#### TO INVENTORS.

An experience of more than thirty years, and the pre paration of not less than one hundred thousand applications for patents at home and abroad, enable us to understand the laws and practice on both continents, and to possess unequaled facilities for procuring patents everywhere. In addition to our facilities for preparing drawings and specifications quickly, the applicant can rest assured that his case will be filed in the Patent Of-fice—ithout delay. Every application, in which the fees have been paid, is sent complete-including the modelto the Patent Office the same day the papers are signed at our office, or received by mail, so there is no delay in filing the case, complaint we often hear from other Another advantage to the inventor in securing his patent through the Scientific American Patent Agency, it insures a special notice of the invention in the Scientific American, which publication often opens negotiations for the sale of the patent or manuarticle. A synopsis of the patent laws in forcion countries may be found on another page and persons contemplating the securing of patents abroad are invited to write to this office for prices, which have been reduced in accordance with the times. and our perfected facilities for conducting the business. Address MUNN & CO., office Scientific American.

#### 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 as early as Thursday morning to appear in next issue,

Portable and Stationary Engines, Boilers of all kinds. 45 Cortlandt St., N. Y. Erie City Iron Works, Erie, Pa. Ascays of Orcs, Analyses of Minerals, Waters, Commercial Articles, etc. Technical formulæ and proc Fuller & Stillman, 40 & 42 Broadway, N. Y.

Best Turbine Water Wheel, Alcott's, Mt. Holly, N. J.  $24 \times 48$  in. Wright's Automatic Engine, with 16 foot band wheel, 30 in. face, for sale. Price low. Atlas Works, Indianapolis, Ind.

Jarvis Patent Boiler Setting burns wet peat, screen ings without blast. A. F. Upton, Agent, 48 Congress St. Boston, Mass.

Pulverizing Mills for all hard substances and grinding purposes. Walker Bros. & Co., 23d & Wood St., Phila., Pa.

The Valves and Hydrants manufactured by Chapman Valve Manufacturing Company, Boston, Mass., received the highest award at the recent Massachusetts Charitable Mechanics Exhibition. Circular and price list on application.

The new "Otto" Silent Gas Engine is simple in construction, easy of management, and the cheapest motor known for intermittent work. Schleicher, Schumm &

Inventors' Models. John Ruthren, Cincinnati, O.

Mechanical draughtsman wanted. A steady situation for an experienced and capable man. Address by letter, only, giving particulars, E. V., 353 W. 92d St., N. Y.

Steel Castings true to pattern, of superior strength and durability. Gearing of all kinds. Hydraulic cylinders, crank shafts, cross heads, connecting rods, and machinery castings of every description. For price list and circular, address Chester Steel Castings Company, Evelina St., Philadelphia, Pa.

Complete sets of Castings for 2 in. cylinder engine cylinder bored and turned and slides bored; small castrice \$5. Photo for three stamps. Address J. W. Westwick, Galena. Ill.

The great advantage of the genuine Asbestos Coverings for Steam Pipes, Boilers, etc., over any other forms of non-conducting coverings, aside from their superior effectiveness, is that they are manufactured in convenient form ready for use, and can be easily applied without the aid of skilled labor. The H. W. Johns Manufacturing Company, 87 Maiden Lane, N. Y., are the sole

Alcott's Turbine received the Centennial Medal.

The Lawrence Engine is the best. See ad. page 397. North's Lathe Dog. 347 N. 4th St., Philadelphia, Pa Sheet Metal Presses, Ferracute Co., Bridgeton, N. J. Brush Electric Light.—20 lights from one machine. Latest & best light. Telegraph Supply Co., Cleveland, O.

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

Vertical & Yacht Engines. N. W. Twiss, New Haven, Ct. Eagle Anvils, 9 cents per pound. Fully warranted.

Steam, Water, and Gas Valves made by the Chapman Valve Manufacturing Company, Boston, Mass., are warranted to keep tight. Send for revised price list.

The Hancock Inspirator received a gold medal at Paris, as being the best boiler feeder ever made, and the Old Colony Railroad (who have twenty-three machines in constant use) have just given it their unqualifled indorsement, as the cheapest and most effective feeder ever used on their locomotives. Those interested are referred to their letter of recommendation, which may be found in our advertising columns.

Coruice Machines; prices reduced, Calvin Carr, Cleve land, O.

1.000 2d hand machines for sale. Send stamp for de scriptive price list. Forsaith & Co., Manchester, N. H. Rider Compression Pumping Engines; especially adapted for country residences. Deep well pumping a specialty. Circulars. Cammeyer & Sayer, 93 Liberty St.,

and Scientific Expert, Lawrence, Mass.

A first class Mechanical Draughtsman desires a per manent situation in general machine or steam engine works. Address T. P. Pemberton, room 30, 37 Park

See ad. for 2d hand Yacht and other Engines.

Interstate and International Mechanical Exchange, 20 working machinery and mechanical supplies. Send for mediately. Give full description and lowest cash price.

amp for catalogue. F. Keppy, Bridgeport, Conn.

Correct thing for Holidays, Whist and Dinner Parties, is the Vanity Fair Cigarettes, with your monogram.

A party wanted, with \$3,000, to manufacture one of the best new scroll saws, aiready perfected and selling. N. Stafford 66 Fulton St., N. Y.

Engine Lathes, 8 ft. bed, 19 in. swing, on hand and finishing; price low. F.C.& A.E.Rowland, N. Haven, C1. The Lathes, Planers, Drills, and other Tools, new and second-hand of the Wood & Light Machine Company, Worcester, are to be sold out very low by the George Place Machinery Agency, 121 Chambers St., New York.

For the best advertising at lowest prices in Scientific, Mechanical, and other Newspapers, write to E. N. Freshman & Bros., Advertising Agents, 186 W. 4th St., Cin., O.

For Town and Village use, comb'd Hand Fire Engine & Hose Carriage, \$350. Forsaith & Co., Manchester, N. H.

Mannfacturers of Improved Goods who desire to build up a lucrative foreign trade, will do well to insert a well displayed advertisement in the SCIENTIFIC AMERICAN Export Edition. This paper has a very large foreign circulation.

Brick Presses for Fire and Red Brick. Factory, 309 S. 5th St., Philadelphia, Pa. S. P. Miller & Son.

Presses, Dies, and Tools for working Sheet Metals, etc. ; Fruit and other Can Tools. Bliss & Williams, Brooklyn, N. Y., and Paris Exposition, 1878.

ing Metals, etc. The Stiles & Parker Press Co., Middletown, Conn.

Hydraulic Presses and Jacks, new and second hand. Lathes and Machinery for Polishing and Buffing Metals. E. Lyon & Co., 470 Grand St., N. Y.

Nickel Plating .- A white deposit guaranteed by using our material. Condit,Hanson & Van Winkle,Newark, N.J.

English Agency, 18 Caroline St., Birmingham Gate Fire Hydrants made by the Chapman Valve Manufacturing Company, Boston, Mass., are perfectly tight, open easily, no water hammer or strain on pipes,

and warranted to give perfect satisfaction. H. Prentiss & Co., 14 Dey St., N. Y., Manufs. Taps, Dies, Screw Plates, Reamers, etc. Send for list.

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. New York Belting and Packing Company, 37 and 38 Park Row, N. Y.

For Apparatus for Electric Light Experiment, address erome Redding & Co., 30 Hanover St., Boston, Mass.

Nickel Plating.-Wenzel's Patent Perforated Carbon Box Anode for holding Grain Nickel. A. C. Wenzel, 114 Center St., New York City.

Bolt Forging Machine & Power Hammers a specialty. Send for circulars. Forsaith & Co., Manchester, N. H.

For Solid Wrought Iron Beams, etc., see advertisenent. Address Union Iron Mills, Pittsburgh, Pa., for lithograph, etc.

To Manufacturers.—Messrs. Bignall & Ostrander, 806-808 N. 2d St., St. Louis, Mo., have added to their present establishment a Machinery Department, from whence with them.

The Scientific American Export Edition is pubnumber comprises most of the plates of the four preced weekly numbers of the SCIENTIFIC AMERICAN, with other appropriate contents, business announcements, etc. It forms a large and splendid periodical of nearly one hundredquarto pages, each number illustrated with about one hundred engravings. It is a complete record of American progress in the arts.

Improved Meat Cutter. Capacity 600 lbs. an hour. Circular and price list, J. W. McFarland & Co., Alliance, O. Fine Taps and Dies for Jewelers, Dentists, and Ma-

chinists, in cases. Pratt & Whitney Co., Hartford, Conn. Improved Steel Castings; stiff and durable; as soft and easily worked as wrought iron; tensile strength not less than 65,000 lbs. to sq. in. Circulars free. Pittsburg Steel Casting Company, Pittsburg, Pa.

Warranted best and cheapest Planers, Jointers, Universal Woodworkers, Band and Scroll Saws, etc., manufactured by Bentel, Margedant & Co., Hamilton, Ohio.

#### NEW BOOKS AND PUBLICATIONS.

NEOPHONOGRAPHY: a System of Short, Swift, Scientific and Easy English Writing. By James Richardson. New York: Har-roun & Bierstadt. 50 cents. By

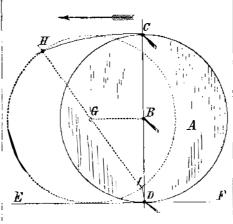
Another of the multitudinous attempts to provide an acceptable substitutefor our common long-hand writing. It differs from the usual, however, in being strictly alphabetic, no compound or contracted characters, omis-The writing is cursive, singularly direct in its flow, and evidently easy to read. The author claims that it is 'it to the barrel. Then roll the barrel correspondingly easy to write.



J. C. Hoadley, Consulting Engineer and Mechanical hydrofluoric acid, take a sealing wax impression of a cold. portion of the face of the lens, stretch over the wax a piece of silk, apply a paste of fine putty powder (put- leaves are spread and pressed into a suitable dish with ty powder and water) to the face of the pad thus made, alternate layers of fine, thoroughly dry sand, as hot as and rub the pad rapidly over the face of the lens with a thehand can bear. When the sand has cooled they may gyratory motion until the surface of the lens is repol-

(2) J. R. E., S. H. R., and others.—Re-E. 13th St., N. Y. U.S.A. An equitable purchasing and garded merely as a rotating body, all parts of the periselling agency. New and serviceable wood and iron phery of a carriage wheel move around its axis with the same velocity. Regarding the carriage wheel as a rollexplanatory circular. A. S. Gear, Manager. \$75,000 ing body, the upper portion moves forward faster than worth of new and second-hand machinery wanted im- the portion which touches the ground. Any point in the wheel will describe a cycloid curve as the wheel rolls For Power& Economy, Alcott's Turbine, Mt. Holly, N.J. on a plane surface. Our correspondents can satisfy hands that have to be swaged three times after each an intric acid diluted with one or two volumes of water. The well named Leader Lathe is far ahead of compethemselves as to the proper solution of the problem in nealing. A Place the hands in charcoal dust in a cast. The work must first be cleansed from all traces of grease

Latest and best Books on Steam Engineering. Send the periphery at diametrically opposite points the pencils, C D. Put the disk on a plane surface, with its edge, against the straight edge, E F, and the three pencils in a line, forming a right angle with the straight edge. Now roll the disk forward in the direction indicated by the arrow. The pencil, B, which represents the axle



Punching Presses, Drop Hammers, and Dies for work- will move from B to G in a right line, the upper one, C, will describe the curve, C H, and the pencil, D, will

(3) S. H. R. asks: 1. Does a small electrical machine (pocket size), such as is made for medical purposes, furnish electricity of sufficient intensity to experiment with the microphone? A. Yes. 2. Can the electric light be produced from a galvanic battery? A. Yes, by using several cells,

(4) C. D. K. asks: 1. What kind of moulds would give the best and smoothest castings of a mixture of tin, zinc, and bismuth? A. I? the alloy contains little zinc well dried moulds of plaster of Paris or of papier mache covered with a film of oil will doubtless oles, Screw Plates, Reamers, etc. Send for list.

Solid Emery Vulcanite Wheels—The Solid Original PLEMENT, No. 17, "Casting Medals, Medallions, etc."

Aution—Our pame is stamped in full on all our best sets.

What is the process of canning sweet corn? A. The following is the method in use by many of the large canning establishments. The corn, after removing from the cob, is filled into the clean cans so as to leave no air spaces. These are placed in a large oven or other airtight vessel, and subjected to hot steam under press-The harder the corn the longer the exposure required to thus cure it; it is said that in some cases as much as eight hours is requisite, but usually much less than this. A large vessel of boiling water, in which the cans are immersed, may be used instead of the steam oven, but is not so effective. On removal from the oven or water bath, as the case may be, each can (they must be filled to the cover with fruit) has the cap with a very small hole tapped in its center immediately soldered on. As soon thereafter as the can stopsblowing, as the escape of steam and air through the vent is termed, the hole is the wants of the Western machine-using public will be quickly soldered. This must be done before the air besupplied. Manufacturers will do well to correspond gins to enter. Other fruit is cured and canned in like manner—tomatoes rarely require longer than 15 to 20 minutes' steam curing. Where the pits are left in fruit lished monthly, about the 15th of each month. Every a longer time is requisite to completely destroy all fermentative germs.

(5) N. B. D. asks (1) if the spools of an ordinary telegraph sounder can be utilized for making a Railroad Company have been experimenting with a car telephone, or are the spools of a relay more suitable? A. The relay spools will be best. 2. The telephone line will be less than half a mile in length. Will small copper wire do for the main line? A. Yes.

(6) G. F. D. asks: 1. What is the cheapest method for producing ozone in large quantities, so that it may be applied as an oxidizing agent? A. Coat the inside of a long glass tube with tiufoil, and pass over this a second wider tube coated with tinfoil on its outer surfaces. Between these two tubes pass a current of dry oxygen, and connect the inner and outer tinfoil coatings with the terminal wires of an active induction coil. Ten to fifteen per cent of the oxygen may thus be converted into ozone. 2. What paint or varnish would be suitable for insulating wire for electrical experiments? A. Shellac dissolved to the consistence of molasses in alcohol, asphaltum varnish, melted sealing wax or paraffin, and benzol solutions of gutta percha and caoutchouc are occasionally used. 3. How is the instrument made for measuring the resistance of an electric current in ohms? A. It consists of a scries of coils of measured resistance

(7) P. McF. asks how to keep cider sweet all winter. A. Add from 0.125 to 0.25 oz. of sulphite of sions, or other stenographic devices being admitted. lime (calcium sulphite) for each gallon of the cider. It should be dissolved in a little of the cider before adding

gelatin or glue moulds for plaster casts. A. Glue is in contact with a flame, that is, when no other gas is softened by digesting it in cold water and then melted mixed with it? A. No. This affords very thick paste, to further heated and stirred for some time in order to evaporate the excess of water. This mixture does not (1) L. M.—To restore a lens blurred by adhere to well oiled moulds, and is very elastic when

How are autumn leaves preserved? A. The fresh be removed smoothed under a hot iron dinned for a few moments in clear French spirit varnish, and allowed to dry in the air. By many melted white wax or not be too hot. The dried leaves are dipped in the melted wax, drawn several times over the edge of the vessel to remove excess, and hung up until the film of power would be about the same in either case. wax has thoroughly cooled and hardened.

titors. For descriptive circular, address Frasse & Co., the following way: Take a disk, A, of thin wood or iron vox. Close and lute the box, bring it to a red heat, or oil by hot soda solution or scouring. 2. What is the 62 Chatham St., New York.

(10) F. D. asks what acid to use to lessen the harsh effect of borax in soap without destroying its qualities. A. The addition of a little glycerin to the soap will render it less harsh if the saponification has been properly conducted. Acids are not employed in the way you suggest.

(11) C. F. L. asks: 1. What are the most approved methods of using petroleum under steam boilers? A. Most of the processes are patented, and by inserting a notice in the " Business and Personal " column you may open communication with the inveutors. 2. Can steam be practically superheated for combining with oil, by running it through a coil of 34 inch pipe 10 or 15 feet long, placed in the firebox? Would any danger attend the use of such a pipe in a hot blast? A. This is perfectly practicable, but the arrangement may not prove very durable. It will not be specially dangerous if means are provided for shutting off the apparatus promptly when required.

(12) H. A.L. writes: I wish to heat four barrels of water, sometimes less; which is best, a large kettle set in brick with a grate, or a small boiler 3 feet long by 15 inches diameter, with six two inch flues? Would such a boiler with 20 or 30 two inch flues, set as described,run a 4 x 5 cylinder at 300 turns, steam at 80 lbs.? A. The boiler would be preferable, and would answer for the engine.

(13) G. P. M. writes: There is a fluid instantaneous ink eraser on the market. Of what is it composed? A. The fluid eraser referred to is probably a strong, cold aqueous or acetic acid solution of calcium or potassium hypochlorite—bleaching powder or eau de Javelle.

Can I make a patented article if I make and use it myself? A. See "Rights of Investigators," p. 128, current volume of the Scientific American.

Can I electroplate with a Callaud battery? A. Yes: two or three cells will suffice for small work.

Is there a cheap process by which I can obtain tolerably fair copies of my own handwriting, and how is it done? A. Write with a 20 per cent aqueous solution of glycerin, sprinkle the writing with excess of finely powderedgum arabic, dust off excess, and dry in a warm place for some time. From this a cast may be taken in fusible metal. Another method is to coat a smooth metal plate with a film of wax, through which with a fine steel point to the metal below the characters are etched. The lines and surface are then blackleaded, and a copper electrotype taken in the usual manner. Still another way is to write upon a prepared block of chalk with lithographer's ink or a preparation of giue and sugar or molasses, after which the parts unprotected by the ink are etched out somewhat with a dilute acid and the block hardened by immersing itfor a time in strong water glass solution.

What is used in, and what is the process of zincography? A. It is similar to lithography-a plate of zinc being used in place of the stone.

Does the Scientific American, Export Edition, contain "Notes and Queries " also? A. Yes.

(14) A. J. F. suggests the use of drums for turning angles in thread telephone lines. At each angle he places a drum having two heads. The thread is sev ered and the ends pass through the drum heads and are knotted.

(15) F. P. H. asks for a method of making cider. A. See p. 315 (8), current volume.

(16) N. E. S. writes: The Second Avenue to run by compressed air instead of steam: the cars to be charged from a stationary reservoir, into which the air has been forced at a high pressure by a stationary engine. It is claimed, by some persons, that the stationary engine has not enough power to draw as many cars as it can supply with air and keep running; but I claim that it has. Who is right? A. We agree with you, as we understand your meaning.

(17) A. H. G. asks how to dissolve amber to be used as a varnish. A. Amber, 10 parts (by weight); melt in a suitable vessel over a moderate fire, and add boiled linseed oil, 20 to 30 parts. The caldron in which this operation takes place should not be more than two thirds filled: and the mixture of oil and resin kept boiling for 10 minutes. The vessel is then removed from the fire (into the open air), allowed to cool down to about 280° Fah., aud from 25 to 30 parts of oil of turpentine gradually added. See also Meredith's process, p. 35, current volume, Scientific American.

(18) C. H. asks (1) how to make oxygen gas in a cheap and simple way for experiments, A. Mix dry potassium chlorate with about one fourth its weight of pure black oxide of manganese, and heat the mixture in a copper retort over the flame of a spirit or gas lamp. The retort should not be more than one quarter full. The gas should be passed through water to free it from traces of chlorine, etc. 2. Is there any (8) H. M. D. asks for the best way to make danger of explosion from the above gas when it comes

(19) W. S. R. asks for a good recipe for which pure glycerin is added in the same quantity by red and blue stencil ink. A. Shellac, 4 parts; borax, 1 weight as that of the dry glue taken. The mass is then part; dissolve by boiling in a small quantity of water. part; dissolve by boiling in a small quantity of water, and dilute with hot water to the consistency of very thin sirup. To this add a sufficient quantity logwood or Brazilwood extract, or the soluble coal tar reds. For blue add to the lac solution soluble Prussian blue, or blue carmine.

> (20) D. H. A. writes: A paper mill in this place is supplied with turbines. The tail race is 3 feet higher than it need be. Which will add most to the power of the wheel, to deepen the tail race and lower the wheels, or to deepen the tail race, let wheels remain where they are, airtight tubes being fitted to the wheels and extending to the water in tail race? A. As we understand the statement, we think that the increase of

(21) G. B. G. asks: 1. What is the compo-(9) "Watch Hand" asks how to anneal watch sition of bright dipping acid for brass? A. Ordinary mixture into which the article is dipped which gives it a dark gray permanent color? It is called "steel bronze" dip. A. The gray or black dip referred to is prepared as follows: Hydrochloric acid, 12 lbs.; ferrous sulphate (copperas), 1 lb.; arsenious acid (pure white arsenic), 1 lb.; dissolve in the acid. Dip the articles bright in dilute nitric acid, rinse in clean water, and immerse in the bronze dip until the proper color is developed. Rinse in cold water and dry in warm sawdust. The green lacquer usually employed is made by digesting together in a warm place, with occasional agitation, shellac, 5 ozs.; sandarac, 4 ozs.; gamboge, 1 oz.; turmeric, 6 ozs.; wood spirit, 1½ gallon.

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

E. A. S.-They are iron garnets-the well formed crystals are sometimes used as jeweling.

Any numbers of the Scientific American Supple-MENT referred to in these columns may be had at this office. Price 10 cents each

#### COMMUNICATIONS RECEIVED.

The Editor of the Scientific American acknowledges with much pleasure the receipt of original papers and contributions on the following subjects:

Government Manufactures. By F. M. S. Bromide of Ammonium. By E. H. W. Aluminum as a Negative Element in Galvanic Batteries. By J. M. S.

Acoustic Telephones, etc. By J. J. B. On Small Steamboats. By G. H. S.

On Economy of Weight in Gearing. By J. O. B. On the History of the American Lead Pencil Manu-

[OFFICIAL.

#### INDEX OF INVENTIONS

FOR WHICH

Letters Patent of the United States were Granted in the Week Ending October 22, 1878,

AND EACH BEARING THAT DATE.

[Those marked (r) are reissued patents.]

A complete copy of any patent in the annexed list, including both the specifications and drawings, will be furnished from this office for one dollar. In ordering, please state the number and date of the patent desired, and remit to Munn & Co., 37 Park Row, New York city.

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Coin detecter, counterfeit, E. Street Cooker and steam washer, feed, J. K. Purinton. Corset clasp, J. S. Crotty. Countersink, W. R. Gill Crane for hoisting car wheels. etc. W. M. Davis. Crayon mould section mould, C. H. Bill Cultivator, riding, H. H. Canaday. Cultivator, wheel, D. Argerbright Cultivator, wheel, R. Geppert. Curtain cord tightener, G. B. Katen Curtain fixture, R. White Cutoff, H. Southworth Dish, covered, J. Jepson. Door securer, W. Hinchliffe. Draught equalizer, M. Scott	209,145 209,134 209,112 209,252 209,252 209,256 209,154 209,210 209,118 209,125 209,313 209,361 209,261 209,261 209,261
Coin detecter, counterfeit, E. Street Cooker and steam washer, feed, J. K. Purinton Corset clasp, J. S. Crotty. Countersink, W. R. Gill Crane for hoisting car wheels. etc., W. M. Davis. Crayon mould section mould, C. H. Bill Cultivator, riding, H. H. Canaday. Cultivator, wheel, D. Argerbright Cultivator, wheel, A. Geppert. Curtain cord tightener. G. B. Katen Curtain fixture, R. White Cutoff, H. Southworth Dish. covered, J. Jepson. Door securer, W. Hinchliffe. Draught equalizer, M. Scott Dredging machine, G. W. Cummings	209,145 209,134 209,132 209,236 209,236 209,236 209,154 209,224 209,210 209,125 209,131 209,268 209,269 209,269 209,159
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Coin detecter, counterfeit, E. Street Cooker and steam washer, feed, J. K. Purinton. Corset clasp, J. S. Crotty. Countersink, W. R. Gill Crane for hoisting car wheels etc., W. M. Davis. Crayon mould section mould, C. H. Bill Cultivator, riding, H. H. Canaday. Cultivator, wheel, D. Argerbright Cultivator, wheel, D. Argerbright Cultivator, wheel, M. Geppert Curtain cord tightener, G. B. Katen Curtain fixture, R. White Cutoff, H. Southworth Dish, covered, J. Jepson. Door securer, W. Hinchliffe. Draught equalizer, M. Scott Dredging machine, G. W. Cummings Egg beater, W. H. Wiester Elevators, hydraulic, C. Cookson. Engine, portable, W. T. Underwood.	209,145 209,134 209,134 209,125 209,252 209,256 209,254 209,210 209,118 209,256 209,313 209,361 209,268 209,269 209,159 209,205 209,119
Coin detecter, counterfeit, E. Street Cooker and steam washer, feed, J. K. Purinton. Corset clasp, J. S. Crotty. Countersink, W. R. Gill Crane for holsting car wheels. etc., W. M. Davis. Crayon mould section mould, C. H. Bill Cultivator, riding, H. H. Canaday. Cultivator, wheel, D. Argerbright Cultivator, wheel, A. Geppert. Curtain cord tightener, G. B. Katen Curtain fixture, R. White Cut off, H. Southworth Dish. covered, J. Jepson. Door securer, W. Hinchliffe. Draught equalizer, M. Scott Dredging machine, G. W. Cummings Egg beater, W. H. Wiester Elevators, hydraulic, C. Cookson Engine, portable, W. T. Underwood. Eraporator and fruit drier, J. B. Sweetland	209,145 209,134 209,134 209,125 209,252 209,236 209,154 209,210 209,18 209,18 209,251 209,261 209,261 209,262 209,100 209,100 209,205 209,100 209,205
Coin detecter, counterfeit, E. Street Cooker and steam washer, feed, J. K. Purinton Corset clasp, J. S. Crotty Countersink, W. R. Gill Crane for hoisting car wheels. etc., W. M. Davis. Crayon mould section mould, C. H. Bill Cultivator, riding, H. H. Canaday Cultivator, wheel, D. Argerbright Cultivator, wheel, A. Geppert. Curtain cord tightener. G. B. Katen Curtain fixture, R. White Cut off, H. Southworth Dish. covered, J. Jepson Door securer, W. Hinchliffe Draught equalizer, M. Scott Dredging machine, G. W. Cummings Egg beater, W. H. Wiester Elevators, hydraulic. C. Cookson Engine, portable, W. T. Underwood Evaporator and fruit drier, J. B. Sweetland Feather renovator, J. M. Clark	209,145 209,134 209,134 209,125 209,252 209,236 209,236 209,224 209,128 209,185 209,381 209,381 209,286 209,296 209,199 209,296 209,199 209,296 209,199 209,202 209,110 209,202
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Coin detecter, counterfeit, E. Street Cooker and steam washer, feed, J. K. Purinton Corset clasp, J. S. Crotty. Countersink, W. R. Gill Crane for hoisting car wheels. etc., W. M. Davis. Crayon mould section mould. C. H. Bill Cultivator, riding, H. H. Canaday. Cultivator, wheel, D. Argerbright Cultivator, wheel, A. Geppert Curtain cord tightener. G. B. Katen Curtain fixture, R. White Cutoff, H. Southworth Dish. covered, J. Jepson. Door securer, W. Hinchliffe. Draught equalizer, M. Scott Dredging machine, G. W. Cummings Egg beater, W. H. Wiester Elevators, hydraulic. C. Cookson Engine, portable, W. T. Underwood Evaporator and fruit drier, J. B. Sweetland Feather renovator, J. M. Clark Feed water heater, W. Baragwanath Felly for vehicle wheels, Beck & Warwick	209,145 209,134 209,134 209,252 209,252 209,236 209,224 209,220 209,125 209,131 209,381 209,381 209,261 209,296 209,190 209,205 209,105 209,205 209,105 209,205
Coin detecter, counterfeit, E. Street Cooker and steam washer, feed, J. K. Purinton. Corset clasp, J. S. Crotty. Countersink, W. R. Gill Crane for holsting car wheels. etc., W. M. Davis. Crayon mould section mould, C. H. Bill Cultivator, riding, H. H. Canaday. Cultivator, wheel, D. Argerbright Cultivator, wheel, A. Geppert. Curtain cord tightener, G. B. Katen Curtain fixture, R. White Cut off, H. Southworth Dish. covered, J. Jepson Door securer, W. Hinchliffe. Draught equalizer, M. Scott Dredging machine, G. W. Cummings Egg beater, W. H. Wiester Elevators, hydraulic, C. Cookson Engine, portable, W. T. Underwood Evaporator and frait drier, J. B. Sweetland Feed water heater, W. Baragwanath Felly for vehicle wheels, Beck & Warwick Fence post, E. Stanley	209,145 209,134 209,134 209,134 209,131 209,252 209,236 209,236 209,224 209,125 209,131 209,261 209,261 209,262 209,110 209,202 209,110 209,202 209,110 209,202 209,110 209,202 209,105 209,105 209,105 209,105 209,216 209,216
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	Alloy of metal, Smith & Egge Manufacturing Co	01109
	Baking powders, J. C. Grant	6.736
	Braid and tape, W. H. Stafford	6,744
i	Bread, A. Brown	6,746
	Cigars, Seubert & Warner	
	Cigars, J. D. Culp & Co	6,747
	Cigars, M. Jacoby	6,742
	Cigars, C. G. Petersen	6,737
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	Flavor for porter, D. D. Williamson	6,745
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	Photographs, etc., Artotype Company	6,733
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	Shaving soap, C. Pauly	6,738
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	Soap. F. Treukamp	6,751
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	Theatrical and gymnastic apparatus, W. Farini	
	DEGLAMA	

#### DESIGNS.

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Cigar box, E. Hantsche	
Moulded cards, J. Hollely	10,879
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