## Business and Personal.

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 Advertisements must be received at publication office DEAP SIRS: In answer to your inquiry as to how we as early as Thursday morning to appear in next issue. | like your Paint. we are more than entirely satisfied with The publishers of this paper guarantee to advertisers a circulation of not less than 50,000 copies every weekly issue.

For the Development of New Ideas, try Anderson Bros., Peekskill, N. Y. Experience large.

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

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

Burgess' Non conductor for Heated Surfaces; easily applied, efficient, and inexpensive. Applicable to plain or curved surfaces, pipes, elbows, and valves. See p. 284.

Safety Linen Hose for hotels, factories. and stores, with or without couplings. Greene, Tweed & Co., 118 Chambers St., New York.

Lubricene, Gear Grease, Cylinder and Machinery Oils R. J. Chard, 6 Burling Slip, New York.

Power, Foot,& Hand Presses for Metal Workers. Moderate prices. Peerless Punch & Shear Co. 52 Dey St., N.Y. The Brown Automatic Cut-off Engine; unexcelled for workmanship, economy, and durability. Write for in-formation. C. H. Brown & Co., Fitchburg, Mass.

Corrugated Traction Tire for Portable Engines, etc. Sole manufacturers, H. Lloyd, Son & Co., Pittsburg, Pa. For the best Stave, Barrel, Keg, and Hogshead Ma

chinery, address H. A. Crossley, Cleveland, Ohio. For Alcott's Improved Turbine, see adv. p. 270.

Collection of Ornaments .- A book containing over 1,000 different designs, such as crests, coats of arms scrolls, corners, borders, etc., sent on receip of \$2. Palm & Fechteler, 403 Broadway, New York city Best Oak Tanned Leather Belting. Wm. F. Fore

paugh, Jr., & Bros., 531 Jefferson St., Philadelphia, Pa. National Steel Tube Cleaner for boiler tubes. Adjust

able, durable. Chalmers-Spence Co., 40 John St., N. Y. Split Pulleys at low prices, and of same strength and

appearance as Whole Pulleys. Yocom & Son's Shafting Works, Drinker St., Philadelphia, Pa.

Removal.-Greene, Tweed & Co. have removed from 18 Park Place to 118 Chambers St., New York. Stave, Barrel, Keg, and Hogshead Machinery a spe

cialty, by E. & B. Holmes, Buffalo, N. Y. Solid Emery Vulcanite Wheels-The Solid Original

Emery Wheel - other kinds imitations and inferior Caution.-Our name is stamped in full on all our best Standard Belting, Packing, and Hose. Buy that only. The best is the cheapest. New York Belting and Pack ing Company, 37 and 38 Park Row. N. Y.

Sheet Metal Presses. Ferracute Co., Bridgeton, N. J 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.

Wright's Patent Steam Engine, with automatic cutoff. The best engine made. For prices, address William Wright, Manufacturer, Newburgh, N. Y

Presses, Dies, and Tools for working Sheet Metal. etc. Fruit & other can tools. Bliss & Williams. B'klyn. N. Y. Bradley's cushioned helve hammers. See illus. ad. p. 300.

Electrical Indicators for giving signal notice of extremes of pressure or temperature. Costs only \$20. At-tached to any instrument. T.Shaw, 915 Ridge Ave. Phila.

Instruction in Steam and Mechanical Engineering. A thorough practical education, and a desirable situation on as competent, can be obtained at the National Institute of Steam Engineering, Bridgeport, Conn. For particulars, send for pamphlet.

Hydraulic Jacks, Presses and Pumps. Polishing and Buffing Machinery. Patent Punches, Shears, etc. E. Lyon & Co., 470 Grand St., New York.

Portable Forges, \$12. Roberts, 107 Liberty St., N. Y. Telephones repaired, parts of same for sale. Send

stamp for circulars. P. O. Box 205, Jersey City, N. J. Eclipse Portable Engine. See illustrated adv., p. 284.

For best low price Planer and Matcher, and latest improved Sash, Door, and Blin i Machinery, Send for catalogue to Rowley & Hermance, Williamsport, Pa.

Loud Speaking Telephones, \$5 a pair. Circulars for stamp. Agents wanted. Wm. R. Brooks, Phelps, N.Y. Small High Speed Steam Yachts complete or in parts. Geo. F. Shedd, Waltham. Mass.

Wanted-A Specialty to Manufacture. Good Machine Shop. Wood Working Tools and Foundry. J. W. Murkland, Barton, Vt.

How to Lay Out the Teeth of Gear Wheels. Price 50 cts. Address Edward Lyman, C.E., New Haven, Conn.

A 60 to 80 H. P. Tubular Boiler, for cash, is wanted MODERN OBSERVATIONS ON RIFLE SHOOTING, by John Hall, Fort Ann, N. Y. 15 H. P. Engines, complete order, \$150. York &

Smith, Cleveland, Ohio AUBURN, N. Y., March 1, 1878.

H. W. Johns M'f'a Co. 87 Maiden Lane. New Yo

it. As you are aware, we are large users of paint, and of all that we have ever used, are satisfied yours is far superior; it is put on with less labor, covers better, flows more easily, has a better body, and, as far as our experience goes, will stand the weather hetter than any other paint we know of. Your Roof Paint is unsurpassed; we used one coat on

a tin roof, and to-day it looks as fresh and the color is as bright as when first applied. Respectfully yours, JOSIAH BARBER & SONS.

Manufacturers of Woolen Goods and Carpetings We take pleasure in referring by permission to the above firm. and would caution the public against worthless imitations of our Asbestos Paints. The ge hears the name of H. W. Johns on every package. The genuine

Forsaith & Co., Manchester, N. H., & 207 Centre St., N. Y. Bolt Forging Machines, Power Hammers, Comb'd Hand Fire Eng. & Hose Carriages, New & 2d hand Machin-ery. Send stamp for illus. cat. State just what you want.

Portable Railroads Sugar Mills. Horizontal & Beam Steam Engines. Atlantic Steam Engine W'ks, B'klyn, N.Y.

Fire Brick, Tile, and Clay Retorts, all shapes. Borgner & O'Brien, M'f'rs, 23d St., above Race, Phila., Pa

Peck's Patent DropPress. See adv., page 301.

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.

Diamond Tools. J. Dickinson, 64 Nassau St., N.Y.

Expanders. R. Dudgeon, 24 Columbia St., New York Valve Refitting Machine. See adv., page 300. Cut Gears for Models, etc. Models, working machin-

ery, experimental work, manufacturing, etc., to order. D. Gilbert & Son, 212 Chester St., Phila., Pa.

Blake Lionand Eagle Imp'd Crusher. See adv. p. 301. Holly System of Water Supply and Fire Protection and Villages. See advertisement in Scien TIFIC AMERICAN of last week.

The E. Horton & Son Co., Windsor Locks, Conn. manufacture the Sweetland Improved Horton Chuck. For Superior Steam Heat. Appar., see adv., page 301. Special Wood-Working Machinery of every variety. Levi Houston, Montgomery, Pa. See ad. page 301.

The best Truss ever used. Send for descriptive circular to N. Y. Elastic Truss Co., 683 Broadway, New York. Inventors' Institute, Cooper Union. A permanent ex hibition of inventions. Prospectus on application. 733

Broadway, N. Y. Comb'd Punch & Shears; Universal Lathe Chucks. Lambertville Iron Works, Lambertville, N. J. See ad. p.301.

Hydraulic Cylinders, Wheels, and Pinions, Machinery Castings; all kinds; strong and durable; and easily worked. Tensile strength not less than 65,000 lbs. to square in. Pittsburgh Steel Casting Co., Pittsburgh, Pa. New Economizer Portable Engine. See illus. adv. p. 300.

For Shafts, Pulleys, or Hangers, call and see stock kept at 79 Liberty St., N. Y. Wm. Sellers & Co.

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

Ore Breaker, Crusher, and Pulverizer. Smaller sizes run by horse power. See p.300. Totten & Co., Pittsbugr. We will purchase or manufacture on royalty, patented

articles of real merit. Farley & Richards, Phila., Pa. Lathes, Planers, and Drills, with modern improvements. The Pratt & Whitney Co., Hartford, Conn

Hand Fire Engines, Lift and Force Pumps, for fire

and all other purposes. Address Rumsey & Co., Seneca Falls, NY., and 93 Liberty St. N. Y. city, U.S.A.

## NEW BOOKS AND PUBLICATIONS.

OUND THE WORLD WITH GENERAL GRANT. By J. Russell Young. Ameri-can News Company, Publishers. New AROUND York.

Parts nineteen and twenty of this very interesting narrative of General Grant's tour around the world are just out, which complete the series. The author, Mr. Young, accompanied the General and his family throughout their travels, and he has given in these numbers a most interesting account of the places they visited, the curious customs of the people, and the regal manner in which the party were received and entertained by the kings and queens and other official dignitaries of the many countries they visited. The entire work contains some 650 pages, and embraces 800 well executed engrav-ings of the most interesting places visited by the Genings of the most interesting places visited by the Gen-eral and his party, and the most curious and wonderful objects they saw during their extended journeying. objects they saw during their extended journeyings.

WITH AN IMPROVED SYSTEM OF SCORE BOOK. By Edwin A. Perry. New York: E. Remington & Sons. Pocket book E. Remington & Sons. Pocket form. Leather, pp. 139. Price \$1.

This is the third edition, with additions, of Captain Perry's "Green Book," so widely and favorably known to long range riflemen. The additions embrace an article on long range with military rifles, and one on the long range tournament of last year, tabulating the results, and drawing from them such conclusions as the most advanced science of rifle practice seems to warrant. The book is all but indispensable to all who take a practical interest in the science and art of long range rifie shooting.

ENGINEER'S AND MECHANIC'S POCKET BOOK. REVISED AND ENLARGED. By Charles H. Haswell. New York: Harper & Brothers.

There are few intelligent mechanics and fewer engi neers in the United States who need to be told of the existence and practical usefulness of "Haswell." The new edition-the thirty-sixth in number-has compressed within its 673 pages a marvelous amount of exact information, largely in the form of tables, formulæ Silent Injector, Blower, and Exhauster. See adv. p. 300. and condensed statements of facts, carefully classified and well indexed. As a convenient reference book for the general reader it is scarcely less useful than for working mechanics and engineers.

> THE SLIDE VALVE PRACTICALLY EXPLAINED. By Joshua Rose, M.E. Philadelphia: Henry Carey Baird & Co. Cl., pp. 100. Price \$1.

Offers to practical men a clear explanation of the operations of each element in a slide valve movement, ; the effects of variations in their proportions being illus-Brass & Copper in sheets, wire & blanks. See ad. p. 300. trated by numerous examples from recent suc essful practice. Thirty-five engravings.

The Improved Hydraulic Jacks, Punches, and Tube PRACTICAL KERAMICS FOR STUDENTS. B C. A. Janvier. New York: Henry Holt & Co. 12mo, cl., pp. 258. Price \$2.50.

The author has brought together, chiefly from authorities not easily accessible to students, a large amount of practical information touching the history, composition, manufacture, and decoration of all sorts of pottery, by which term is included all terra-cottas, earthenwares, stonewares, and porcelains. The matter is well chosen, concisely put, and admirably arranged. The book is well made and amply indexed

BRAIN AND MIND; OR, MENTAL SCIENCE RELATION TO MODERN PHYSIOLOGY. By oils. Henry S. Drayton, A.M., and James McNeill. Illustrated. Cloth, 12mo, pp. 334. Price \$1.50. New York: S. R. Wells & Co.

The authors have given with considerable ability a re view of the system of mental science known as phrenology, with the relations of mind to anatomy and physiology as understood by phrenologists. The book con-For Mill Mach'y & Mill Furnishing, see illus, adv. p.317. tains a large number of engraved illustrations of that peculiar sort characteristic of works on phrenology

> VACCINATION TRACTS. London: William Young. 16mo, cl., pp. 320.

This volume comprises 1 to 14 of the anti-vaccination tracts, issued apparently by or for the Anti-Vaccination Society of England. They are made up chiefly of excerpts from all sorts of writings "scattered in pamphlets, newspapers, and other periodicals." Our opinion of the movement has already been given in this paper; and so likewise have the arguments of its friends.

THE FRUIT GROWERS' FRIEND: AN EASY GUIDE FOR THE RAISING OF FRUITS FOR PLEASURE OR PROFIT. By R. H. Haines. New York: American News Company. 8vo, paper, pp. 34. Price 30 cents.

A practical manual, arranged for ready reference giving the newest and most successful ways of growing large and small fruits.

SPONS' ENCYCLOPÆDIA OF THE INDUSTRIAL ARTS, MANUFACTURES, AND COMMERCIAL PRODUCTS. Part 11. Treats of Coal Tar Products, Cocoa, and Coffee. 64 pp. Price 75 cents.



HINTS TO CORRESPONDENTS.

No attention will be paid to communications unless accompanied with the full name and address of the

writer. Names and addresses of correspondents will not be

given to inquirers. Wer at correspondents, in re

(2) J. L. asks. If a boller has two safety valves, namely, two inches and three inches, and both weighted alike (half inch), which would blow off first, and why? A. The three inch valve would probably lift a little in advance of the other, as there is less proportionate friction.

(3) L. W. D. asks: What is the best material for filling the space between inside and outside boards of a refrigerator ? A. Sawdust is generally used and answers a good purpose as long as it is kept dry. A simple air space is effective if the walls are perfectly air tight.

(4) H. A. S. asks: Which is the cheapest boiler that can be made to run an engine 4 inches stroke by 2 inches bore ? Can one be made out of common gas pipe so as to run an engine of that size? A. Yes; make one out of gas pipe not less than two inches diameter

(5) A. V. asks if there is any means of removing stumps other than by the use of machinery. A. The following has been recommended: In the top of the stump a number of holes, each capable of holding a pound or two of saltpeter (potassic nitrate), are bored. filled with the salt, and during the latter part of the fall kept full of water, which will dissolve the salt, and the solution formed gradually passes into the roots. In the early spring the same holes are to be filled for a week or two with kerosene oil. and finally the oil-soaked stump set fire to, when the combustion will proceed, aided by the oxygen of the niter, until the greater part of the roots are consumed, after the manner of a slow match.

(6) R. E. G. asks: Is there any way of drilling a small hole in glass? I wish to suspend a pane of glass by means of a thread or fine string. I have broken a large amount of glass in trying to bore a small hole in it, but have not succeeded. A. Use turpentine, and take care when the drill is about to break its way through the glass as the hole is finished.

(7) E. B. asks: How are glass water gauges cut off to proper lengths without breaking? A. One method employed by mechanics is to break off the end of a round file, say 1¼ inch, so as to obtain a sharp edge, then with it scratch a circle on the inside of the gauge, at the proper length, and it will readily snap off where the scratch is made. Another method is to file a nick in one side and place the thumbs opposite the nick and break the glass as a stick would be broken.

(8) A. & P. ask how to make a good tooth wash. A. Take sugar of milk 100 parts, pure tannin 15 parts, lake 10 parts, oils of mint, anise-seed, and orange CONSIDERED IN ACCORDANCE WITH THE flowers, sufficient quantity. Rub together the lake and PRINCIPLES OF PHRENOLOGY AND IN tannin, gradually add the sugar of milk, and then the

> (9) T. L. C. asks how to make common polish boot blacking? A. Ivory black 1 part, molass one-half part, sweet oil one-eighth part. Mix and stir in hydrochloric acid one-eighth part, and oil of vitriol onefourth part. Dilute the acid with twice its weight of water before mixing. Another recipe is to take ivory black 4 lb., molasses 2 lb., sweet oil 1 lb., oil of vitriol 8 1b. Mix and put in boxes.

> (10) C. U. B. writes: I am building a flat bottomed, stern wheeled boat, 60 feet long and 16 feet beam at the water line, drawing 18 inches. What horse power engines would be required to run her? A. Two engines 10 inch cylinder and 2 feet stroke. 2. Could I not use a central crank, and dispense with one engine? A. Yes, but your one engine must be equal in capacity to the two 10 inch by 2 feet stroke.

> (11) A. G. writes: Cambridge Physics, article Philosophy, by Rolf & Gillet, says, page 243: "But very few substances expand when they become solid. Iron is such a substance, and it is owing to this property that it is so well adapted for castings. As it solidifies, it expands so as to completely fill the mould." If this is so why do pattern makers always make their patterns one-eighth of an inch on a foot larger than the casting required? A. The volume of iron in a molten state is less than when it is crystallized or solidified. It solidifies at a very high temperature, when it perfectly fills the mould. During the subsequent cooling it shrinks so that it becomes, when cold, smaller than the mould or pattern.

> (12) E. L. M. asks: 1. In what numbers of the SUPPLEMENT can directions for making a Bell telephone be found? A. SUPPLEMENT 142 contains the information you desire. 2. Will it work without battery, through No. 17 iron wire, over a distance of 500 or 600 feet? A. Yes.

(13) S. E. J. asks why the axles and boxes to wagons, etc., are made on a taper, or smaller on the outer end than on the inside end of bearing, and would the axle being straight or crooked make any difference. I notice that all the builders make them in that way What is the reason for it? A. All axles are not made with taper; when so made, the axles are set or bent so that the underside or wearing side of the axle is a tright angle to the "dish" of the wheels. Axles are made straight. THSONIAN INSTITUTION. BUREAU OF Correspondents whose inquiries do not appear after (14) O. R. L. writes: 1. In the SCIENTIFIC ETHNOLOGY. INTRODUCTION TO THE a reasonable time should repeat them. If not then pub-AMERICAN of October 11, 1879, you have a cut of the STUDY OF SIGN LANGUAGE AMONG THE lished, they may conclude that, for good reasons, the steamer Pellworm, dimensions as follows: Length 75 feet, beam 12, draught 31/2, boiler 25 horse power. With Persons desiring special information which is purely the hydromotor which is represented in her you say she will make six knots per hour, and that the engine will give to the boat 40 per cent of the power generated. Now what I wish to know is at what rate per hour would the most advantageous form of engine and screw propel this same boat? A. 10 to 12 miles per hour, degenerated would be given to the boat? A. 50 to 60 per cent, according to the size and proportions of the screw.

Familiar as household words -the names of brook's celebrated Steel Pens-Falcon, Bank, and Easy Writer. To be had from all the Booksellers, Stationers, and Newsdealers.

Rollstone Mac. Co.'s Wood Working Mach'y ad. p. 300. SMITHSONIAN INSTITUTION.

Recipes and Information on all Industrial Processes Park Benjamin's Expert Office, 49 and 50 Astor House. New York.

Improved Work Holder for Lathes, Gear Cutting, Attachments for Lathes, Tyson Vase Engine, Small Steam Motor. No boiler, no danger. Send for new catalogue, 1880. Jackson & Tyler, Baltimore.

Artificial Ice Manufacturers and Brewers will find Anhydrous Liquid Ammonia, made by Larkin & Scheffer, St. Louis, greatly superior to other liquids. Packed in boxed cylinders provided with globe valves, containing time and labor, as the cylinder is directly connected with the suction coil, and can be emptied in fifteen minutes.

Cleveland, Ohio.

Geared Power Press, cost \$450, for \$200. York & Smith, Cleveland, Ohio.

4 to 40 H. P. Steam Engines. See adv. p. 285.

NORTH AMERICAN INDIANS, AS ILLUSTRA- Editor declines them. TING THE GESTURE SPEECH OF MAN-KIND. By Garrick Mallery, Brevet Lieut. Col. U. S. Army. Quarto, paper, pp. 72. Washington: Government Printing Office. 1880.

An exceedingly important paper, intended at once to indicate the scope and purpose of a work upon sign language in preparation by the Bureau of Ethnology of from 70 to 125 pounds liquid, securing great saving of the Smithsonian Institution, and to call out interest and correspondence upon the subject. It gives, in the form of a vocabulary, a collation of all authentic signs, with Steel Figures, \$1; Letters, \$3 a set. York & Smith, descriptions of them, and of specially associated facial expressions. with engraved illustrations when necessary; language, the syntax of signs, origin and extent of gesture speech, modern uses of gestures and signs, etc.

of the question.

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 obtain such information without remuneration.

Any numbers of the SCIENTIFIC AMERICAN SUPPLE-MENT referred to in these columns may be had at this pending on model. 2. What percentage of the power office. Price 10 cents each.

(1) W. H. K. asks if a blow pipe is (15) H. H. M. writes: In SCIENTIFIC operated by a force pump having a metal condensing , AMERICAN of March 6, page 159, is an article on etching expressions, with engraved illustrations when necessary; chamber, will it blow a steadler stream, and also on glass with diluted fluoric acid. Will you please in-also brief considerations of the practical value of sign stronger, if the condenser is made of elastic rubber? A. form me how to dilute fluoric acid, or what to dilute An elastic chamber is unnecessary. The air itself is | with, and the proportion? A. Dilute the fluoric acid with water. sufficiently elastic to cause a ready flow.

## Scientific American.

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(16 J. M. asks (1) for the proportions for at same time produce deleterious effects upon the glue making rubber waterproof solution. How much rubber, how much bisulphide of carbon, and how much abso-the strings where they are struck or touched by it? A. lute alcohol? A. Caoutchouc (gum rubber) 1 oz., carbon disulphide, about 1/4 pint rubber, and vice versa. 2. If you drop coal oil on a hot plate it will vaporize. Is that the same as gas: if not, what is the difference be tween vapor and gas? Will the vapor condense back into liquid, or how will you keep it in a state of vapor A. A gas is distinguishable from a vapor by the fact that, as in the case of atmospheric air, it can only be condensed by great cold and pressure. The vapor of coal oil or netroleum is not such a gas. If, however, this vapor be brought into contact with intensely heated surfaces a considerable portion of it is converted into a gas as permanent as that used for illuminating purposes. It is used by some of our gas companies for enriching common coal and "water gas." Alone it burns with a very smoky flame, owing to its richness in carbon.

(17) R. D. asks: What is peroxide of manganese composed of, and where can I obtain such as is used for filling the porous Cup of a Leclanche battery? A. It is a compound of the metal manganese with oxygen. It occurs native as pyrolusite. It can be obtained through any druggist. 2. How is hard rubber moulded such as is used by electricians? I can get this rubber in sheets any thickness, and I want to know if I can melt it and run it into any form I wish. A. It cannot be melted or moulded as you propose. See pp. 48 and 105, Vol 39, SCIENTIFIC AMERI-CAN.

(18) H. D. C. asks for a recipe of rubber cement that will cement together the edges or overlaps of thin sheet rubber. A. The rubber cement is prepared by dissolving finely cut pure gum caoutchouc in a sufficient quantity of naphtha. The naphtha is warmed by standing the vessel containing it in another containing hot water, away from fire.

(19) H. M. asks: What dye is strong enough and cheap enough to use as a test of suspected communication between a cesspool and a well? Can you sug gest any better method than the use of a dye to learn if any communication does exist between the cesspool or well? A. The coal tar dyes magenta and fluoresceine have been employed successfully for similar purposes.

(20) G. W. H. asks how to make a good cement for wood with a light color. A. Dissolve best white glue in a sufficient quantity of strong hot acetic

(21) J. H. F. asks: Do you know of any method whereby gray iron castings can be coated with brass to a thickness of one-sixteenth or more of an inch? . We know of no better way than that of brazing on a shell of the requisite thickness.

(22) W. L. asks where to find information in regard to the distillation of turpentine and resin. A. Consult Knight's New Am. Mech. Dictionary, also Johnson's and Appletons' Encyclopædias. We know of no book on the subject.

(23) E. H. K. asks: What work on assaying could you recommend to me? Or is there anything in your paper that would give satisfactory information on metallurgy? A. Consult Percy's Metallurgy and Rickett's "Assaying and Assay Schemes."

(24) D. H. C. asks for the name or names of some complete and reliable book or work on assaying gold and silver, etc., from all kinds of quartz and rock and ore. 1 want some complete work on the above giving full details of the latest and best methods, giving materials, etc., used; name of book, price, address where to be had. A. See reply to E. H. K., this page You should address booksellers who advertise in this paper for their catalogues and price lists.

(25) F. B. W. asks if Richard Trevithick. of Merthyr Tydvil, South Wales, ran an engine on rails before an engine was run on the Stockton and Darlington road, England. A. Yes, in 1803, in South Wales.

(26) A. M. R. asks: What is the composition of the gelatine transfer pad? A. See p. 235, Vol. 41, SCIENTIFIC AMERICAN.

(27) A. D. writes: I am desirous of using vulcanized India rubber for moulding purposes. Will you tell me the best method of reducing rubber to the proper consistency for that purpose, and if anything is required tohardenit again? A. Vulcanized rubber cannot be reworked in the way you propose. See pp. 48 and 105, Vol. 39, SCIENTIFIC AMERICAN.

(28) C. W. V. writes: In your issue for February 28, 1880, Vol. 42, page 133, you give a receipt for guttapercha cement. What kind of pitch do you mean; that made from coal or that made from the pine tree? A. Pine pitch. The addition of shellac will harden it.

(29) S. L. H. asks for a receipt for making a solution to be used as sizing on white paper so as to prepare it for varnishing with alcohol varnish. A. Have you tried thin aqueous solution of glue?

with which the felt is fastened to the hammers, or upon A little camphor sprayed on in alcoholic (absolute) solution does very well.

(31) J. R. C. asks how to remove castor oil A and balsam fir from a camel's hair brush. A. Use oil Ba of turpentine or ether. of turpentine or ether.

(32) H. B. G. writes: In the Science Record of 1874, page 20, is a recipe for destroying hair. One of Ba the ingredients is sulphhydrate of sodium. Now, is there Bei another or common name for it, for I have been to every Bo druggist in this vicinity; some say that they do not know what it is; others say that there is no such thing. A. Use ordinary chemically pure sulphide of soda (sodium Bo sulphide), sold by dealers in laboratory supplies.

(33) W. P. writes: I have spilled a lamp full of coal oil on a Brussels carpet. How can I remove Br the spot or stain? A. Spread over the spot, above and Br beneath, warm pipe clay, and allow it toremain 24 hours; then brush it off and beat out the adhering portions with Bu a light switch.

(34) L. F. asks: 1. What advantage is it in the gravity battery to have the copper on the bottom instead of having it suspended from a yoke? A. It is Ca so placed because the cuprous solution is strongest at that point, and as a matter of convenience. 2. If you Ca silverplate first with a striking solution and strong battery, why do you not finish with the same also; or what advantage is there to use a richer solution and weaker battery? A. A weak bath and strong battery, because a strong bath or long exposure in a weak one is apt to Cig act upon the uncoated metal and render the deposit uneven; a weak current and stronger bath, because such a current produces a more regular and "freer" coating, and such a bath has less resistance and requires a smaller exposure of anodes and less attention. 3. Your receipts for striking solutions have to 1 gallon of water from 1/4 oz. of AgCy, Vol. 40, page 124, 4; and 5 oz., Vol. 42, page 59, 4; and from 1 lb. of KCy, Vol. 40, page 124, 4; to 21/2 lb. of KCy, Vol. 42, page 59, 4. A. As a rule, the former gives the best results, especially Con with the more positive metals; the latter works more Cra rapidly and quite satisfactorily with copper and Ger-man silver, if the battery is rapid enough and the work properly trussed. properly trussed.

(35) S. E. T. writes: I am using water from a well at the bottom of which there is quicksand. Dra The suction pipe is two or three feet from the bottomyet there seems to be a sort of fine mud or sand-like deposit around and on the water gauges. I blow out about a foot of water from the boiler every other day. The water which comes out is clear and free from a deposit. I do not see why there should be an apparent deposit around and from the water gauges and still the water seem so clear. Can you help the difficulty by any ex- Fan planation? Do you think there is any great amount of Fen depositor scale-forming material collecting on the in- Fe terior of the boiler? When we are running the planer Fit the water in the boiler seems to rise up or foam. Is there any remedy for it? A. The water should be first pumped into a setting tank and drawn from that to deliver to the boiler; two setting tanks used alternately Fir will be necessary, except one tank be large enough for a Firday's work, and is filled in the evening, and the water Fir allowed to settle through the night. We can give no Fir opinion about the scale forming, without knowing the Fis character of the water. The foaming may proceed from . bad water, bad circulation, or scant steam room. The residue consists chiefly of a very fine, light silicious clay and lime.

(36) A. F. O. writes: In pouring the composition for my gelatin printing pad I am troubled with little bubbles, which leave troublesome depressions. How can they be avoided? A. Warm the vessel in which the composition is to be poured, and skim the surface by drawing a sharp edged piece of metal or cardboard Ge over it immediately after pouring. Gh

MINERALS, ETC.-Specimens have been re- | Gr ceived from the following correspondents, and Gra examined, with the results stated:

F. L. S.-It is micaceous hematite. Its precise value Ha here could only be ascertained by an analysis. Distance from railroad or navigable route, etc., must also be taken Ha into consideration.-H. W. B.-It is chalcopyrite, an ore of copper-iffound in sufficient quantity, of some value. -A. L. F.-I. Clay slate containing iron pyrites. 2 and 3. Porphyry. 4. Iron pyrites in altered dolerite.

COMMUNICATIONS RECEIVED. On Mercury in Vulcanite Plates. By T. H. C. On Ice boats. By T. D. On the Power Used in Driving a Foot Lathe. By M. On Ice Boats. By J. P. C. Astronomical Notes. By W. R. B. On Water Supply for Washington. By C. L. F. On Repairing Spiral Springs. By E. N. M.

Arm rest for writers, H. H. McEntoy 220,4	1   HEADTO POLIOT OPPERTUNC (1   1 HOL
Antistic common structure T C Flotchon 996.5	0 Dhotograph humighar M W Jonks 996 591
Artist's canvas stretcher, J. G. Fletcher	Destographic stand and album I. Dubarnet
Autometia geta 1 P Kaleo	Photography method and apparatus for costing
A -la h - com A D midant 996 A	nlotos for use in C. Esstman
Axle box cover, car, A. K. Tillany	Disponetion and attice former (1.1) The first and the second attice former (1.1) The first and the second attice former (1.1) The first and the second attice former (1.1) The first attic
Axie box, locomotive, J. J. Thomas 220,J	Plano action and action frame, C. F. T. Steinway, 226,462
Axle, venicle, W. C. Partiow	4 Ficture and other frames, back for, L. A. Deutner 220,391
Bale tie, J. R. Cavett 220,3	Plow, Swartz & Arnot
Baling bran, etc., machine for, H. Kennedy 220,5	Prow and cultivator nanule, L. B. Morgan
Barrel bodies, neating apparatus for, wood &	POCKEL, SALELY, M. A. Adler
W11k180n	5 POP DOX, R. M. WIIIIamson
Barrel swing, P. W. Nelson 226,5	S Post omce box door. W. H. Camp 226,489
Belt fastener, w. L. Potter 226.24	6 Pressure regulator, W. Foster 226,394
Billiard table, J. Walsh 226,4	Propeller, screw, J. B. ward 226,466
Boot and shoe, D. A. McDonald 226,5	Pump lever attachment, sand, J. Moloney 226,534
Boot and shoe shank, Buren & Fenton 226,4	6 Reflector, lamp, F. E. Meyer 226,412
Boot and shoe, spring soled, T. Nuthmann 226,5	1 Rock drill, W. L. Neill 226,539
Boots, last or form for shaping rubber, 1. W. Tuits 226,5	4 Rocking attachment to chairs, J. Reiche
Box, D. Dunscomb	Roofing fabrics, manufacture of, W. H. Stewart. 226,461
Bracelet, rubber, D. Stone 226,5	4 Rotary engine, F. W. Link
Brake lever, A. C. Fish 226,5	Rubber or vulcanite, manufacture of hard, H., O.,
Brush, F. Sprower (r) 9,1	0 & M. Traun
Brush holder, E. B. Randolph 226,55	l Safety pin, A. M. Smith 226,460
Brush, mucilage, J. B. Davids 226,50	0 / Sash holder, E. C. Byam 226,438
Buckwheat hulling machine, T. Nelson (r) 9,16	I Sash lock. E. C. Byam 226,487
Butter package, S. M. Kohr 226,55	Saw teeth blanks. manufacture of, D. Spaulding 226,426
Butter, preservation of, T. F. Wilkins 226,46	Sawing machine, drag, A. J. Merritt 226,533
Button setting instrument, G. W. Prentice 226,54	Scraper, rotary road, J. W. Wilson (r) 9,150
Candlestick, W. Selkirk 226,55	Screw bolt and nut, Ibbotson & Talbot 226,450
Car coupling, R F. Fairlie (r)	7   Seeder. broadcast, J. Hogan 226,516
Car coupling, D. Frank 226,39	Seeding machine, M. J. Clawson 226,442
Car wheel, J. F. Kelly	B Sewing machine hand power attachment, C, T.
Carbureter, M. S. Wright 226.58	Christmas 226.492
Carpet sweeper, Gates & Potter 226.5	Sewing machine motor, T. E. Marable 226,529
Carriage top, D. Conboy 226.38	Sewing machine piping and hemming attachment.
Cheese cutter, W. R. Green	combined, G. W. Baker 226 882
Chimney caps, etc., ventilator for. B. W. Felton 226.5	Sewing machine, shoe. C. F. Bosworth 226.481
Cigars, putting up, J. Felbel 226.30	Sewing machine trimming attachment. J. E.
Clasp, C. C. Shelby	Wilson
Clock, electric, J. Happersberger	Sewing machines, mechanism for operating the
Cloth. etc., machine for cutting. H. Stein	feed and shuttles of. G. M. Pratt 226550
Clothes line adjuster, F. Bonaventure	Shingle machine, M. A. Bidwell
Coffee pot. C. B. Veronee	5 Shirt, E. S. Tomlinson 226,464
Coin holding and delivering apparatus, A. S. Tyler 226.57	Shovel, spade, or fork, W. Chisholm 226,493
Coin holding and delivering device, J. O. Hands., 226.51	Sleigh, bob, W. Hughes
Composition of matter, J. L. Pope	Slop jar or bucket. J. Solter 226.562
Compound engine K. W. Jurisch et al	Sluiceway gate. T. Parker 226.455
Compound engine, L. Perkins	5 Smoke stack, H. Brown 226,439
Cornice. window. B. W. Kerfoot	Soldering apparatus, J. J. Johnston 226.404
Cracker machine, C. L. Vale (r) 9.15	Sower, seed, W. S. Morgan
Cradle and carriage, combined, H, S. Pruyn 226,45	Spring coupling, H. B. Etter 226,446
Cultivator fender, L. Davis, Jr	Steam boiler, J. Cowhig 226,443
Cultivator tooth, E. R. McCall 22653	Steam boiler, portable, W. R. Michener (r) 9,149
Cutter head. G. W. Amesbury 226,38	Steam washer, D. & W. E. Richards 226,552
Dashes, device for making, Peters & Standish 226,41	7   Stove, J. H. Irwin
Draught bar, vehicle, H. Livingston 226,40	7   Stove leg, adjustable, J. Matz 226,530
Dredging apparatus, W. H. Seward 226,55	Suspender end, B. J. Greely (r) 9,155
Drilling machine, temple roller, N. Chapman 226,49	1 Swing, J. W. Bowen 226,482
Electric machine, dynamo, J. E. Braunsdorf 226,48	B Telegraph conductor, underground, A. T. Wood-
Tilemeton se fatu attachment Dissell & I ittlefield 99647	ward 226.468
Elevator safety attachment, bissen & Dittenete. 20,41	
Engines, automatic apparatus for stopping, Ripp	Telephone call bell, H. C. Bliss
Engines, automatic apparatus for stopping, Ripp & Mueller	Telephone call bell, H. C. Bliss.       226,480         i 'Lelephone switch, E. N. Lordl.       226,528
Engines, automatic apparatus for stopping, Ripp & Mueller	Telephone call bell, H. C. Bliss
Engines, automatic apparatus for stopping, Ripp & Mueller	Telephone call bell, H. C. Bliss.       226,480         'Felephone switch, E. N. Lord!       226,528         Thermo-dynamic engine, E. Thuemmler       226,526         Thill coupling, E. P. Joslyn       226,527         O'hill coupling, E. H. Wyrent       226,528
Engines, automatic apparatus for stopping, Ripp & Mueller	Telephone call bell, H. C. Bliss.       226,480         'Felephone switch, E. N. Lord!       226,528         Thermo-dynamic engine, E. Thuemmler       226,570         Thill coupling, E. P. Joslyn       226,480         Thill coupling, J. H. Wygant       226,480         Tobseco draing furnace C. W. Hughes       226,517
Engines, automatic apparatus for stopping, Ripp & Mueller	Telephone call bell, H. C. Bliss.       226,480         'Telephone switch, E. N. Lordl       226,582         Thermo-dynamic engine, E. Thuemmler       226,570         Thill coupling, E. P. Joslyn       226,482         Thill coupling, J. H. Wygant       226,486         Tobacco drying furnace, C. W. Hughes       226,512         276,513       Tobacco steaming apparatus, A. Harnish       226,513
Elevator satesy attachment, Bissen & Dicteded. 22,41         Engines, automatic apparatus for stopping, Ripp & Mueller	Telephone call bell, H. C. Bliss.       226,480         'Ielephone switch, E. N. Lord!       226,528         Thermo-dynamic engine, E. Thuemmler       226,528         Thill coupling, E. P. Joslyn.       226,452         Thill coupling, J. H. Wygant       226,456         Tobacco drying furnace, C. W. Hughes.       226,452         Tobacco steaming apparatus, A. Harnish       226,452         Tox nielo M. Backes.       226,452
Engines, automatic apparatus for stopping, Ripp         & Mueller       226,55         Evaporator, A. L. & A. S. Folger       226,55         Exercising machine, J. Arnett       226,55         Fan, M. Rubin (r)       9,11         Fence and fence post, wire, Boyer & Kinsey       226,40         Fibers from textile plants, extracting, P. A. A.       M         M A Favier       226,40	Telephone call bell, H. C. Bliss.       226,480         'Felephone switch, E. N. Lordi       226,528         Thermo-dynamic engine, E. Thuemmler       226,528         Thill coupling, E. P. Joslyn       226,436         Thill coupling, J. H. Wygant       226,436         Tobacco drying furnace, C. W. Hughes       226,537         Tobacco steaming apparatus, A. Harnish       226,436         Trace snlicing device, J. E. Curd       226,437
Engines, automatic apparatus for stopping, Ripp & Mueller	Telephone call bell, H. C. Bliss.       226,440         'Telephone switch, E. N. Lordl       226,528         Thermo-dynamic engine, E. Thuemmler       226,570         Thill coupling, E. P. Joslyn       226,452         Thill coupling, J. H. Wygant       226,532         Tobacco dring furnace, C. W. Hughes       226,517         Tobacco steaming apparatus, A. Harnish       226,517         Toy pistol, M. Backes       226,517         Trav. waiter's Lear & Connett       226,526
Engines, automatic apparatus for stopping, Ripp         & Mueller       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaporator, A. L. & A. S. Folger       226,42         Fan, M. Rubin (r)       9,12         Fence and fence post, wire, Boyer & Kinsey       226,35         Fence, portable, M. Higbee       226,40         Fibers from textile plants, extracting, P. A. A.       M. A. Favier         M. A. Favier       226,50         Filling and binding papers, device for, I. W. Heg-singer       226,40	Telephone call bell, H. C. Bliss.       226,480         'Telephone switch, E. N. Lordl       226,528         Thermo-dynamic engine, E. Thuemmler       226,528         Thill coupling, E. P. Joslyn       226,482         Thill coupling, J. H. Wygant       226,513         Tobacco drying furnace, C. W. Hughes       226,515         Tobacco steaming apparatus, A. Harnish       226,515         Torace splicing device, J. E. Curd       226,496         Tray, waiter's, Jear & Connett       226,596         Tricycle, E. F. Beerandleu       226,596
Elevator satery attachment, Justen & Dicteded. 22,41         Engines, automatic apparatus for stopping, Ripp         & Mueller       226,55         Evaporator, A. L. & A. S. Folger       226,55         Exercising machine, J. Arnett       226,35         Fan, M. Rubin (r)       9,15         Fence and fence post, wire, Boyer & Kinsey       226,35         Fibers from textile plants, extracting, P. A. A.       M. A. Favier         226,50       Filing and binding papers, device for, I. W. Heysinger         Singer       226,40         Firearm, breech-loading, G. H. Fav.       226,40	Telephone call bell, H. C. Bliss.       226,480         'Telephone switch, E. N. Lordi       226,528         Thermo-dynamic engine, E. Thuemmler       226,528         Thill coupling, E. P. Josiyn.       226,432         Thill coupling, J. H. Wygant       226,436         Tobacco drying furnace, C. W. Hughes       226,513         Tobacco steaming apparatus, A. Harnish       226,437         Trace splicing device, J. E. Curd.       226,436         'Tricycle, E. F. Esperandleu       226,437         'Tricycle, E. F. Esperandleu       226,504         'Trings, manufacture of, E. Brosemann       226,504
Elevator satery attachment, Justen & Dicteded. 22,4         Engines, automatic apparatus for stopping, Ripp         & Mueller       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaporator, A. L. & A. S. Folger       226,55         Fan, M. Rubin (r)       9,11         Fence and fence post, wire, Boyer & Kinsey       226,35         Fibers from textile plants, extracting, P. A. A.       M. A. Favier         M. A. Favier       226,40         Filing and binding papers, device for, I. W. Heysinger       226,40         Firearm, breech-loading, G. H. Fay.       226,40         Firearm, magazine, N. King (r)       9,15	Telephone call bell, H. C. Bliss.       226,440         'Telephone switch, E. N. Lordl       226,528         Thermo-dynamic engine, E. Thuemmler.       226,528         Thill coupling, E. P. Josiyn.       226,452         Thill coupling, J. H. Wygant       226,543         Tobacco drying furnace, C. W. Hughes.       226,517         Top pistol, M. Backes.       226,473         Traze splicing device, J. E. Curd.       226,526         'Tricycle, E. F. Esperandleu.       226,526         'Tricycle, E. F. Esperandleu.       226,526         'Trimmings, manufacture of, E. Brosemann       226,526         Tug, hame, J. Skidmore et al.       226,526
Engines, automatic apparatus for stopping, Ripp         & Mueller       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaroising machine, J. Arnett       226,42         Fan, M. Rubin (r).       9,12         Fence and fence post, wire, Boyer & Kinsey       226,42         Fibers from textile plants, extracting, P. A.       226,40         Filing and binding papers, device for, I. W. Heysinger       226,40         Firearm, breech-loading, G. H. Fay.       226,50         Firearm, inggazine, N. King (r).       9,12         Firearm trigger, G. Schalet       996,55	Telephone call bell, H. C. Bliss.       226,480         'Telephone switch, E. N. Lordl       226,528         Thermo-dynamic engine, E. Thuemmler       226,570         Thill coupling, E. P. Joslyn       226,482         Thill coupling, J. H. Wygant       226,452         Tobacco drying furnace, C. W. Hughes       226,515         Tobacco steaming apparatus, A. Harnish       226,515         Toy pistol, M. Backes       226,543         Trace splicing device, J. E. Curd       226,546         Triczole, E. F. Esperandleu       226,544         Trimmings, manufacture of, E. Brosemann       226,544         Tug, hame, J. Skidmore et al.       226,544         Yalye, stop, G. H. Perkins et al.       226,544
Elevator satery attachment, Justen & Dictedent, 226, 55         Engines, automatic apparatus for stopping, Ripp         & Mueller	Telephone call bell, H. C. Bliss.       226,480         'Telephone switch, E. N. Lordl       226,582         Thermo-dynamic engine, E. Thuemmler       226,570         Thill coupling, E. P. Joslyn.       226,482         Thill coupling, J. H. Wygant       226,482         Tobacco drying furnace, C. W. Hughes       226,515         Tobacco steaming apparatus, A. Harnish       226,436         Trace splicing device, J. E. Curd.       226,436         Trirace splicing device, J. E. Curd.       226,436         Trirdy, waiter's, Lear & Connett.       226,436         Trirdy, asiter's, Lear & Connett.       226,504         Tring, manufacture of, E. Brosemann       226,544         Tug, hame, J. Skidmore et al.       226,544         Vehicle spring, C. M. Murch.       226,544
Elevator satery attachment, Justen & Dicteded. 22, 1         Engines, automatic apparatus for stopping, Ripp & Mueller	Telephone call bell, H. C. Bliss.       226,480         Telephone switch, E. N. Lordl       226,543         Thermo-dynamic engine, E. Thuemmler.       226,543         Thill coupling, E. P. Josiyn.       226,452         Thill coupling, J. H. Wygant       226,543         Tobacco drying furnace, C. W. Hughes.       226,517         Top pistol, M. Backes.       226,513         Tray waiter's, Lear & Connett.       226,526         Tritycele, E. F. Esperandleu       226,526         Tritycele, E. F. Esperandleu       226,526         Valve, stop, G. H. Perkins et al.       226,544         Vehicle spring, C. M. Murch.       226,544         Vehicle spring, N. Nilson       226,544
Engines, automatic apparatus for stopping, Ripp         & Mueller       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaporator, A. L. & A. S. Folger       226,45         Fan, M. Rubin (r).       226,42         Fan, M. Rubin (r).       226,42         Fence, portable, M. Higbee       226,42         Fibers from textile plants, extracting, P. A. A.       226,40         Filing and binding papers, device for, I. W. Hey-       226,40         Firearm, breech-loading, G. H. Fay.       226,50         Firearm trigger, G. Schalck       226,55         Fire scape, H. Fuller.       226,54         Fire kindlers, machine for making, A. F. Temple 226,54         Fire, hore-gring and preserving. C. W. Davis       226,54	Telephone call bell, H. C. Bliss.       226,480         'Telephone switch, E. N. Lordl       226,528         Thermo-dynamic engine, E. Thuemmler.       226,570         Thill coupling, E. P. Joslyn.       226,452         Thill coupling, J. H. Wygant       226,545         Tobacco drying furnace, C. W. Hughes.       226,517         Tobacco steaming apparatus, A. Harnish.       226,517         Top jistol, M. Backes.       226,473         Trace splicing device, J. E. Curd.       226,526         'Tricycle, E. F. Esperandleu.       226,526         Trug, hame, J. Skidmore et al.       226,536         Vehicle spring, C. M. Murch.       226,536         Vehicle spring, N. Nilson.       226,536         Vehicle spring, R. G. Newton       226,473
Engines, automatic apparatus for stopping, Ripp         & Mueller       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaporator, A. L. & A. S. Folger       226,45         Evaroising machine, J. Arnett       226,45         Fan, M. Rubin (r).       9,15         Fence, portable, M. Higbee       226,45         Fibers from textile plants, extracting, P. A. A.       226,40         Filing and binding papers, device for, I. W. Heysinger       226,40         Firearm, breech-loading, G. H. Fay.       226,50         Firearm, tragger, G. Schalck       226,50         Fire excape, H. Fuller       226,40         Fire kindlers, machine for making, A. F. Temple       226,40         Fire kindlers, machine for making, A. F. Temple       226,50         Fire kindlers, machine for making, A. F. Temple       226,50         Fire kindlers, machine for making, A. F. Temple       226,50         Fire kindlers, machine for making, A. F. Temple       226,50         Fire kindlers, machine for making, A. F. Temple       226,50         Filors, walls, etc. covering for, G. P. Chiles       226,50	Telephone call bell, H. C. Bliss.       226,480         'Telephone switch, E. N. Lordl       226,528         Thermo-dynamic engine, E. Thuemmler       226,528         Thill coupling, E. P. Joslyn       226,482         Thill coupling, J. H. Wygant       226,532         Tobacco drying furnace, C. W. Hughes       226,515         Tobacco steaming apparatus, A. Harnish       226,515         Top pistol, M. Backes       226,515         Tray, waiter's, Lear & Connett       226,506         Trimmings, manufacture of, E. Brosemann       226,544         Turmings, manufacture of, E. Brosemann       226,544         Vehicle spring, C. M. Murch       226,536         Vehicle spring, N. Nison       226,536         Vehicle spring bar, G. Newton       226,544         Vehicle spring, C. M. Murch       226,545         Vehicle spring, C. M. Murch       226,546         Ve
Engines, automatic apparatus for stopping, Ripp         & Mueller       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaporator, A. L. & A. S. Folger       226,55         Exercising machine, J. Arnett       226,45         Fan, M. Rubin (r)       9,15         Fence, and fence post, wire, Boyer & Kinsey       226,55         Fibers from textile plants, extracting, P. A. A.       226,50         Fling and binding papers, device for, I. W. Heysinger       226,50         Firearm, breech-loading, G. H. Fay       226,50         Firearm, magazine, N. King (r)       9,15         Fire scape, H. Fuller       226,52         Fire kindlers, machine for making, A. F. Temple 226,54         Fire, swalshe to covering for, G. P. Chiles       226,50         Fire, swalshe to, covering for, G. P. Chiles       226,50         Fire, swalshe to, covering for, G. P. Chiles       226,50         Floor bin and sifter, combined, J. M. Clark       226,50	Telephone call bell, H. C. Bliss.       226,480         'Telephone switch, E. N. Lordl       226,528         Thermo-dynamic engine, E. Thuemmler       226,528         Thill coupling, E. P. Joslyn.       226,482         Thill coupling, J. H. Wygant       226,542         Tobacco drying furnace, C. W. Hughes       226,515         Tobacco steaming apparatus, A. Harnish       226,543         Trace splicing device, J. E. Curd.       226,496         Trar, waiter's, Lear & Connett.       226,540         Tring, manufacture of, E. Brosemann       226,540         Tring, manufacture of, E. Brosemann       226,541         Valve, stop, G. H. Perkins et al.       226,536         Vehicle spring, N. Nilson       226,536         Vehicle spring bar, G. Newton       226,540         Veloice pering, C. M. Murch       226,540         Veloice spring, N. Nilson       226,541         Veloice spring, N. Nilson       226,545         Veloice spring bar, G. Newton       226,540         Veloice spring, C. M. Murch       226,540         Veloice spring, N. Nilson       226,540         Veloice spring bar, G. Newton       226,541         Velocipede, G. E. Whitmore.       226,547         Vessels, construction of steam. A. Olsen       226,547     <
Engines, automatic apparatus for stopping, Ripp         & Mueller.       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaporator, A. L. & A. S. Folger       226,45         Evaroising machine, J. Arnett       226,45         Fan, M. Rubin (r).       226,42         Fan, M. Rubin (r).       296,42         Fence, portable, M. Higbee       226,42         Fibers from textile plants, extracting, P. A.       226,40         Filing and binding papers, device for, I. W. Hey-       226,40         Firearm, breech-loading, G. H. Fay.       226,52         Firearm, trigger, G. Schalck       226,54         Fire scape, H. Fuller.       226,42         Fire kindlers, machine for making, A. F. Temple 226,55       51         Fire escape, H. Fuller.       226,42         Fire kindlers, machine for making, A. F. Temple 226,52       51         Fire kindlers, machine for making, A. F. Temple 226,52       526,44         Flioh, preparing and preserving, D. W. Davis.       226,44         Fliohors, walls, etc., covering for, G. P. Chiles.       226,44         Flour bin and sifter, combined, J. M. Clark       226,54         Fluid motors, valve gear for. W. F. Class       296,44	Telephone call bell, H. C. Bliss.       226,440         Yelephone switch, E. N. Lordl       226,552         Thermo-dynamic engine, E. Thuemmler.       226,572         Thill coupling, E. P. Joslyn.       226,452         Thill coupling, J. H. Wygant       226,452         Tobacco drying furnace, C. W. Hughes.       226,545         Tobacco steaming apparatus, A. Harnish.       226,517         Toy pistol, M. Backes.       226,543         Trar, waiter's, Lear & Connett.       226,526         Tricycle, E. F. Esperandleu.       226,556         Tug, hame, J. Skidmore et al.       226,544         Vehicle spring, C. M. Murch.       226,544         Vehicle spring, N. Nilson.       226,544         Velicle spring, N. Nilson.       226,547         Velocipede, G. E. Whitmore.       226,547         Velocipede, G. E. Whitmore.       226,547         Vise for bench vises, pice, F. I. Maule.       226,547
Engines, automatic apparatus for stopping, Ripp         & Mueller       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaroising machine, J. Arnett       226,45         Fan, M. Rubin (r).       226,45         Fence, portable, M. Higbee       226,45         Fibers from textile plants, extracting, P. A.       226,40         Filing and binding papers, device for, I. W. Heysinger       226,40         Firearm, breech-loading, G. H. Fay.       226,50         Firearm trigger, G. Schalck       226,52         Fire scape, H. Fuller       226,42         Fire scape, H. Fuller       226,42         Fire scape, C. Schalck       226,52         Fire scape, G. Schalck       226,52         Fire scape, G. Schalck       226,52         Fire scape, H. Fuller       226,42         Fire kindlers, machine for making, A. F. Temple 226,52       526,52         Fire scape, H. Fuller       226,42         Fire kindlers, machine for making, A. F. Temple 226,52       526,52         Fire, scape, G. K. Fuller       226,42         Fire, kindlers, machine for making, A. F. Temple 226,42       526,54         Filoor, walls, etc., covering for, G. P. Chiles       226,42         Floors, walls, etc., covering for, G. P. Chiles       226,44	Telephone call bell, H. C. Bliss.       226,480         'Telephone switch, E. N. Lordl       226,528         Thermo-dynamic engine, E. Thuemmler       226,570         Thill coupling, E. P. Joslyn       226,482         Thill coupling, J. H. Wygant       226,452         Tobacco drying furnace, C. W. Hughes       226,515         Tobacco steaming apparatus, A. Harnish       226,515         Toy pistol, M. Backes       226,515         Tray, waiter's, I.ear & Connett       226,546         Tringing device, J. E. Curd       226,546         Trace splicing device, J. E. Curd       226,546         Tringing, snanufacture of, E. Brosemann       226,546         Tug, hame, J. Skidmore et al.       226,546         Vehicle spring, C. M. Murch.       226,546         Vehicle spring, N. Nilson       226,546         Velocipede, G. E. Whitmore.       226,541         Velocipede, G. E. Whitmore.       226,542         Vessels, construction of steam, A. Olsen       226,542         Veise for bench vises, pipe, F. I. Maule.       226,541         Vessels, oistruction, per f. I. Maule.       226,542         Vessels, construction of steam, A. Olsen       226,542         Vessels, oistruction of steam, A. Olsen       226,542         Vese for bench vises, pipe
Engines, automatic apparatus for stopping, Ripp         & Mueller       226,55         Evaporator, A. L. & A. S. Folger       226,42         Fan, M. Rubin (r)       9,12         Fence, portable, M. Higbee       226,42         Fibers from textile plants, extracting, P. A. A.       226,40         Filing and binding papers, device for, I. W. Heg-       226,40         Firearm, breech-loading, G. H. Fay       226,50         Firearm, magazine, N. King (r)       9,12         Fireescape, H. Fuller       226,40         Fire escape, H. Fuller       226,40         Fire kindlers, machine for making, A. F. Temple 226,50       51         Fire kindlers, machine for making, A. F. Temple 226,50       526         Fish, preparing and preserving, D. W. Davis.       226,42         Filoors, walls, etc., covering for, G. P. Chiles.       226,44         Fluid motors, valve gear for, W. F. Class.       226,44         Fluid motors, valve gear for, W. F. Class.       226,44         Foul air trap for wash basins, J. L. Hutchinson.       226,44	Telephone call bell, H. C. Bliss.       226,480         Telephone switch, E. N. Lordl       226,528         Thermo-dynamic engine, E. Thuemmler       226,528         Thill coupling, E. P. Joslyn       226,482         Thill coupling, J. H. Wygant       226,542         Tobacco drying furnace, C. W. Hughes       226,515         Tobacco steaming apparatus, A. Harnish       226,515         Tor pistol, M. Backes       226,542         Trage splicing device, J. E. Curd       226,543         Trage, waiter's, Lear & Connett       226,540         Trimmings, manufacture of, E. Brosemann       226,544         Tug, hame, J. Skidmore et al.       226,543         Vehicle spring, C. M. Murch       226,544         Vehicle spring, C. M. Murch       226,540         Vehicle spring, C. M. Murch       226,543         Vehicle spring, C. M. Murch       226,544         Vehicle spring, N. Nison       226,542         Veise for bench vises, pipe, F. I. Maule       226,542         Vessels, construction of steam, A. Olsen       226,542         Vase for bench vises, pipe, F. I. Maule       226,424         Wagon, side bar, C. W. Saladee       226,424         Wagons and dumping them, device for unload-       226,424
Engines, automatic apparatus for stopping, Ripp & Mueller.       226,53         Evaporator, A. L. & A. S. Folger       226,42         Fan, M. Rubin (r)       9,12         Fence, portable, M. Higbee       226,42         Fibers from textile plants, extracting, P. A. M. M. Favier       226,40         Filing and binding papers, device for, I. W. Heysinger       226,53         Firearm, preech-loading, G. H. Fay       226,54         Firearm trigger, G. Schalck       226,55         Fire escape, H. Fuller       226,54         Fire kindlers, machine for making, A. F. Temple 226,55       52         Fire kindlers, machine for making, A. F. Temple 226,54       51         Filsh, preparing and preserving, D. W. Davis       226,54         Floors, walls, etc. covering for, G. P. Chiles       226,54         Flour bin and sifter, combined, J. M. Clark       226,54         Fluid motors, valve gear for, W. F. Class       226,54         Fluid motors, valve gear for, W. F. Class       226,54         Fluid motors, valve gear for, W. F. Class       226,54         Fluid mo	Telephone call bell, H. C. Bliss.       226,440         Telephone switch, E. N. Lordl       226,528         Thermo-dynamic engine, E. Thuemmler.       226,528         Thill coupling, E. P. Josiyn.       226,452         Thill coupling, J. H. Wygant       226,548         Tobacco drying furnace, C. W. Hughes.       226,517         Tobacco steaming apparatus, A. Harnish.       226,517         Toy pistol, M. Backes.       226,528         Trity cole, E. F. Esperandleu.       226,526         Tricycle, E. F. Esperandleu.       226,526         Tricycle, E. F. Esperandleu.       226,526         Velicle spring, C. M. Murch.       226,544         Vehicle spring, N. Nilson.       226,544         Vehicle spring bar, G. Newton       226,544         Vehicle spring bar, G. Newton       226,544         Velocipede, G. E. Whitmore.       226,542         Vise for bench vises, pipe, F. I. Maule.       226,542         Vise for bench vises, pipe, F. I. Maule.       226,542         Vagon, side bar, C. W. Saladee.       226,542         Wagons and dumping them, device for unload- ing, P. H. Samuell.       226,425
Engines, automatic apparatus for stopping, Ripp         & Mueller.       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaroising machine, J. Arnett       226,45         Fan, M. Rubin (r).       226,42         Fan, M. Rubin (r).       226,42         Fence, portable, M. Higbee       226,42         Fibers from textile plants, extracting, P. A. A.       226,40         Filing and binding papers, device for, I. W. Hey-       226,40         Firearm, magazine, N. King (r).       9,15         Fire scape, H. Fuller.       226,40         Fire kindlers, machine for making, A. F. Temple 226,50       5         Fire scape, H. Fuller.       226,44         Fire kindlers, machine for making, A. F. Temple 226,52       5         Fire scape, H. Fuller.       226,52         Fish, preparing and preserving, D. W. Davis.       226,52         Flour bin and sifter, combined, J. M. Clark       226,54         Fluid motors, valve gear for, W. F. Class.       226,44         Fountain	Telephone call bell, H. C. Bliss.       226,480         Telephone switch, E. N. Lordl       226,578         Thermo-dynamic engine, E. Thuemmler.       226,578         Thill coupling, E. P. Joslyn       226,480         Tobacco drying furnace, C. W. Hughes.       226,578         Tobacco steaming apparatus, A. Harnish.       226,517         To pistol, M. Backes.       226,532         Traice splicing device, J. E. Curd.       226,526         Tricycle, E. F. Esperandleu.       226,556         Toug, hame, J. Skidmore et al.       226,544         Yehicle spring, C. M. Murch.       226,556         Vehicle spring, N. Nison.       226,544         Vehicle spring, N. Nison.       226,544         Vehicle spring, N. Nison.       226,547         Velocipede, G. E. Whitmore.       226,547         Vesicie spring, N. Nison.       226,548         Velocipede, G. E. Whitmore.       226,547         Vise for bench vises, pipé, F. I. Maule.       226,473         Vagons and dumping them, device for unload- ing, P. H. Samuell,
Engines, automatic apparatus for stopping, Ripp         & Mueller       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaporator, A. L. & A. S. Folger       226,45         Fan, M. Rubin (r).       9,15         Fence, portable, M. Higbee       226,45         Fibers from textile plants, extracting, P. A. A.       226,40         Fileres from textile plants, extracting, P. A. A.       226,40         Firearm, breech-loading, G. H. Fay.       226,50         Firearm, trigger, G. Schalck       226,52         Fire escape, H. Fuller       226,42         Fire escape, H. Fuller       226,42         Fire kindlers, machine for making, A. F. Temple       226,52         Fire kindlers, machine for making, A. F. Temple       226,42         Fire kindlers, washine for making, A. F. Temple       226,42         Fire, walls, etc., covering for, G. P. Chiles       226,43         Floors, walls, etc., covering for, G. P. Chiles       226,43         Flour bin and sifter, combined, J. M. Clark       226,44         Foul air trap for wash basins, J. L. Hutchinson       226,45         Fouling mill, R. Eickemeyer (r)       9,14         Gas, generator for producing carbureted water,       9,14	Telephone call bell, H. C. Bliss.226,480Telephone switch, E. N. Lordl226,528Thermo-dynamic engine, E. Thuemmler226,528Thill coupling, E. P. Joslyn226,482Tobacco drying furnace, C. W. Hughes226,512Tobacco steaming apparatus, A. Harnish226,515Toy pistol, M. Backes226,515Trace splicing device, J. E. Curd226,546Trace splicing device, J. E. Curd226,546Trimmings, manufacture of, E. Brosemann226,544Tug, hame, J. Skidmore et al.226,544Vehicle spring, C. M. Murch226,544Vehicle spring, R. Nilson226,546Velicle spring, Bar, G. Newton226,542Vielice device, J. E. Wittmore226,544Velicle spring, N. Nilson226,542Vessels, construction of steam, A. Olsen226,542Vies for bench vises, pipe, F. I. Maule226,542Vies for bench vises, pipe, F. I. Maule226,542Wagons and dumping them, device for unloading, P. H. Samuell226,476Wash stands, bath tubs, etc., combined valve and226,476
Engines, automatic apparatus for stopping, Ripp         & Mueller       226,55         Evaporator, A. L. & A. S. Folger       226,42         Fan, M. Rubin (r)       9,12         Fence, portable, M. Higbee       226,42         Fibers from textile plants, extracting, P. A. A.       226,40         Filing and binding papers, device for, I. W. Heg-       226,40         Firearm, breech-loading, G. H. Fay       226,50         Firearm, magazine, N. King (r)       9,12         Fire escape, H. Fuller       226,40         Fire escape, H. Fuller       226,40         Fire kindlers, machine for making, A. F. Temple 226,50       Fire skingler, 226,50         Fish, preparing and preserving, D. W. Davis.       226,52         Filoor, Sualls, etc., covering for, G. P. Chiles.       226,42         Flour bin and sifter, combined, J. M. Clark       226,44         Foul air trap for wash basins, J. L. Hutchinson.       226,44         Foultiar trap for wash basins, J. L. Hutchinson.       226,44         Foultiar in J. Storer       226,44         F	Telephone call bell, H. C. Bliss.       226,480         Telephone switch, E. N. Lordl       226,528         Thermo-dynamic engine, E. Thuemmler       226,528         Thill coupling, J. P. Joslyn       226,432         Thill coupling, J. H. Wygant       226,543         Tobacco drying furnace, C. W. Hughes       226,515         Tobacco steaming apparatus, A. Harnish       226,515         Tor pistol, M. Backes       226,542         Tring, waiter's, Lear & Connett       226,540         Trace splicing device, J. E. Curd       226,540         Trimmings, manufacture of, E. Brosemann       226,540         Trimmings, manufacture of, E. Brosemann       226,540         Valve, stop, G. H. Perkins et al.       226,540         Vehicle spring, C. M. Murch       226,542         Vesels, construction of steam, A. Olsen       226,542         Vese for bench vises, pipe, F. I. Maule       226,424         Wagons and dumping then, device for unload-       ing, P. H. Samuell       226,425         Wash stands, bath tubs, etc., combined valve and       seal joint for, J. Bennor.       226,426         Washing machine, T. S
Engines, automatic apparatus for stopping, Ripp         & Mueller.       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaporator, A. L. & A. S. Folger       226,45         Fan, M. Rubin (r).       226,45         Fence, portable, M. Higbee       226,46         Fibers from textile plants, extracting, P. A.       226,40         Filing and binding papers, device for, I. W. Heysinger       226,40         Firearm, preech-loading, G. H. Fay       226,52         Firearm, magazine, N. King (r).       9,12         Firearm, trigger, G. Schalck       226,40         Fire scape, H. Fuller.       226,40         Fire kindlers, machine for making, A. F. Temple 226,50       9,12         Fire kindlers, machine for making, A. F. Temple 226,54       9,12         Flud motors, value gear for, W. F. Class       226,44         Four bin and sifter, conving for, G. P. Chiles.       226,44         Four bin and sifter, convined, J. M. Clark       226,44         Four bin and sifter, convined, J. M. Clark       226,44         Four bin and sifter, convined, J. M. Clark       226,44         Four bin and sifter, convined, J. M. Clark       226,44         Four bin and sifter, convine day J. M. Clark       226,44	Telephone call bell, H. C. Bliss.       226,440         Telephone switch, E. N. Lordl       226,528         Thermo-dynamic engine, E. Thuemmler.       226,528         Thill coupling, E. P. Josiyn       226,452         Thill coupling, J. H. Wygant       226,548         Tobacco drying furnace, C. W. Hughes.       226,517         Tobacco steaming apparatus, A. Harnish       226,526         Trar, waiter's, Lear & Connett.       226,526         Tricycle, E. F. Esperandleu.       226,526         Trig, east Connett.       226,526         Trimmings, manufacture of, E. Brosemann       226,540         Tay, waiter's, Lear & Connett.       226,544         Vehicle spring, C. M. Murch.       226,543         Vehicle spring, N. Nilson.       226,544         Vehicle spring, N. Nilson.       226,544         Vehicle spring N. Nilson.       226,542         Vesels, construction of steam, A. Olsen.       226,542         Vagons and dumping then, device for unload- ing, P. H. Samuell       226,423         Wagons and dumping then, device for unload- ing, P. H. Samuell       226,424         Wash stands, bath tubs, etc., combined valve and seal Joint for, J. Bennor.       226,426         Waste pipes, etc., purifying and ventilating, R.       226,506
Engines, automatic apparatus for stopping, Ripp         & Mueller       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaroising machine, J. Arnett       226,42         Fan, M. Rubin (r).       226,42         Fan, M. Rubin (r).       226,42         Fence, portable, M. Higbee       226,42         Fibers from textile plants, extracting, P. A. A.       226,40         Filing and binding papers, device for, I. W. Heysinger       226,40         Firearm, breech-loading, G. H. Fay.       226,50         Firearm, ingger, G. Schalck       226,52         Fire escape, H. Fuller.       226,40         Fire kindlers, machine for making, A. F. Temple       226,52         Fire escape, H. Fuller.       226,52         Fire escape, H. Fuller.       226,52         Fire, singer       226,52         Fire kindlers, machine for making, A. F. Temple       226,52         Fire, singer, Schalck       226,52         Fire	Telephone call bell, H. C. Bliss.226,480Telephone switch, E. N. Lordl226,578Thermo-dynamic engine, E. Thuemmler.226,578Thill coupling, E. P. Joslyn226,452Thill coupling, J. H. Wygant226,548Tobacco drying furnace, C. W. Hughes.226,517Tobacco steaming apparatus, A. Harnish226,517Traze splicing device, J. E. Curd226,526Trircycle, E. F. Esperandleu226,526Trinmings, manufacture of, E. Brosemann226,544Yehicle spring, C. M. Murch226,554Vehicle spring, R. G. Newton226,544Vehicle spring, R. G. Newton226,544Velicle spring, R. G. Newton226,544Velicie de spring, R. G. Newton226,545Velicie de spring, R. G. Newton226,545Velicie de spring, R. G. Newton226,412Wagons and dumping them, device for unload- ing, P. H. Samuell226,424Wash stands, bath tubs, etc., combined valve and seal joint for, J. Bennor.226,426Washing machine, T. Suppes226,547Wisdon226,547Wisdon226,547
Engines, automatic apparatus for stopping, Ripp         & Mueller       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaporator, A. L. & A. S. Folger       226,45         Fan, M. Rubin (r).       9,15         Fence, portable, M. Higbec       226,45         Fibers from textile plants, extracting, P. A. A.       226,40         Filing and binding papers, device for, I. W. Hey-       226,40         Firearm, breech-loading, G. H. Fay.       226,50         Firearm, trigger, G. Schalck       226,52         Fire escape, H. Fuller       226,42         Fire escape, H. Fuller       226,42         Fire kindlers, machine for making, A. F. Temple       226,52         Fish, preparing and preserving, D. W. Davis.       226,43         Floors, walls, etc., covering for, G. P. Chiles.       226,43         Flour bin and sifter, combined, J. M. Clark       226,44         Foul air trap for wash basins, J. L. Hutchinson.       226,53         Fouling mill, R. Elckemeyer (r).       9,14         Gas, generator for producing carbureted water,       3,14         Four bin and sifter, combined, J. M. Clark       226,44         Foul air trap for wash basins, J. L. Hutchinson.       226,47	Telephone call bell, H. C. Bliss.226,480Telephone switch, E. N. Lordl226,528Thermo-dynamic engine, E. Thuemmler226,570Thill coupling, E. P. Joslyn226,482Tobacco drying furnace, C. W. Hughes226,512Tobacco steaming apparatus, A. Harnish226,515Toy pistol, M. Backes226,513Trace splicing device, J. E. Curd226,546Trizes esplicing device, J. E. Curd226,546Trimmings, manufacture of, E. Brosemann226,544Tug, hame, J. Skidmore et al.226,544Vehicle spring, C. M. Murch226,544Vehicle spring, N. Nilson226,545Vessels, construction of steam, A. Olsen226,542Vise for bench vises, pie, F. I. Maule.226,542Vason side bar, C. W. Saladee.226,542Wagons and dumping them, device for unloading, P. H. Samuell226,476Waste stands, bath tubs, etc., combined valve and226,426Waste pipes, etc., purifying and ventilating, R.226,426Wastergauge, T. C. Purves.226,541
Engines, automatic apparatus for stopping, Ripp & Mueller       226,55         Evaporator, A. L. & A. S. Folger       226,45         Fan, M. Rubin (r).       9,15         Fence, portable, M. Higbee       226,45         Fibers from textile plants, extracting, P. A. A.       226,40         Firearm, breech-loading, G. H. Fay.       226,50         Firearm, breech-loading, G. H. Fay.       226,50         Firearm, magazine, N. King (r).       9,15         Firearm trigger, G. Schalck       226,50         Fire escape, H. Fuller.       226,40         Fire escape, H. Fuller.       226,40         Fire kindlers, machine for making, A. F. Temple       226,50         Fish, preparing and preserving, D. W. Davis.       226,42         Flour bin and sifter, combined, J. M. Clark       226,44         Fluid motors, valve gear for, W. F. Class.       226,44         Foul air trap for wash basins, J. L. Hutchinson.       226,44         Fouling mill, R. Eickemeyer (r).       9,14         Gas governor, L. P. Blair       226,47         Gas	Telephone call bell, H. C. Bliss.226,440Telephone switch, E. N. Lordl226,528Thermo-dynamic engine, E. Thuemmler.226,570Thill coupling, E. P. Josiyn.226,482Thill coupling, J. H. Wygant.226,452Tobacco drying furnace, C. W. Hughes.226,515Toy pistol, M. Backes.226,523Traice splicing device, J. E. Curd.226,526Tricycle, E. F. Esperandleu.226,526Tricycle, E. F. Esperandleu.226,544Tug, hame, J. Skidmore et al.226,544Vehicle spring, C. M. Murch.226,544Vehicle spring, D. N. Nilson.226,544Vehicle spring bar, G. Newton226,544Vesels, construction of steam, A. Olsen.226,544Vagon, side bar, C. W. Saladee.226,542Wagon, side bar, C. W. Saladee.226,424Wagons and dumping them, device for unload- ing, P. H. Samuell.226,425Wash stands, bath tubs, etc., combined valve and seal joint for, J. Bennor.226,542Waste pipes, etc., purifying and ventilating, R. Wilsdon226,545Waste pipes, etc., purifying and ventilating, R. Wilsdon226,542Waste pipes, etc., purifying and ventilating, R. Wilsdon226,542Waste pipes, etc., purifying and ventilating, R. Wilsdon226,544Whip rolling machine, C. M. Comstock.226,547Wilsdon226,547Waste pipes, etc., purifying and ventilating, R. Wilsdon226,547Wilsdon226,547Wilsdon226,547
Engines, automatic apparatus for stopping, Ripp         & Mueller.       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaporator, A. L. & A. S. Folger       226,45         Evaroising machine, J. Arnett       226,42         Fan, M. Rubin (r).       226,42         Fan, M. Rubin (r).       226,42         Fence, portable, M. Higbee       226,42         Fibers from textile plants, extracting, P. A.       226,40         Filing and binding papers, device for, I. W. Heysinger       226,40         Firearm, breech-loading, G. H. Fay       226,40         Firearm trigger, G. Schalck       226,52         Fire escape, H. Fuller.       226,42         Fire kindlers, machine for making, A. F. Temple 226,50       91,52         Fire escape, H. Fuller.       226,42         Fish, preparing and preserving, D. W. Davis.       226,42         Flud motors, valve gear for, W. F. Class.       226,44         Fluid motors, valve gear for, W. F. Class.       226,44         Foul air trap for wash basins, J. L. Hutchinson.       226,42         Fulling mill, R. Elekemeyer (r).       9,14         Gas governor, L. P. Blair       226,42         Gas governor, L. P. Blair       226,42         Gueose, manufacturing, C. Furbish.       226,53<	Telephone call bell, H. C. Bliss.       226,440         Telephone switch, E. N. Lordl       226,528         Thermo-dynamic engine, E. Thuemmler.       226,570         Thill coupling, E. P. Joslyn       226,452         Thill coupling, J. H. Wygant       226,543         Tobacco drying furnace, C. W. Hughes.       226,517         Tobacco steaming apparatus, A. Harnish       226,552         Tray waiter's, Lear & Connett.       226,526         Tricycle, E. F. Esperandleu.       226,554         Tray waiter's, Lear & Connett.       226,554         Trigy, hame, J. Skidmore et al.       226,544         Vehicle spring, C. M. Murch.       226,544         Vehicle spring, N. Nilson.       226,544         Vehicle spring, N. Nilson.       226,542         Vesels, construction of steam, A. Olsen.       226,542         Vesels, construction of steam, A. Olsen.       226,542         Valve, stop, G. H. Perkins et al.       226,543         Velocipede, G. E. Whitmore.       226,544         Vesels, construction of steam, A. Olsen.       226,424         Wagon, side bar, C. W. Saladee.       226,424         Wagons and dumping then, device for unload- ing, P. H. Samuell.       226,546         Wash stands, bath tubs, etc., combined valve and seal Joint for, J. Bennor.       226,
Engines, automatic apparatus for stopping, Ripp         & Mueller       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaporator, A. L. & A. S. Folger       226,45         Fan, M. Rubin (r).       226,42         Fan, M. Rubin (r).       226,42         Fan, M. Rubin (r).       226,42         Fence, portable, M. Higbee       226,40         Fibers from textile plants, extracting, P. A. A.       226,40         Firearm, breech-loading, G. H. Fay.       226,50         Firearm, breech-loading, G. H. Fay.       226,50         Firearm rigger, G. Schalck       226,52         Fire escape, H. Fuller.       226,44         Fire kindlers, machine for making, A. F. Temple       226,52         Fire escape, H. Fuller.       226,52         Fire escape, H. Fuller.       226,54         Fish, preparing and preserving, D. W. Davis.       226,52         Fiors, walls, etc., covering for, G. P. Chiles.       226,44         Flour bin and sifter, combined, J. M. Clark       226,44         Foul air trap for wash basins, J. L. Hutchinson.       226,42         Fountain, J. Storer       226,44         Fulling mill, R. Elckemeyer (r).       9,14         Gas, governor, L. P. Blair       226,47         Gas, proc	Telephone call bell, H. C. Bliss.226,480Telephone switch, E. N. Lordl226,528Thermo-dynamic engine, E. Thuemmler226,572Thill coupling, E. P. Joslyn226,452Thill coupling, J. H. Wygant226,452Tobacco drying furnace, C. W. Hughes226,515Tobacco steaming apparatus, A. Harnish226,517Top jistol, M. Backes226,452Traige splicing device, J. E. Curd226,452Tricycle, E. F. Esperandleu226,546Trigole, E. F. Esperandleu226,544Tug, hame, J. Skidmore et al.226,544Vehicle spring, N. Nilson226,545Velicle spring, R. G. Newton226,413Velicle spring, R. G. Newton226,413Wagons and dumping them, device for unload- ing, P. H. Samuell226,424Wagons and dumping them, device for unload- ing, P. H. Samuell226,426Washing machine, T. Suppes226,426Washing machine, T. Suppes226,547Washing machine, T. Suppes226,547Witsdon226,547Witsdon226,547Witsdon226,548Windmill, J. & J. B. Cushman226,442Windmill, J. & J. B
Engines, automatic apparatus for stopping, Ripp         & Mueller       226,55         Evaporator, A. L. & A. S. Folger       226,45         Fan, M. Rubin (r).       9,15         Fence, portable, M. Higbec       226,45         Fibers from textile plants, extracting, P. A. A.       226,40         Filing and binding papers, device for, I. W. Hey-       226,40         Firearm, breech-loading, G. H. Fay.       226,50         Firearm, breech-loading, G. H. Fay.       226,40         Firearm, trigger, G. Schalck       226,45         Fire escape, H. Fuller       226,40         Fire escape, H. Fuller       226,40         Fire kindlers, machine for making, A. F. Temple       226,50         Filons, walls, etc., covering for, G. P. Chiles       226,42         Flour bin and sifter, combined, J. M. Clark       226,44         Fluid motors, valve gear for, W. F. Class       226,44         Foul air trap for wash basins, J. L. Hutchinson       226,44         Fouling mill, R. Elckemeyer (r)       9,14         Gas governor, L. P. Blair       226,43         Gas, governor, L. P. Blair       <	Telephone call bell, H. C. Bliss.       226,480         Telephone switch, E. N. Lordl       226,528         Thermo-dynamic engine, E. Thuemmler       226,572         Thill coupling, E. P. Joslyn       226,482         Tobacco drying furnace, C. W. Hughes       226,515         Toy pistol, M. Backes       226,515         Toy pistol, M. Backes       226,515         Toy pistol, M. Backes       226,515         Trace splicing device, J. E. Curd       226,504         Tringing, aparatus, A. Harnish       226,515         Toy pistol, M. Backes       226,515         Toy pistol, M. Backes       226,504         Trace splicing device, J. E. Curd       226,504         Trimmings, manufacture of, E. Brosemann       226,544         Tug, hame, J. Skidmore et al.       226,544         Vehicle spring, C. M. Murch       226,545         Vehicle spring, N. Nilson       226,542         Veise for bench vises, pipe, F. I. Maule       226,542         Vise for bench vises, pipe, F. I. Maule.       226,424         Wagons and dumping them, device for unloading, P. H. Samuell       226,542         Wast stands, bath tubs, etc., combined valve and       326,544         Wast stands, bath tubs, etc., combined valve and       326,545         Waster pipes, etc., p
Engines, automatic apparatus for stopping, Ripp         & Mueller.       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaporator, A. L. & A. S. Folger       226,45         Fan, M. Rubin (r).       226,45         Fence, portable, M. Higbee       226,46         Fibers from textile plants, extracting, P. A.       226,40         Filers from textile plants, extracting, P. A.       226,40         Firearm, preach-loading, G. H. Fay       226,40         Firearm, preach-loading, G. H. Fay       226,40         Firearm, trigger, G. Schalck       226,55         Fire escape, H. Fuller.       226,40         Fire structure, and preserving, D. W. Davis       226,40         Fire kindlers, machine for making, A. F. Temple 226,55       717         Fish, preparing and preserving, D. W. Davis       226,42         Folors, walls, etc. covering for, G. P. Chiles       226,44         Four bin and sifter, combined, J. M. Clark       226,53         Fluid motors, valve gear for, W. F. Class       226,44         Four bin and sifter, combined, J. M. Clark       226,44         Four bin and sifter, combined, J. M. Clark       226,44         Four bin and sifter, conbined, J. M. Clark       226,44	Telephone call bell, H. C. Bliss.       226,440         Telephone switch, E. N. Lordl       226,552         Thermo-dynamic engine, E. Thuemmler.       226,552         Thill coupling, E. P. Josiyn.       226,452         Thill coupling, J. H. Wygant.       226,543         Tobacco drying furnace, C. W. Hughes.       226,517         Tobacco steaming apparatus, A. Harnish.       226,517         Toy pistol, M. Backes.       226,432         Trarace splicing device, J. E. Curd.       226,526         Tricycle, E. F. Esperandleu.       226,526         Trinmings, manufacture of, E. Brosemann       226,544         Vehicle spring, C. M. Murch.       226,544         Vehicle spring, N. Nilson.       226,544         Vehicle spring N. Nilson.       226,544         Vehicle spring N. Nilson.       226,544         Velocipede, G. E. Whitmore.       226,542         Vise for bench vises, pipe, F. I. Maule.       226,423         Wagons and dumping them, device for unload- ing, P. H. Samuell.       226,424         Wash stands, bath tubs, etc., combined valve and seal Joint for, J. Bennor.       226,424
Engines, automatic apparatus for stopping, Ripp         & Mueller       226,45         Evaporator, A. L. & A. S. Folger       226,53         Evaporator, A. L. & A. S. Folger       226,43         Fan, M. Rubin (r).       226,43         Fence, and fence post, wire, Boyer & Kinsey       226,43         Filers from textile plants, extracting, P. A. A.       226,40         Filing and binding papers, device for, I. W. Heysinger       226,40         Firearm, breech-loading, G. H. Fay.       226,50         Firearm, magazine, N. King (r).       9,15         Fire escape, H. Fuller.       226,40         Fire kindlers, machine for making, A. F. Temple 226,50       56         Fire escape, H. Fuller.       226,52         Fire escape, H. Fuller.       226,52         Fish, preparing and preserving, D. W. Davis.       226,52         Fish, preparing and preserving, D. W. Davis.       226,52         Folors, walls, etc., covering for, G. P. Chiles.       226,44         Fluid motors, valve gear for, W. F. Class.       226,44         Foul air trap for wash basins, J. L. Hutchinson.       226,54         Fouling mill, R. Eickemeyer (r).       9,14         Gas governor, L. P. Blair       226,47         Fulling mill, R. Eickemeyer (r).       9,14         Gas, p	Telephone call bell, H. C. Bliss.       226,480         Telephone switch, E. N. Lordl       226,578         Thermo-dynamic engine, E. Thuemmler.       226,570         Thill coupling, E. P. Joslyn       226,480         Tobacco drynamic engine, E. Thuemmler.       226,480         Thill coupling, J. H. Wygant       226,452         Tobacco steaming apparatus, A. Harnish       226,517         Tobacco steaming apparatus, A. Harnish       226,517         Toy pistol, M. Backes.       226,542         Tricycle, E. F. Esperandleu       226,526         Tricycle, E. F. Esperandleu       226,543         Tug, hame, J. Skidmore et al.       226,544         Yehicle spring, C. M. Murch.       226,544         Yehicle spring, N. Niison       226,544         Vehicle spring, N. Niison       226,541         Velicle spring, N. Niison       226,422         Vise for bench vises, pipe, F. I. Maule.       226,424         Wagon, side bar, C. W. Saladee.       226,424         Washing machine, T. Suppes       226,546         Washing machine, T. Suppes       226,547         Waster pipes, etc., purifying and ventilating, R.       226,424         Washing machine, T. Suppes       226,546         Washing machine, T. Suppes       226,547
Engines, automatic apparatus for stopping, Ripp         & Mueller       226,55         Evaporator, A. L. & A. S. Folger       226,45         Fan, M. Rubin (r).       9,15         Fence, portable, M. Higbee       226,46         Filters from textile plants, extracting, P. A. A.       226,40         Firearn, breech-loading, G. H. Fay.       226,50         Firearm, trigger, G. Schalck       226,52         Fire escape, H. Fuller.       226,42         Fire escape, H. Fuller.       226,42         Fire escape, H. Fuller.       226,42         Fire escape, H. Fuller.       226,52         Fire escape, H. Fuller.       226,52         Fire escape, H. Fuller.       226,52         Filors, walls, etc., covering for, G. P. Chiles.       226,42         Flour bin and sifter, combined, J. M. Clark       226,44         Foul air trap for wash basins, J. L. Hutchinson.       226,52         Foulting mill, R. Elckemeyer (r).       9,14         Gas governor, L. P. Blair       226,42         Fulling mill, R. Elckemeyer (r).       9,14         Gas process and apparatus	Telephone call bell, H. C. Bliss.226,480Telephone switch, E. N. Lordl226,528Thermo-dynamic engine, E. Thuemmler226,570Thill coupling, E. P. Joslyn226,452Thill coupling, J. H. Wygant226,452Tobacco drying furnace, C. W. Hughes226,515Toy pistol, M. Backes226,515Toy pistol, M. Backes226,515Toy pistol, M. Backes226,516Trace splicing device, J. E. Curd226,546Trace splicing device, J. E. Curd226,546Trigole, E. F. Esperandleu226,546Trig, hame, J. Skidmore et al.226,546Vehicle spring, C. M. Murch226,546Vehicle spring, R. Nilson226,547Vessels, construction of steam, A. Olsen226,547Vessels, construction of steam, A. Olsen226,542Vise for bench vises, pipe, F. I. Maule226,421Wagons and dumping them, device for unload- ing, P. H. Samuell226,422Washing machine, T. Suppes226,547Waster pipes, etc., purifying and ventilating, R. Wilsdon226,549White onling machine, C. M. Comstock226,426Waster pipes, etc., purifying and ventilating, R. Wilsdon226,425Windmill, J. & J. B. Cushman226,439Windmill, G. Rischmuller226,539Wringer, H. A. Gore226,539Wringing machine, J. G. Roth (r)9,158
Engines, automatic apparatus for stopping, Ripp & Mueller.       226,53         Evaporator, A. L. & A. S. Folger       226,45         Fan, M. Rubin (r)       9,15         Fence, portable, M. Higbee       226,47         Fibers from textile plants, extracting, P. A. A.       M. A. Favier         Singer       226,40         Firearm, breech-loading, G. H. Fay       226,40         Firearm trigger, G. Schalck       226,53         Fire escape, H. Fuller       9,15         Fire kindlers, machine for making, A. F. Temple 226,54       Fish, preparing and preserving, D. W. Davis         Floors, walls, etc. covering for, G. P. Chiles       226,44         Flour bin and sifter, combined, J. M. Clark       226,44         Flour bin and sifter, combined, J. M. Clark       226,44         Flour bin and sifter, combined, J. M. Clark       226,44         Fluid motors, valve gear for, W. F. Class       226,44         Fluid motors, valve gear for, W. F. Class       226,44         Fluid motors, valve gear for, W. F. Class       226,44         Fluid motors, valve gear for,	Telephone call bell, H. C. Bliss.       226,440         Telephone switch, E. N. Lordl       226,528         Thermo-dynamic engine, E. Thuemmler.       226,528         Thill coupling, E. P. Josiyn.       226,452         Thill coupling, J. H. Wygant       226,543         Tobacco drying furnace, C. W. Hughes.       226,515         Toy pistol, M. Backes.       226,513         Traze splicing device, J. E. Curd.       226,526         Tricycle, E. F. Esperandleu.       226,526         Tricycle, E. F. Esperandleu.       226,526         Tricycle, S. F. Mannet, J. Skidmore et al.       226,526         Tricycle, Spling, C. M. Murch.       226,544         Vehicle spring, N. Nilson.       226,544         Vehicle spring bar, G. Newton       226,544         Vehicle spring bar, G. Newton       226,542         Velocipede, G. E. Whitmore.       226,542         Vise for bench vises, pipe, F. I. Maule.       226,542         Wagon, side bar, C. W. Saladee.       226,542         Wash stands, bath tubs, etc., combined valve and       seal joint for, J. Bennor.       226,424         Wagons and dumping them, device for unloading, P. H. Samuell       226,542         Wash stands, bath tubs, etc., combined valve and       seal joint for, J. Bennor.       226,542 <td< td=""></td<>
Engines, automatic apparatus for stopping, Ripp         & Mueller.       226,53         Evaporator, A. L. & A. S. Folger       226,53         Evaporator, A. L. & A. S. Folger       226,53         Evaroising machine, J. Arnett       226,43         Fan, M. Rubin (r).       226,44         Fan, M. Rubin (r).       226,44         Fan, M. Rubin (r).       226,44         Fence, portable, M. Higbee       226,44         Filters from textile plants, extracting, P. A.       226,40         Filting and binding papers, device for, I. W. Heysinger       226,40         Firearm, breech-loading, G. H. Fay       226,52         Firearm, trigger, G. Schalck       226,52         Fire escape, H. Fuller.       226,44         Fire kindlers, machine for making, A. F. Temple 226,52       51         Fish, preparing and preserving, D. W. Davis       226,44         Flud motors, valve gear for, W. F. Class       226,44         Four bin and sifter, combined, J. M. Clark       226,44         Foul air trap for wash basins, J. L. Hutchinson       226,54         Foulting mill, R. Elckemeyer (r).       9,14         Gas, governor, L. P. Blair       226,47         Gas governor, L. P. Blair       226,43         Glucose, manufacturing, C. Furbish.       226,32	Telephone call bell, H. C. Bliss.       226,440         Telephone switch, E. N. Lordl       226,552         Thermo-dynamic engine, E. Thuemmler.       226,572         Thill coupling, E. P. Joslyn       226,452         Thill coupling, J. H. Wygant       226,543         Tobacco drying furnace, C. W. Hughes.       226,517         Tobacco steaming apparatus, A. Harnish       226,552         Tray waiter's, Lear & Connett.       226,552         Tricycle, E. F. Esperandleu.       226,554         Tury, hame, J. Skidmore et al.       226,544         Vehicle spring, C. M. Murch.       226,544         Vehicle spring, N. Nilson.       226,544         Vehicle spring, N. Nilson.       226,544         Vehicle spring, N. Nilson.       226,542         Vesels, construction of steam, A. Olsen.       226,424         Wagon, side bar, C. W. Saladee.       226,424         Wagon, side bar, T. Suppes       226,424         Wash stands, bath tubs, etc., combined valve and seal Joint for, J. Bennor.       226,543         Waster pipes, etc., purifying and ventilating, R.       Wilsdon         Wilsdon
Engines, automatic apparatus for stopping, Ripp         & Mueller       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaporator, A. L. & A. S. Folger       226,45         Fan, M. Rubin (r).       226,45         Fence, portable, M. Higbee       226,45         Fibers from textile plants, extracting, P. A. A.       226,45         Filing and binding papers, device for, I. W. Heysinger       226,40         Firearm, breech-loading, G. H. Fay.       226,55         Fire escape, H. Fuller.       226,40         Fire kindlers, machine for making, A. F. Temple       226,55         Fire escape, H. Fuller.       226,55         Fire escape, H. Fuller.       226,56         Fish, preparing and preserving, D. W. Davis.       226,52         Filors, walls, etc., covering for, G. P. Chiles.       226,44         Fluid motors, valve gear for, W. F. Class.       226,44         Fountain, J. Storer       226,44         Fulling mill, R. Eickemeyer (r).       9,14         Gas, governor, L. P. Blair       226,47         Gas, sporcess and apparatus for manufacturing,       226,47         Gas, process and apparatus for manufacturing,       226,47         Gas, process and apparatus for manufacturing,       226,47         Gas, process and appa	Telephone call bell, H. C. Bliss.       226,480         Telephone switch, E. N. Lordl       226,572         Thermo-dynamic engine, E. Thuemmler       226,572         Thill coupling, E. P. Joslyn       226,542         Thill coupling, J. H. Wygant       226,543         Tobacco drying furnace, C. W. Hughes       226,517         Tobacco steaming apparatus, A. Harnish       226,517         Top jistol, M. Backes       226,542         Trinzoe splicing device, J. E. Curd       226,542         Trircycle, E. F. Esperandlea       226,544         Tug, hame, J. Skidmore et al.       226,546         Vehicle spring, C. M. Murch       226,544         Vehicle spring, R. G. Newton       226,544         Velocipede, G. E. Whitmore       226,543         Vesicie spring, N. Nilson       226,544         Velocipede, G. E. Whitmore       226,442         Vise for bench vises, pipë, F. I. Maule       226,442         Wagons and dumping them, device for unload-       ing, P. H. Samuell       226,442         Washing machine, T. Suppes       226,442         Washing machine, C. M. Comstock       226,442         Wisdon       226,547       226,442         Wisdon       226,547         Waster spice, t.c., purifying and ventilating, R
Engines, automatic apparatus for stopping, Ripp         & Mueller       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaporator, A. L. & A. S. Folger       226,45         Fan, M. Rubin (r).       9,15         Fence, portable, M. Higbee       226,45         Filters from textile plants, extracting, P. A. A.       226,40         Filters from textile plants, extracting, P. A. A.       226,40         Firearm, breech-loading, G. H. Fay.       226,50         Filters from textile plants, extracting, P. A. A.       226,40         Firearm, breech-loading, G. H. Fay.       226,50         Firearm, breech-loading, G. H. Fay.       226,50         Fire escape, H. Fuller.       226,42         Fire escape, H. Fuller.       226,42         Fire escape, H. Fuller.       226,42         Fire, walls, etc., covering for, G. P. Chiles.       226,42         Floors, walls, etc., covering for, G. P. Chiles.       226,42         Foul and sifter, combined, J. M. Clark.       226,44         Foul air trap for wash basins, J. L. Hutchinson.       226,42         Fulling mill, R. Elckemeyer (r).       9,14         Gas, governor, L. P. Blair       226,42         Gas, process and apparatus for	Telephone call bell, H. C. Bliss.       226,480         Telephone switch, E. N. Lordl       226,523         Thermo-dynamic engine, E. Thuemmler       226,573         Thill coupling, E. P. Joslyn       226,452         Thill coupling, J. H. Wygant       226,452         Tobacco drying furnace, C. W. Hughes       226,515         Top pistol, M. Backes       226,515         Top pistol, M. Backes       226,515         Toy pistol, M. Backes       226,546         Trace splicing device, J. E. Curd       226,546         Tringrig, Ranufacture of, E. Brosemann       226,546         Tringrig, Nanufacture of, E. Brosemann       226,544         Tug, hame, J. Skidmore et al.       226,546         Vehicle spring, C. M. Murch       226,543         Vehicle spring, N. Nilson       226,545         Vehicle spring bar, G. Newton       226,542         Vise for bench vises, pipe, F. I. Maule       226,424         Wagons and dumping them, device for unloading, P. H. Samuell       226,425         Waste pipes, etc., purifying and ventilating, R.       Wilsdon         Wilsdon       226,542         Waste pipes, etc., purifying and ventilating, R.       Wilsdon         Wilsdon       226,542         Waste pipes, etc., purifying and ventilating, R.
Engines, automatic apparatus for stopping, Ripp         & Mueller.       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaporator, A. L. & A. S. Folger       226,45         Fan, M. Rubin (r).       226,45         Fence, portable, M. Higbee       226,46         Fibers from textile plants, extracting, P. A.       226,40         Filters from textile plants, extracting, P. A.       226,40         Firearm, breech-loading, G. H. Fay       226,40         Firearm, treger, G. Schalck       226,52         Firearm trigger, G. Schalck       226,53         Fire escape, H. Fuller.       226,40         Fire kindlers, machine for making, A. F. Temple 226,54       Fire kindlers, machine for making, A. F. Temple 226,54         Floors, walls, etc. covering for, G. P. Chiles.       226,44         Fluid motors, valve gear for, W. F. Class       226,44         Fluid motors, valve gear for, W. F. Class       226,54         Four bin and sifter, combined, J. M. Clark       226,44         Fluid motors, valve gear for, W. F. Class       226,44         Four bin and sifter, combined, J. M. Clark       226,44         Four bin and sifter, combined, J. M. Clark       226,44         Fourtain, J. Storer       226,44 </td <td>Telephone call bell, H. C. Bliss.       226,440         Telephone switch, E. N. Lordl       226,523         Thermo-dynamic engine, E. Thuemmler.       226,525         Thill coupling, E. P. Josiyn.       226,452         Thill coupling, J. H. Wygant.       226,543         Tobacco drying furnace, C. W. Hughes.       226,517         Tobacco steaming apparatus, A. Harnish.       226,526         Traze splicing device, J. E. Curd.       226,526         Tricycle, E. F. Esperandleu.       226,526         Tricycle, E. F. Esperandleu.       226,526         Trinmings, manufacture of, E. Brosemann       226,544         Vehicle spring, C. M. Murch.       226,544         Vehicle spring, N. Nilson.       226,542         Velocipede, G. E. Whitmore.       226,542         Vagon, side bar, C. W. Saladee.       226,542         Wagon, side bar, C. W. Saladee.       226,423         Wagons and dumping them, device for unloading. R.       Wilsdon         Wilsdon       226,544         Wabing machine, T. Suppes       226,542         Water gauge, T. C. Purves       226,542</td>	Telephone call bell, H. C. Bliss.       226,440         Telephone switch, E. N. Lordl       226,523         Thermo-dynamic engine, E. Thuemmler.       226,525         Thill coupling, E. P. Josiyn.       226,452         Thill coupling, J. H. Wygant.       226,543         Tobacco drying furnace, C. W. Hughes.       226,517         Tobacco steaming apparatus, A. Harnish.       226,526         Traze splicing device, J. E. Curd.       226,526         Tricycle, E. F. Esperandleu.       226,526         Tricycle, E. F. Esperandleu.       226,526         Trinmings, manufacture of, E. Brosemann       226,544         Vehicle spring, C. M. Murch.       226,544         Vehicle spring, N. Nilson.       226,542         Velocipede, G. E. Whitmore.       226,542         Vagon, side bar, C. W. Saladee.       226,542         Wagon, side bar, C. W. Saladee.       226,423         Wagons and dumping them, device for unloading. R.       Wilsdon         Wilsdon       226,544         Wabing machine, T. Suppes       226,542         Water gauge, T. C. Purves       226,542
Engines, automatic apparatus for stopping, Ripp         & Mueller       226,53         Evaporator, A. L. & A. S. Folger       226,53         Evaporator, A. L. & A. S. Folger       226,53         Evaroising machine, J. Arnett       226,43         Fan, M. Rubin (r)       226,44         Fan, M. Rubin (r)       226,44         Fence, portable, M. Higbee       226,45         Fibers from textile plants, extracting, P. A. M.       M. A. Favier         Singer       226,40         Firearm, breech-loading, G. H. Fay       226,40         Firearm trigger, G. Schalck       226,55         Fire escape, H. Fuller       226,54         Fish, preparing and preserving, D. W. Davis       226,54         Fish, preparing and preserving, D. W. Davis       226,54         Fish, preparing and preserving, D. W. Davis       226,54         Four bin and sifter, combined, J. M. Clark       226,54         Four bin and sifter, combined, J. M. Clark       226,54         Foul air trap for wash basins, J. L. Hutchinson       226,54         Fouling mill, R. Eickemeyer (r)       9,14         Gas governor, L. P. Blair       226,47         Gas governor, L. P. Blair       226,47         Glucose, manufacturing, J. F. Wolff       226,54	Telephone call bell, H. C. Bliss.       226,440         Telephone switch, E. N. Lordl       226,528         Thermo-dynamic engine, E. Thuemmler.       226,570         Thill coupling, E. P. Joslyn       226,542         Thill coupling, J. H. Wygant       226,543         Tobacco drying furnace, C. W. Hughes.       226,517         Tobacco steaming apparatus, A. Harnish       226,552         Trar, waiter's, Lear & Connett.       226,552         Trinmings, manufacture of, E. Brosemann       226,554         Tury, hame, J. Skidmore et al.       226,544         Vehicle spring, C. M. Murch.       226,544         Vehicle spring, N. Nilson       226,544         Vehicle spring, N. Nilson       226,544         Vehicle spring, N. Nilson       226,544         Vehicle spring bar, G. Newton       226,544         Vehicle spring bar, G. Newton       226,542         Vise for bench vises, pipe, F. I. Maule.       226,543         Vagons and dumping then, device for unload- ing, P. H. Samuell       226,424         Wagons and dumping then, device for unload- ing, P. H. Samuell       226,424         Washing machine, T. Suppes       226,436         Waster pipes, etc., purifying and ventilating, R.       7         Wilsdon       226,439         Whitmill,
Engines, automatic apparatus for stopping, Ripp         & Mueller       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaporator, A. L. & A. S. Folger       226,45         Fan, M. Rubin (r).       226,45         Fan, M. Rubin (r).       226,45         Fence, portable, M. Higbee       226,46         Filters from textile plants, extracting, P. A. A.       M. A. Favier.         Singer       226,55         Firearm, breech-loading, G. H. Fay.       226,50         Firearm ingger, G. Schalck       226,55         Fire escape, H. Fuller.       226,40         Fire escape, H. Fuller.       226,40         Fire kindlers, machine for making, A. F. Temple       226,55         Fire escape, H. Fuller.       226,42         Fish, preparing and preserving, D. W. Davis.       226,52         Filors, walls, etc., covering for, G. P. Chiles.       226,44         Fluid motors, valve gear for, W. F. Class.       226,44         Foul air trap for wash basins, J. L. Hutchinson.       226,42         Fulling mill, R. Elckemeyer (r).       9,14         Gas, governor, L. P. Blair       226,47         Gas, process and apparatus for manufacturing,       M. S. Frost.       226,47         Gas, process and apparatus for manufacturing,	Telephone call bell, H. C. Bliss.       226,480         Telephone switch, E. N. Lordl       226,572         Thermo-dynamic engine, E. Thuemmler       226,572         Thill coupling, E. P. Joslyn       226,572         Thill coupling, J. H. Wygant       226,573         Tobacco drying furnace, C. W. Hughes       226,515         Top pistol, M. Backes       226,517         Top pistol, M. Backes       226,526         Trinzee splicing device, J. E. Curd       226,526         Tricycle, E. F. Esperandleu       226,544         Tug, hame, J. Skidmore et al.       226,546         Vehicle spring, C. M. Murch       226,546         Vehicle spring, N. Nilson       226,547         Velocipede, G. E. Whitmore       226,541         Velocipede, G. E. Whitmore       226,542         Vise for bench vises, pipé, F. I. Maule       226,442         Wagons and dumping them, device for unload-       ing, P. H. Samuell       226,442         Washing machine, T. Suppes       226,443         Washing machine, C. M. Comstock       226,442         Wisdon       226,542         Washing machine, C. M. Comstock       226,442         Washing machine, T. Suppes       226,442         Wisdon       226,542         Wisdon
Engines, automatic apparatus for stopping, Ripp & Mueller.       226,53         Evaporator, A. L. & A. S. Folger       226,53         Evaporator, A. L. & A. S. Folger       226,53         Evaporator, A. L. & A. S. Folger       226,45         Fan, M. Rubin (r).       286,45         Fence, portable, M. Higbee       226,47         Fibers from textile plants, extracting, P. A.       226,40         Fibers from textile plants, extracting, P. A.       226,40         Firearm, breech-loading, G. H. Fay       226,40         Firearm, treger, G. Schalck       226,53         Fire escape, H. Fuller       226,40         Fire structure, G. Schalck       226,53         Fire escape, H. Fuller       226,54         Fire kindlers, machine for making, A. F. Temple 226,54       File, preparing and preserving, D. W. Davis         Flour bin and sifter, combined, J. M. Clark       226,44         Flour bin and sifter, combined, J. M. Clark       226,44         Fluid motors, valve gear for, W. F. Class       226,52         Fountain, J. Storer       226,44         Fouling mill, R. Elckemeyer (r)       9,14         Gas, generator for producing carbureted water,       J. D. Averell         J. D. Averell       226,47         Gas, process and apparatus for manufacturing,       M. S.	Telephone call bell, H. C. Bliss.       226,440         Telephone switch, E. N. Lordl       226,528         Thermo-dynamic engine, E. Thuemmler.       226,528         Thill coupling, J. H. Wygant       226,548         Tobacco drying furnace, C. W. Hughes.       226,517         Tobacco steaming apparatus, A. Harnish.       226,528         Train vaiter's, Lear & Connett.       226,528         Tricycle, E. F. Esperandleu.       226,524         Tringing, Manufacture of, E. Brosemann       226,524         Tricycle, E. F. Esperandleu.       226,526         Tricycle, Spring, C. M. Murch.       226,544         Yehicle spring, N. Nilson.       226,544         Vehicle spring bar, G. Newton       226,544         Vehicle spring bar, G. Newton       226,542         Velocipede, G. E. Whitmore.       226,542         Vise for bench vises, pipe, F. I. Maule.       226,542         Wagon, side bar, C. W. Saladee.       226,542         Was stands, bath tubs, etc., combined valve and       seal joint for, J. Bennor.       226,424         Wagons and dumping them, device for unloading, P. H. Samuell.       226,543         Waste pipes, etc., purifying and ventilating, R.       Wisdon       226,544         Waidon       226,544       226,544         Windmill,
Engines, automatic apparatus for stopping, Ripp & Mueller.       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaporator, A. L. & A. S. Folger       226,45         Fan, M. Rubin (r).       226,45         Fence, portable, M. Higbee       226,47         Filters from textile plants, extracting, P. A.       226,40         Filters from textile plants, extracting, P. A.       226,40         Firearm, breech-loading, G. H. Fay       226,40         Firearm, magazine, N. King (r).       9,15         Firearm trigger, G. Schalck       226,55         Fire escape, H. Fuller.       226,40         Fire kindlers, machine for making, A. F. Temple 226,50       9,15         Fish, preparing and preserving, D. W. Davis.       226,42         Four bin and sifter, combined, J. M. Clark       226,44         Four bin and sifter, combined, J. M. Clark       226,44         Four bin and sifter, combined, J. M. Clark       226,44         Foult ain trap for wash basins, J. L. Hutchinson.       226,44         Foulting mill, R. Elckemeyer (r).       9,14         Gas, generator for producing carbureted water,       J. D. Averell         J. D. Averell       226,35         Gem setting, V. Draper (r).       9,14	Telephone call bell, H. C. Bliss.       226,440         Telephone switch, E. N. Lordl       226,552         Thermo-dynamic engine, E. Thuemmler.       226,572         Thill coupling, E. P. Joslyn       226,452         Thill coupling, J. H. Wygant       226,452         Tobacco drying furnace, C. W. Hughes.       226,517         Tobacco steaming apparatus, A. Harnish       226,552         Tray waiter's, Lear & Connett.       226,552         Tricycle, E. F. Esperandleu.       226,554         Trigy, awaiter's, Lear & Connett.       226,554         Trigy, awaiter's, Lear & Connett.       226,554         Trigy, awaiter's, Lear & Connett.       226,554         Valve, stop, G. H. Perkins et al.       226,554         Vehicle spring, C. M. Murch.       226,554         Vehicle spring, N. Nilson.       226,542         Vehicle spring, N. Nilson.       226,542         Velocipede, G. E. Whitmore.       226,542         Vagons and dumping them, device for unload- ing, P. H. Samuell.       226,423         Wagons and dumping then, device for unload- ing, P. H. Samuell.       226,562         Wash stands, bath tubs, etc., combined valve and seal joint for, J. Bennor.       226,564         Washing machine, T. Suppes.       226,424         Waster pauge, T. C. Purves.
Dievator sater, statachnet, Jusen & Dictement, 20, 11         Engines, automatic apparatus for stopping, Ripp         & Mueller       226, 32         Evaporator, A. L. & A. S. Folger       226, 32         Evarcising machine, J. Arnett       226, 43         Fan, M. Rubin (r).       226, 44         Fan, M. Rubin (r).       226, 44         Fence, portable, M. Higbee       226, 44         Fibers from textile plants, extracting, P. A. A.       M. A. Favier.         Singer       226, 40         Firearm, breech-loading, G. H. Fay.       226, 50         Firearm ingger, G. Schalck       226, 52         Fire escape, H. Fuller.       226, 44         Fire kindlers, machine for making, A. F. Temple 226, 52       Fire escape, H. Fuller.         Fish, preparing and preserving, D. W. Davis.       226, 52         Fise parening and preserving, D. W. Davis.       226, 52         Foor, walls, etc., covering for, G. P. Chiles.       226, 44         Fluid motors, valve gear for, W. F. Class.       226, 44         Fluid motors, valve gear for, W. F. Class.       226, 54         Fountain, J. Storer       226, 54         Fulling mill, R. Elekemeyer (r).       9, 14         Gas governor, L. P. Blair       226, 52         Gas governor, L. P. Blair       226, 54	Telephone call bell, H. C. Bliss.       226,440         Telephone switch, E. N. Lordl       226,578         Thermo-dynamic engine, E. Thuemmler.       226,570         Thill coupling, E. P. Joslyn       226,452         Thill coupling, J. H. Wygant.       226,452         Tobacco drying furnace, C. W. Hughes.       226,517         Tobacco steaming apparatus, A. Harnish.       226,517         Top pistol, M. Backes.       226,526         Tricycle, E. F. Esperandleu.       226,526         Trinmings, manufacture of, E. Brosemann       226,544         Tug, hame, J. Skidmore et al.       226,544         Vehicle spring, C. M. Murch.       226,544         Vehicle spring, N. Niison.       226,544         Vehicle spring, N. Niison.       226,542         Velicle spring bar, G. Newton       226,442         Vagon, side bar, C. W. Saladee.       226,442         Wagon, side bar, C. W. Saladee.       226,424         Wagons and dumping them, device for unload- ing, P. H. Samuell       226,540         Waster pipes, etc., purifying and ventilating, R.       226,540         Waitsdon       226,425         Waster pipes, etc., purifying and ventilating, R.       226,424         Wagons and dumping them, device for unload- ing, P. H. Samuell       226,540
Dievator satery attachment, Dissen & Dirtensited, 22, 44         Engines, automatic apparatus for stopping, Ripp         & Mueller       226, 55         Evaporator, A. L. & A. S. Folger       226, 55         Evaroising machine, J. Arnett       226, 45         Fan, M. Rubin (r).       9, 15         Fence, portable, M. Higbee       226, 45         Filters from textile plants, extracting, P. A. A.       M. A. Favier.         Singer       226, 40         Firearm, breech-loading, G. H. Fay.       226, 50         Firearm trigger, G. Schalck       226, 52         Fire escape, H. Fuller.       226, 44         Fire kindlers, machine for making, A. F. Temple       226, 42         Fish, preparing and preserving, D. W. Davis.       226, 52         Fire escape, H. Fuller.       226, 44         Fluid motors, valve gear for, W. F. Class.       226, 44         Fluid motors, valve gear for, W. F. Class.       226, 44         Foul air trap for wash basins, J. L. Hutchinson.       226, 47         Fulling mill, R. Elckemeyer (r).       9, 14         Gas, gonerator for producing carbureted water,       1. D. A verell         J. D. Averell       226, 47         Gas, spocess and apparatus for manufacturing,       M. S. Frost.         Gem setting, V. Draper (r)	Telephone call bell, H. C. Bliss.       226,480         Telephone switch, E. N. Lordl       226,528         Thermo-dynamic engine, E. Thuemmler.       226,570         Thill coupling, E. P. Joslyn       226,452         Thill coupling, J. H. Wygant.       226,452         Tobacco drying furnace, C. W. Hughes.       226,515         Tobacco steaming apparatus, A. Harnish.       226,515         Toy pistol, M. Backes.       226,542         Trinzee splicing device, J. E. Curd.       226,546         Trace splicing device, J. E. Curd.       226,546         Trigole, E. F. Esperandleu.       226,546         Trigole, S. F. Esperandleu.       226,544         Yehicle spring, N. Nilson.       226,544         Vehicle spring, N. Nilson.       226,545         Velocipede, G. E. Whitmore.       226,547         Vessels, construction of steam, A. Olsen.       226,542         Vise for bench vises, pipe, F. I. Maule.       226,442         Wagons and dumping them, device for unload- ing, P. H. Samuell       226,442         Washing machine, T. Suppes       226,442         Washing machine, C. M. Comstock.       226,442         Washing machine, C. M. Comstock.       226,442         Washing machine, T. Suppes       226,442         Windmill, J. & J. B. Cus
Engines. automatic apparatus for stopping. Ripp         Engines. automatic apparatus for stopping. Ripp         & Mueller.       226,53         Evaporator, A. L. & A. S. Folger       226,53         Evaroising machine, J. Arnett       226,43         Fan, M. Rubin (r).       286,45         Fence, portable, M. Higbee       226,40         Fibers from textile plants, extracting, P. A.       226,40         Filters from textile plants, extracting, P. A.       226,40         Firearm, breech-loading, G. H. Fay       226,40         Firearm, treger, G. Schalck       226,53         Firearm trigger, G. Schalck       226,53         Fire escape, H. Fuller.       226,40         Fire kindlers, machine for making, A. F. Temple 226,54       Fire kindlers, machine for making, A. F. Temple 226,54         Flour bin and sifter, combined, J. M. Clark       226,44         Flour bin and sifter, combined, J. M. Clark       226,44         Fluid motors, valve gear for, W. F. Class       226,53         Fountain, J. Storer       226,44         Fountain, J. Storer       226,44         Fulling mill, R. Elckemeyer (r).       9,14         Gas, generator for producing carbureted water,       J. D. Averell         J. D. Averell       226,47         Gas, process and apparatus for	Telephone call bell, H. C. Bliss.       226,440         Telephone switch, E. N. Lordl       226,523         Thermo-dynamic engine, E. Thuemmler.       226,523         Thill coupling, J. H. Wygant       226,452         Thill coupling, J. H. Wygant.       226,452         Tobacco drying furnace, C. W. Hughes.       226,517         Tobacco steaming apparatus, A. Harnish.       226,524         Trizy pistol, M. Backes.       226,524         Trizy witcr's, Lear & Connett.       226,526         Tricycle, E. F. Esperandleu.       226,526         Trinmings, manufacture of, E. Brosemann       226,544         Tug, hame, J. Skidmore et al.       226,544         Vehicle spring, C. M. Murch.       226,544         Vehicle spring, D. M. Nilson.       226,544         Vehicle spring bar, G. Newton       226,542         Velocipede, G. E. Whitmore.       226,542         Vise for bench vises, pipe, F. I. Maule.       226,542         Wagon, side bar, C. W. Saladee.       226,424         Wagons and dumping them, device for unloading, P. H. Samuell.       226,425         Wash stands, bath tubs, etc., combined valve and seal joint for, J. Bennor.       226,542         Waste pipes, etc., purifying and ventilating, R.       Wilsdon         Wilsofull, G. Rischmuller.       226,54
Engines, automatic apparatus for stopping, Ripp & Mueller.       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaporator, A. L. & A. S. Folger       226,55         Evaroising machine, J. Arnett       226,42         Fan, M. Rubin (r).       226,42         Fence, portable, M. Higbee       226,42         Filters from textile plants, extracting, P. A. M. M. Favier       226,40         Filting and binding papers, device for, I. W. Heysinger       226,40         Firearm, breech-loading, G. H. Fay       226,40         Firearm trigger, G. Schalck       226,52         Fire escape, H. Fuller.       226,44         Fire kindlers, machine for making, A. F. Temple 226,50       9,15         Fire escape, H. Fuller.       226,44         Folors, walls, etc., covering for, G. P. Chiles.       226,44         Four bin and sifter, combined, J. M. Clark       226,44         Foul air trap for wash basins, J. L. Hutchinson.       226,54         Fulling mill, R. Elckemeyer (r).       9,14         Gas, gouerator for producing carbureted water,       9,14         Gas, governor, L. P. Blair       226,47         Gas governor, L. P. Blair       226,43         Gem setting, V. Draper (r)       9,14         Grain, etc. apparatus for cleaning, J. Arbuckle. <td< td=""><td>Telephone call bell, H. C. Bliss.       226,440         Telephone switch, E. N. Lordl       226,528         Thermo-dynamic engine, E. Thuemmler.       226,570         Thill coupling, J. H. Wygant       226,452         Thill coupling, J. H. Wygant.       226,452         Tobacco drying furnace, C. W. Hughes.       226,517         Tobacco steaming apparatus, A. Harnish.       226,552         Tray waiter's, Lear &amp; Connett.       226,552         Tricycle, E. F. Esperandleu.       226,554         Trig, hame, J. Skidmore et al.       226,544         Yehicle spring, C. M. Murch.       226,544         Vehicle spring, N. Nilson.       226,544         Vehicle spring, N. Nilson.       226,542         Veloicle spring, N. Nilson.       226,542         Vehicle spring, N. Nilson.       226,542         Veloicpede, G. E. Whitmore.       226,542         Vesels, construction of steam, A. Olsen.       226,424         Wagons and dumping then, device for unload- ing, P. H. Samuell.       226,424         Wash stands, bath tubs, etc., combined valve and seal joint for, J. Bennor.       226,424         Washing machine, T. Suppes.       226,424         Washing machine, C. M. Comstock.       226,424         Windmill, J. &amp; J. B. Cushman.       226,425</td></td<>	Telephone call bell, H. C. Bliss.       226,440         Telephone switch, E. N. Lordl       226,528         Thermo-dynamic engine, E. Thuemmler.       226,570         Thill coupling, J. H. Wygant       226,452         Thill coupling, J. H. Wygant.       226,452         Tobacco drying furnace, C. W. Hughes.       226,517         Tobacco steaming apparatus, A. Harnish.       226,552         Tray waiter's, Lear & Connett.       226,552         Tricycle, E. F. Esperandleu.       226,554         Trig, hame, J. Skidmore et al.       226,544         Yehicle spring, C. M. Murch.       226,544         Vehicle spring, N. Nilson.       226,544         Vehicle spring, N. Nilson.       226,542         Veloicle spring, N. Nilson.       226,542         Vehicle spring, N. Nilson.       226,542         Veloicpede, G. E. Whitmore.       226,542         Vesels, construction of steam, A. Olsen.       226,424         Wagons and dumping then, device for unload- ing, P. H. Samuell.       226,424         Wash stands, bath tubs, etc., combined valve and seal joint for, J. Bennor.       226,424         Washing machine, T. Suppes.       226,424         Washing machine, C. M. Comstock.       226,424         Windmill, J. & J. B. Cushman.       226,425
Dievator satery attachment, Dissen & Dirtension, 20, 51         Engines, automatic apparatus for stopping, Ripp & Mueller         Evaporator, A. L. & A. S. Folger       226, 53         Evaporator, A. L. & A. S. Folger       226, 53         Evarcising machine, J. Arnett       226, 44         Fan, M. Rubin (r).       226, 44         Fan, M. Rubin (r).       9, 15         Fence, portable, M. Higbee       226, 44         Filters from textile plants, extracting, P. A. A.       M. A. Favier.         Singer       226, 50         Firearm, breech-loading, G. H. Fay.       226, 50         Firearm trigger, G. Schalck       226, 55         Fire escape, H. Fuller.       226, 44         Fire kindlers, machine for making, A. F. Temple 226, 55       Fire escape, H. Fuller.         Filors, walls, etc., covering for, G. P. Chiles.       226, 45         Flour bin and sifter, combined, J. M. Clark       226, 44         Fluid motors, valve gear for, W. F. Class       226, 44         Fulling mill, R. Eickemeyer (r).       9, 14         Gas governor, L. P. Blair       226, 47         Gas governor, L. P. Blair       226, 47         Gas, process and apparatus for manufacturing,       226, 47         Gas, process and apparatus for cleaning, J. Arbuckle.       226, 47	Telephone call bell, H. C. Bliss.       226,480         Telephone switch, E. N. Lordl       226,573         Thermo-dynamic engine, E. Thuemmler.       226,570         Thill coupling, E. P. Joslyn       226,452         Thill coupling, J. H. Wygant.       226,452         Tobacco dring furnace, C. W. Hughes.       226,517         Tobacco steaming apparatus, A. Harnish.       226,517         Tobacco steaming apparatus, A. Harnish.       226,517         Trace splicing device, J. E. Curd.       226,526         Tricycle, E. F. Esperandleu.       226,540         Trimmings, manufacture of, E. Brosemann       226,544         Yehicle spring, C. M. Murch.       226,543         Yeelice spring, C. M. Murch.       226,544         Vehicle spring, N. Niison.       226,444         Velice spring, N. Niison.       226,442         Vise for bench vises, pipe, F. I. Maule.       226,442         Wagon, side bar, C. W. Saladee.       226,424         Wagons and dumping them, device for unload- ing, P. H. Samuell       226,442         Washing machine, T. Suppes       226,444         Washing machine, T. Suppes       226,444         Wilsdon       226,444         Wilsdon       226,444         Wing machine, J. Beushman       226,457
Dievator salety attachment, Dissein & Dirtension, 20, 51         Engines, automatic apparatus for stopping, Ripp & Mueller         Evaporator, A. L. & A. S. Folger         226,55         Evaporator, A. L. & A. S. Folger         Exercising machine, J. Arnett         226,47         Fan, M. Rubin (r).         Fence, portable, M. Higbee         Filers from textile plants, extracting, P. A. A.         M. A. Favier.         226,40         Firearm, breech-loading, G. H. Fay.         Singer.         226,50         Firearm rigger, G. Schalck         Pire kindlers, machine for making, A. F. Temple         Pire kindlers, machine for making, A. F. Temple         Pilud motors, valve gear for, W. F. Class         Four in and sifter, combined, J. M. Clark         Piluig mill, R. Elckemeyer (r).         Gas, gorenator for producing carbureted water,         J. D. Averell         M. S. Frost         Z26,47         Grain drill fertilizing attachment, W. H. Young.         Z26,47         Fulling mill, R. Elckemeyer (r).         9,14         Gas, governor, L. P. Blair         226,47         Gas, governor, L. P. Blair         226,47         Ghucose, manufacturi	Telephone call bell, H. C. Bliss.       226,480         Telephone switch, E. N. Lordl       226,572         Thermo-dynamic engine, E. Thuemmler.       226,572         Thill coupling, E. P. Joslyn       226,452         Thill coupling, J. H. Wygant.       226,452         Tobacco drying furnace, C. W. Hughes.       226,515         Toy pistol, M. Backes.       226,515         Toy pistol, M. Backes.       226,526         Tricycle, E. F. Esperandleu       226,526         Tricycle, E. F. Esperandleu       226,544         Tug, hame, J. Skidmore et al.       226,544         Vehicle spring, C. M. Murch.       226,546         Velicie spring, R. G. Newton       226,547         Velocipede, G. E. Whitmore.       226,547         Velocipede, G. E. Whitmore.       226,547         Vessels, construction of steam, A. Olsen       226,476         Wagons and dumping them, device for unload-       ing, P. H. Samuell       226,426         Wash stands, bath tubs, etc., combined valve and       scal joint for, J. Bennor.       226,426         Washing machine, T. Suppes       226,439       226,439         Washing machine, C. M. Comstock.       226,430         Windmill, J. & J. B. Cushman       226,426         Washing machine, C. M. Comstock.       226,

## mbrella handle, F. J. Kaldenberg.... .. 11,731 to 11,734 TRADE-MARKS.

(30) H. T. writes: 1. A piece of floor oil cloth has been laid and in use several months and still remains sticky to such a degree that chairs, tables, etc. placed upon it will adhere to it more or less. What is the cause, and how can it be remedied? A. Try the ap-Letters Pa plication of a moderately strong wash of acetate of lead in hot water. 2. By what process can the polish of black marble, such as cases of French clocks are often made of, be restored after having become dull by age or handling? A. Use fine moist rouge and chamois AND EACH skin. 3. I have a piano of excellent quality in every way except that it will not remain in tune longer than about one week after tuning, owing, as I believe, to the tuning pins being too small or thin for their sockets. patent in the a Can I remedy this defect by the application of any such since 1866, will substance as glue or resin or anything of that nature to lar. In orderin the pins or sockets; if so, which is the best, and how should it be applied to obtain the best result? A. Get patent desired, a new set of tuning pins of large diameter. 4. In our New York city climate the felt with which the dampers and hammers | granted prior to of pianos are covered is generally damaged materially within a short time by moths. Could not this felt, before fications not be application, be impregnated with some chemical that Adjustable cha would prevent the attack of the moths and that would not i Anode frame, A

[OFFICIAL.] INDEX OF INVENTIONS FOR WHICH Letters Patent of the United States were	Tatham, Jr.       226,568         Interlocking switch and signal apparatus, A. G.       226,499         Iron, maufacture of, Hamilton & Griffith.       226,400         Ironing board, G H Pearel.       226,543         Label holder, H. Baker       226,547         Latch, automatic gate, Webb & Duncan.       226,577         Lath bolter, Murray & Holt.       226,577	bacco, C. G. Emery
Granted in the Week Ending April 13, 1880,	Lawn rake, W. C. Quigley	English Patents Issued to Americans.
AND EACH BEARING THAT DATE. [Those marked (r) are reissued patents.]	Lubricator, T. M. Wilson	Boot nailing machinery, A. Knowlton, Boston, Mass. Churn, W. Earle, Philadelphia, Pa.
A printed copy of the specification and drawing of any patent in the annexed list, also of any patent issued ince 1866, will be furnished from this office for one dol- ar. In ordering please state the number and date of the patent desired, and remit to Munn & Co., 37 Park Row,	Mechanical motor. J. G. Marcy	Grinding mills for wood pulp, G. King, Oswego, N. Y. Hat bigms, J. Peters et al., Philadelphia, Pa. Heat, Attilizing from furnaces, A. H. Hearington, Roches- ter, N. Y. Organs and apparatus for playing, G. H. Chinnock et al., Brooklyn, N. Y.
New York city. We also furnish copies of patents tranted prior to 1866; but at increased cost, as the speci- leations not being printed, must be copied by hand.	Paper and cloth, coating, A. Sackett	<ul> <li>Printing press, J. L. Firm et al., —, N. J.</li> <li>Saw sharpening machinery, G. W. Dudley et al., Waynesborough, Va.</li> <li>Screws threads, machinery for cutting, F. Armstrong, Bridgenort Conn.</li> </ul>
Adjustable chair, M. F. Bell	Papier mache, manufacturing articles in imita- tion of, R. Cunningham	Telegraphic cables, manufacture of, M. M. Manly et al., Philadelphia, IPa.

Incubators, heat regulating device for, H. B.