T. J. Neacy Loom shuttle box mechanism. Crompton & Wy-		: 1
A printed copy of the specification and drawing of any	man Looms, retracting device for the picker sticks of, J. J. Geobegan		: 7
patent in the agnexed list, also of any patent issued since 1866, will be furnished from this office for one dol-	Lumber polishing machine, B. Beehler	231.259	
lar. In ordering please state the number and date of the	Meat chopper, G. P. Norton	231,187	
patent desired and remit to Munn & Co., 37 Park Row, New York city. We also furnish copies of patents	Metal plates, machine for beveling the edges of, R. Briggs		
granted prica to 1866; but at increased cost, as the specifications not being printed, must be copied by hand.	Microphone transmitter, T. A. Watson	231,247	. (
Advertising, automatic device for, R. M. Westlake 231,204	ratus for catching dust generated in, C. E. Thayer		•
Aging liquors, apparatus for, J. H. Thierman 231,377 Air brake for railway trains, J. Hall 231,311 Axle cutting device. L. A. Young 231.387	Mining, apparatus for hydraulic, W.B. Farwell Mower, lawn, Dille & McGuire Musical instrument, mechanical, G. H. Ireland	231,286	. 1
Bale band tightener, C. T. Christmas 231,273 Bale tag, P. Cohen 231,277	Nail extractor, F. Kraengel Nail pointing die, J. M. E. Baackes	231,332	٠. ١
Baling press, P. K. Dederick	Nails, die for pointing wire, J. M. E. Baackes Nutlock, G. Lyon	231,338	
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