- (36) T. L. D. and other correspondents ask ing with putty, and pour the lower half of bearing, the what should be the proportion of core to wire in magnets for an electro-motor, and what size wire should be used? A. Core and wire should weigh the same. No. 16 gauge (American) wire is commonly employed,
- (37) M. S. asks how to wind wire on the cores of a number of electro-motor magnets? A. shaft. Fasten in the toolpost of a lathe a piece of iron having a groove cut in it to receive the wire. Set the change thread corresponding to the thickness of the wire. Wind the magnets by running the lathe in one direction and reverse the motion of feed at each traverse
- (38) P. L. F. asks howto deodorize rubber? A. Cover the articles with charcoal dust, place them in an enclosed vessel, and raise the temperature to 94° Fah., and let it remain thus for several hours. move and clean the articles, when they will be found free from odor.
- (39) J. S. says: I have a quantity of pure  ${\bf rubber} \not \ \ {\bf 18} \ {\bf inch} \ {\bf thick}, \ {\bf that} \ {\bf has} \ \ {\bf been} \ {\bf used} \ {\bf for} \ {\bf thumb} \ {\bf cuts}$ for taking the hair from skins, such as beaver, nutria, etc. Can you tell me what I can do with the rubber, as it is all pure? I want to melt it and run into moulds for making the same kind of thumb cuts again. A. Cut the rubber into small pieces and place in the proportion of 100 lbs. in a well closed boiler with 10 lbs. bisulphide of carbon and 4 ozs, absolute alcohol, well stirred; then close the poiler and leave the material to soak for a few hours. It becomes a soft doughy mass, which, after being ground and kneaded, is fit to be formed with any shape, when the solvent will evapor-
- (49) M. T. wants to know the proper weight of a chipping hammer, and how long the handle should be? A. Weight 134 lbs. for heavy chipping, 1 lb. for the stone. light chipping; length of handle 15 inches
- (41) L. G. A. says: My sledge hammer comes off its handle; how can I preventthis? Iron and wood wedges do not answer. A. Make the eye of the hammer smallest in wadth at the middle, when either a wooden or iron wedge will hold it permanently,
- forgrinding brass plugs? A. The burnt sand from the middle of a brass casting core.
- (43) H. N. M. asks: How can I prevent taps from splitting and hardening? A. Heat the water in which they are quenched to 100°
- (44) H. E. M. asks: What material can I use to braze a brass flange on a copper pipe? A. Commercial brazing spelter mixed with borax and water.
- (45) J. R. inquires for a good waterproof varnish for harness? A. India rubber, 1/2 lb.; spirits them well over a slow fire.
- (46) E. T. C. asks: How can I take old wine and fruit stains out of linen? A. Rub the part on each side with yellow soap. Then lay in a mixture of starch in cold water very thick, and expose the linen to the sun and air till the stain comes out. If not removed in three or four days, rub that off and renew the process. When dry, it may be sprinkled with a little water.
- (47) T. B. asks: What will temper steel when the metal will not temper readily when dipped at red heat? A.-Add salt to the water.
- (48) M. C. asks how to caseharden nuts? A. Finely powder prussiate of potash. Get the nuts red hot, coat them with the powder, put them again in the fire until the powder fuses, and then dip them in
- (49) E, T. L. asks how he can test to dis cover whether his planer planes true? A. Take a fine finishing cut on a long casting, turn the casting on its edge and adjust it to touch the point of the tool at each end. Then try the point of the tool in the middle, when any hollowness or roundness will become at once
- (50) A. F. inquires how he can cut out a deep, square, small hole, true? A. By drifting with a square serrated hardened steel plug driven through with a hammer. Lubricate freely,
- (51) F. S. asks for a varnish to restore faded rubber goods? A. Use black japan varnish diluted with alittle linseed oil.
- (52) M. C. H. asks for the best manner of cleaning watch pinions? A. Pith from the stalk of the common muller is the best material, and is better than cork. It should be obtained from the dry stalk in
- (53) B. R. asks what the "liquid foil" is that is used for silvering glass globes? A. Lead, 1 part; tin higmuth 1 Melt and just before it gets add mer cury 10 parts. Pour this into the globe and turn it rap-
- lead polish? A. Black lead, pulverised, 1 lb.; turpentine, 1 gill; water, 1 gill; sugar, 1 oz.
- (55) I. L. asks: Will carbon points do to use in a brace, to mark sheet iron through a templet, to make a mark same as a center punch? A. Yes.
- (59) R. J. F. asks if the pendulum can be accelerated one second per day, by putting on an ounce weight? A. Not without virtually shortening the pentime of oscillation is independent of the nature or weight of the material—pendulums of metal, glass or wood, all being of the same length, under like conditions will oscillate in the same period of time.
- (57) C. H. D. savs: I have a machine for running emery wheels, the boxes of which are so worn by continual use as to need re-Babbitting, though the shaft is still smooth and good. Can you give directions for doing this in the most approved way? A. First set the shaft up in its place, close up the ends of the bear-

Babbitt being at a low red heat, and there being a small piece o. rosin placed beneath the shaft to make the Babbitt flow well. Then put a piece of paper on the joint of bottom bearing, put on the cap, stop up the end with putty, and pour the Babbitt through the oil hole. It will aid the flow of the Babbitt to heat the

(58) J. E. G. asks how to temper gun lock springs? A. Make the springs red hot and cool them off in water, then fry them in lard oil over a fire until they will blaze freely.

(59), C. L. asks if there is any way to remove old grease that has become hard and dry on the bright parts of our engine? A. Scrape off the grease with a triangular scraper.

Also for a good recipe for making a cement to fill the holes and seams of millstones? A. Try crushed stone grit 20 parts, litharge 2 parts, quicklime 2 parts. Mix

- (60) M. L. C. asks for a good paint for blackboards? A, Mix together common glue, 4 ozs.; flour of emery, 3 ozs., and just lampblack enough to give an inky color to the preparation. Dissolve the glue in 11/2 pints of warm water, put in the lampblack and emery, stir till there are no lumps, and apply to the board with a smoothly rolled woolen rag. Three coats are needed.
- (61) F. T. asks how to remove burrs easily from the heads of cold chisels? A. Rest the head upon a block of iron and strike the burrs from the under side, and they will break readily and easily off.
- (62) M. H. inquires how he can true up his carpenter's grindstone? A. Use a 34 inch bar of iron or a gas pipe for a turning tool, held below the center of
- (63) E. T. P. wants to know how to remove rust from small hollow castings? A. Dip in dilute sulphuric acid, 1 part of commercial acid to 10 water: wash in hot lime water, and dry in the tumbler with dry sawdust.
- (64) M. T. says: How can I reduce the (42) B. F. asks: What is the best material elasticity of a bar spring? A. File off a very thin scale from the surface

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

C. A. S.—The asbestos is of good quality, and will bring a fair price in the market. Asbestos is used for fireproof feltings, varnishes, cenents, paints, for engine and boiler packing, and in the manufacture of a fireproof cloth and paper, etc. Dealers will address .—S. D. H.—It contains large percentages of copper turpentine, 1 gallon; dissolve to a jelly, then take hot and zinc, and small amounts of iron, antimony, and allinseed oil equal parts with the mass and incorporate umina. The natural occurrence of this alloy (brass) is doubtful. You should send larger specimens and further particulars if possible.—C. P.—Send a sample of the magnesia salt.—O. F. F.—The sulphide contains a little copper, nickel, and arsenic. Silver was not detected. It is not of much value.

### HINTS TO CORRESPONDENTS.

We renew our request that correspondents, in referring to former answers or articles, will be kind enough to name the date of the paper and the page, or the number of the question.

Correspondents whose inquiries fail to appear should repeat them. If not then published, they may conclude that, for good reasons, the Editor declines them. The address of the writer should always be given.

Inquiries relating to patents, or to the patentability of inventions, assignments, etc., will not be published here. All such questions, when initials only are given, are thrown into the waste basket, as it would fill half of our paper to print them all; but we generally take pleas ure in answering briefly by mail, if the writer's address

## WANTS AND BUSINESS INQUIRIES.

Almost any desired information, and that of a business nature especially, care be expeditiously obtained by advertising in the column of "Business and Personal," which is set apart for that purpose subject to the charge mentioned at its head.

We have received this week the following inquiries, particulars, etc., regarding which can probably be elicited from the writers by the insertion of a small advertisement in the column specified, by parties able to supply the wants: Who makes electric lights?

Who sells carbon points?

Who manufactures ornamental iron work, such as brackets?

OFFICIAL.

### INDEX OF INVENTIONS

(54) M. C. asks for a recipe for liquid black | Letters Patent of the United States were Granted in the Week Ending October 16, 1877,

### 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 dulum, that is, by a different distribution of the weight furmshed from this office for one dollar. In ordering, on the bar. For pendulums of the same length, the 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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:	Bolting gage, G. W. Church Boot and shoe, T. J. Greenwood (r)	7,912
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	Gate, M. J. McPherson. Gate, farm, H. Recher. Governor for steam engines, Kurten & Kramer. Grain, etc., separating stones, etc., J. Arbuckle Grass cutter and rake, J. H. Stump Grindingmachine die, J. A. Bidwell Grinding mill, D. C. Newell Harness for breaking horses, C. H. Bowin Harrow, W. H. Hatfield Harvester, J. Pine (r). Hat-pouncing machine, F. R. & S. R. Going. Hat-pouncing tool, F. R. Going. Hat-pouncing tool, F. R. Going. Heaters, chimney attachment for, A. Young. Hinge for window blinds, lock, D. W. Beal. Hogs-scraping machine, R. C. Tompkins. Hoisting jack, W. A. Greenleaf. Horse collars, stuffing, L. H. Kindy. Horseshoe nail finishing machine, R. Hersey. Hose nozale, Gilchrist & Anderson. Hydraulic engine, rotary, J. Talley, Jr Hydraulic press, F. S. Kinney. Ice runs, adjustable switch for, H. F. Dernell. Indicating the force of blows, H. J. Blakeslee. Inhaler, W. Boekel Inhaler and respirator, I. S. Emery. Insect destroyer, E. H. Fordtran. Insect-destroying composition, J. M. Madding. Knife and butter extractor, J. N. Parker.	196,159 196,266 196,178 196,266 196,178 196,267 196,100 196,128 196,100 196,128 196,218
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	Gate, M. J. McPherson. Gate, farm, H. Recher. Governor for steam engines, Kurten & Kramer. Grain, etc., separating stones, etc., J. Arbuckle Grass cutter and rake, J. H. Stump Grindingmachine die, J. A. Bidwell Grinding mill, D. C. Newell. Harness for breaking horses, C. H. Bowin Harrow, W. H. Hatfield. Harvester, J. Pine (r). Hat-pouncing machine, F. R. & S. R. Going Heaters, chimney attachment for, A. Young. Hinge for window blinds, lock, D. W. Beal. Hog-scraping machine, R. C. Tompkins. Hoisting jack, W. A. Greenleaf. Horse collars, stuffing, T. H. Kindy. Horseshoe nail finishing machine, R. Hersey. Hose nozale, Gilchrist & Anderson. Hydraulic engine, rotary, J. Talley, Jr. Hydraulic engine, rotary, J. Talley, Jr. Hydraulic press, F. S. Kinney. Lee runs, adjustable switch for, H. F. Dernell. Indicating the force of blows, H. J. Blakeslee. Inhaler, W. Boekel Inhaler and respirator, I. S. Emery. Insect destroyer, E. H. Fordtran. Insect-destroying composition, J. M. Madding. Knife and butter extractor, J. N. Parker. Labels, machine for gumming, L. Morganthau Lamp wick, mineral, C. F. A. Hinrichs. Last, J. R. Jacques.	196,159 196,266 196,178 196,265 196,178 196,265 196,178 196,265 196,100 196,128 196,100 196,128 196,281 196,141 196,144 196,161 196,144 196,161 196,144 196,161 196,144 196,161 196,144 196,161 196,144 196,161 196,144 196,161 196,144 196,161 196,144 196,161
	Gate, M. J. McPherson. Gate, farm, H. Recher Governor for steam engines, Kurten & Kramer. Grain, etc., separating stones, etc., J. Arbuckle Grass cutter and rake, J. H. Stump Grindingmachine die, J. A. Bidwell Grinding mill, D. C. Newell Harness for breaking horses, C. H. Bowin Harrow, W. H. Hatfield Harvester, J. Pine (r). Hat-pouncing machine, F. R. & S. R. Going. Hat-pouncing machine, F. R. & S. R. Going. Hat-pouncing tool, F. R. Going. Heaters, chimney attachment for, A. Young. Hinge for window blinds, lock, D. W. Beal. Hog-scraping machine, R. C. Tompkins Hoisting jack, W. A. Greenleaf. Horse collars, stuffing, L. H. Kindy. Horseshoe nail finishing machine, R. Hersey Hose nozzle, Gilchrist & Anderson. Hydraulic engine, rotary, J. Talley, Jr Hydraulic press, F. S. Kinney. Ice runs, adjustable switch for, H. F. Dernell. Indicating the force of blows, H. J. Blakeslee Inhaler, W. Boekel Inhaler and respirator, I. S. Emery Insect destroyer, E. H. Fordtran. Insect-destroying comPosition, J. M. Madding Knife and butter extractor, J. N. Parker Labels, machine for gumming, L. Morganthau Lamp wick, mineral, C. F. A. Hinrichs. Last, J. R. Jacques. Lathe, jeweler's, J. A. De Vries Lathe, ewetchmaker's, C. Hopkins	196,159 196,101 196,285 196,101 196,128 196,286 196,178 196,286 196,100 196,128 196,281 196,101 196,281 196,281 196,281 196,281 196,281 196,281 196,281 196,281 196,281 196,281 196,281 196,281 196,281 196,281
	Gate, M. J. McPherson. Gate, farm, H. Recher. Governor for steam engines, Kurten & Kramer. Grain, etc., separating stones, etc., J. Arbuckle Grass cutter and rake, J. H. Stump Grindingmachine die, J. A. Bidwell Grinding mill, D. C. Newell. Harness for breaking horses, C. H. Bowin Harrow, W. H. Hatfield. Harvester, J. Pine (r). Hat-pouncing machine, F. R. & S. R. Going Heaters, chimney attachment for, A. Young Hinge for window blinds, lock, D. W. Beal. Hog-scraping machine, R. C. Tompkins. Hoisting jack, W. A. Greenleaf. Horse collars, stuffing, L. H. Kindy. Horseshoe nail finishing machine. R. Hersey. Hose nozzle, Gilchrist & Anderson Hydraulic engine, rotary, J. Talley, Jr. Hydraulic press, F. S. Kinney. Ice runs, adjustable switch for, H. F. Dernell. Indicating the force of blows, H. J. Blakeslee. Inhaler, W. Boekel. Inhaler and respirator, I. S. Emery. Insect destroyer, E. H. Fordtran Insect-destroying composition, J. M. Madding. Knife and butter extractor, J. N. Parker. Labels, machine for gumming, L. Morganthau. Lamp wick, mineral, C. F. A. Hinrichs Last, J. R. Jacques. Lathe, jeweler's, J. A. De Vries. Lathe, watchmaker's, C. Hopkins Level and square, combined spirit, J. E. Kitchen Level and square, combined spirit, J. E. Kitchen.	196,159 196,266 196,178 196,265 196,178 196,265 196,178 196,196 196,100 196,132 196,191 196,211 196,211 196,211 196,211 196,141 196,116 196,161
	Gate, M. J. McPherson. Gate, farm, H. Recher Governor for steam engines, Kurten & Kramer. Grain, etc., separating stones, etc., J. Arbuckle Grass cutter and rake, J. H. Stump Grindingmachine die, J. A. Bidwell Grinding mill, D. C. Newell Harness for breaking horses, C. H. Bowin Harrow, W. H. Hatfield Harvester, J. Pine (r). Hat-pouncing machine, F. R. & S. R. Going. Hat-pouncing machine, F. R. & S. R. Going. Hat-pouncing tool, F. R. Going. Hat-pouncing tool, F. R. Going. Hose-scraping machine, R. C. Tompkins Hogs-craping machine, R. C. Tompkins Hose collars, stuffing, L. H. Kindy. Horse collars, stuffing, L. H. Kindy. Horseshoe nail finishing machine, R. Hersey Hose nozzle, Gilchrist & Anderson. Hydraulic engine, rotary, J. Talley, Jr Hydraulic press, F. S. Kinney. Ice runs, adjustable switch for, H. F. Dernell. Indicating the force of blows, H. J. Blakeslee Inhaler and respirator, I. S. Emery. Insect destroyer, E. H. Fordtran. Insect-destroying composition, J. M. Madding. Knife and butter extractor, J. N. Parker. Labels, machine for gumming, L. Morganthau Lamp wick, mineral, C. F. A. Hinrichs. Last, J. R. Jacques. Lathe, jeweler's, J. A. De Vries Lathe, ewatchmaker's, C. Hopkins Leather-splitting machinery, Dancel & Smith Level and square, combined spirit, J. E. Kitchen Lightning rod, G. S. Knapp.	196,159 196,101 196,285 196,101 196,128 196,286 196,178 196,286 196,100 196,128 196,286 196,196 196 196 196 196 196 196 196 196 196
	Gate, M. J. McPherson. Gate, farm, H. Recher. Governor for steam engines, Kurten & Kramer. Grain, etc., separating stones, etc., J. Arbuckle Grass cutter and rake, J. H. Stump Grindingmachine die, J. A. Bidwell Grinding mill, D. C. Newell. Harness for breaking horses, C. H. Bowin Harrow, W. H. Hatfield. Harvester, J. Pine (r). Hat-pouncing machine, F. R. & S. R. Going Hat-pouncing machine, F. R. & S. R. Going Heaters, chimney attachment for, A. Young Hinge for window blinds, lock, D. W. Beal. Hog-scraping machine, R. C. Tompkins. Hoisting jack, W. A. Greenleaf Horse collars, stuffing, L. H. Kindy Horseshoe nail finishing machine, R. Hersey Hose nozzle, Gilchrist & Anderson Hydraulic engine, rotary, J. Talley, Jr Hydraulic engine, rotary, J. Talley, Jr Hydraulic press, F. S. Kinney. Lee runs, adjustable switch for, H. F. Dernell. Indicating the force of blows, H. J. Blakeslee. Inhaler, W. Boekel Inhaler and respirator, I. S. Emery. Insect destroyer, E. H. Fordtran Insect-destroying composition, J. M. Madding. Knife and butter extractor, J. N. Parker. Labels, machine for gumming, L. Morganthau. Lamp wick, mineral, C. F. A. Hinrichs Last, J. R. Jacques Lathe, jeweler's, J. A. De Vries Lathe, ewatchmaker's, C. Hopkins Leather-splitting machinery, Dancel & Smith Level and square, combined spirit, J. E. Kitchen Lightning rod, G. S. Knapp Lime and magnesia, hypocificorites of, E. Solvay.	196,159 196,266 196,178 196,265 196,178 196,265 196,178 196,265 196,100 196,132 196,100 196,132 196,211 196,211 196,211 196,211 196,211 196,211 196,141 196,161
	Gate, M. J. McPherson. Gate, farm, H. Recher Governor for steam engines, Kurten & Kramer. Grain, etc., separating stones, etc., J. Arbuckle Grass cutter and rake, J. H. Stump Grindingmachine die, J. A. Bidwell Grinding mill, D. C. Newell Harness for breaking horses, C. H. Bowin Harrow, W. H. Hatfield Harvester, J. Pine (r). Hat-pouncing machine, F. R. & S. R. Going. Hat-pouncing machine, F. R. & S. R. Going. Hat-pouncing tool, F. R. Going. Hat-pouncing tool, F. R. Going. Heaters, chimney attachment for, A. Young. Hinge for window blinds, lock, D. W. Beal. Hogs-scraping machine, R. C. Tompkins Hoisting jack, W. A. Greenleaf. Horse collars, stuffing, L. H. Kindy. Horseshoe nail finishing machine, R. Hersey Hose nozale, Gilchrist & Anderson. Hydraulic engine, rotary, J. Talley, Jr. Hydraulic press, F. S. Kinney. Ice runs, adjustable switch for, H. F. Dernell. Indicating the force of blows, H. J. Blakeslee Inhaler and respirator, I. S. Emery. Insect destroyer, E. H. Fordtran. Insect-destroying composition, J. M. Madding. Knife and butter extractor, J. N. Parker. Labels, machine for gumming, L. Morganthau Lamp wick, mineral, C. F. A. Hinrichs. Last, J. R. Jacques. Lathe, jeweler's, J. A. De Vries Lathe, watchmaker's, C. Hopkins Leather-splitting machinery, Dancel & Smith. Level and square, combined spirit, J. E. Kitchen Lightning rod, G. S. Knapp. Lime and magnesia, bypoofficrites of, E. Solvay, Loom picker, Brennand and Hampson.	196,159 196,101 196,101 196,202 196,101 196,102 196,10
	Gate, M. J. McPherson. Gate, farm, H. Recher. Governor for steam engines, Kurten & Kramer. Grain, etc., separating stones, etc., J. Arbuckle Grass cutter and rake, J. H. Stump Grindingmachine die, J. A. Bidwell Grinding mill, D. C. Newell Harness for breaking horses, C. H. Bowin Harrow, W. H. Hatfield Harvester, J. Pine (r) Hat-pouncing machine, F. R. & S. R. Going Hat-pouncing tool, F. R. Going Heaters, chimney attachment for, A. Young Hinge for window blinds, lock, D. W. Beal Hog-scraping machine, R. C. Tompkins Hoisting jack, W. A. Greenleaf Horse collars, stuffing, L. H. Kindy Horseshoe nail finishing machine, R. Hersey Hose nozzle, Gilchrist & Anderson Hydraulic press, F. S. Kinney. Lee runs, adjustable switch for, H. F. Dernell. Indicating the force of blows, H. J. Blakeslee. Inhaler, W. Boekel Inhaler and respirator, I. S. Emery. Insect destroyer, E. H. Fordtran Insect-destroying composition, J. M. Madding. Knife and butter extractor, J. N. Parker. Labels, machine for gumming, L. Morganthau. Lamp wick, mineral, C. F. A. Hinrichs Lathe, jeweler's, J. A. De Vries. Lathe, ewatchmaker's, C. Hopkins Level and square, combined spirit, J. E. Kitchen Lightning rod, G. S. Knapp. Lime and magnesia, bypocificrites of, E. Solvay. Loom, hand, Clements & Cagle Loom picker, Brennand and Hampson Match splint machine, Underwood and Holliday.	196,159 196,266 196,178 196,265 196,178 196,265 196,178 196,196,196 196,197 196,211 196,211 196,211 196,211 196,211 196,211 196,211 196,181 196,196 196,197 196,211
	Gate, M. J. McPherson. Gate, farm, H. Recher Governor for steam engines, Kurten & Kramer. Grain, etc., separating stones, etc., J. Arbuckle Grass cutter and rake, J. H. Stump Grindingmachine die, J. A. Bidwell Grinding mill, D. C. Newell Harness for breaking horses, C. H. Bowin Harrow, W. H. Hatfield Harvester, J. Pine (r). Hat-pouncing machine, F. R. & S. R. Going. Hat-pouncing machine, F. R. & S. R. Going. Hat-pouncing tool, F. R. Going. Heaters, chimney attachment for, A. Young. Hinge for window blinds, lock, D. W. Beal. Hog-scraping machine, R. C. Tompkins. Hoisting jack, W. A. Greenleaf. Horse collars, stuffing, L. H. Kindy. Horseshoe nail finishing machine, R. Hersey. Hose nozzle, Gilchrist & Anderson. Hydraulic engine, rotary, J. Talley, Jr. Hydraulic press, F. S. Kinney. Lee runs, adjustable switch for, H. F. Dernell. Indicating the force of blows, H. J. Blakeslee. Inhaler, W. Boekel Inhaler and respirator, I. S. Emery. Insect destroyer, E. H. Fordtran. Insect-destroying composition, J. M. Madding. Knife and butter extractor, J. N. Parker. Labels, machine for gumming, L. Morganthau Lamp wick, mineral, C. F. A. Hinrichs. Lathe, Jeweler's, J. A. De Vries. Lathe, ewelcher's, J. A. De Vries Lathe, watchmaker's, C. Hopkins Leather-splitting machinery, Dancel & Smith. Level and square, combined spirit, J. E. Kitchen Lightning rod, G. S. Knapp. Lime and magnesia, hypocificarites of, E. Solvay. Loom, hand, Clements & Cagle. Loom picker, Brennand and Hampson. Match splint machine, Underwood and Holliday. Mower, lawn. T. D. Marsh	196,159 196,261 196,178 196,265 196,178 196,265 196,178 196,100 196,132 196,100 196,132 196,131 196,211 196,212 196,231 196,131
	Gate, M. J. McPherson. Gate, farm, H. Recher. Governor for steam engines, Kurten & Kramer. Grain, etc., separating stones, etc., J. Arbuckle Grass cutter and rake, J. H. Stump Grindingmachine die, J. A. Bidwell Grinding mill, D. C. Newell. Harness for breaking horses, C. H. Bowin Harrow, W. H. Hatfield. Harvester, J. Pine (r). Hat-pouncing machine, F. R. & S. R. Going Hat-pouncing machine, F. R. & S. R. Going Heaters, chimney attachment for, A. Young. Hinge for win dow blinds, lock, D. W. Beal Hog-scraping machine, R. C. Tompkins. Holsting jack, W. A. Greenleaf. Horse collars, stuffing, L. H. Kindy Horseshoe nail finishing machine. R. Hersey Hose nozzle, Gilchrist & Anderson Hydraulic engine, rotary, J. Talley, Jr Hydraulic press, F. S. Kinney. Lee runs, adjustable switch for, H. F. Dernell. Indicating the force of blows, H. J. Blakeslee. Inhaler, W. Boekel. Inhaler and respirator, I. S. Emery. Insect destroyer, E. H. Fordtran Insect-destroying comPosition, J. M. Madding Knife and butter extractor, J. N. Parker. Labels, machine for gumming, L. Morganthau. Lamp wick, mineral, C. F. A. Hinrichs Last, J. R. Jacques Lathe, jeweler's, J. A. De Vries Lathe, jeweler's, J. A. De Vries Lathe, ewatchmaker's, C. Hopkins Level and square, combined spirit, J. E. Kitchen Lightning rod, G. S. Knapp	196,159 196,266 196,178 196,265 196,178 196,265 196,178 196,196,196 196,292 196,196 196,292 196,196 196,292 196,196 196,292 196,196 196,292 196,293
	Gate, M. J. McPherson. Gate, farm, H. Recher. Governor for steam engines, Kurten & Kramer. Grain, etc., separating stones, etc., J. Arbuckle Grass cutter and rake, J. H. Stump Grindingmachine die, J. A. Bidwell Grinding mill, D. C. Newell. Harness for breaking horses, C. H. Bowin Harrow, W. H. Hatfield. Harvester, J. Pine (r). Hat-pouncing machine, F. R. & S. R. Going Hat-pouncing machine, F. R. & S. R. Going Hat-pouncing tool, F. B. Going Heaters, chimney attachment for, A. Young Hinge for window blinds, lock, D. W. Beal. Hog-scraping machine, R. C. Tompkins. Hoisting jack, W. A. Greenleaf Horse collars, stuffing, L. H. Kindy Horseshoe nail finishing machine, R. Hersey Hose nozale, Gilchrist & Anderson Hydraulic engine, rotary, J. Talley, Jr Hydraulic press, F. S. Kinney Ice runs, adjustable switch for, H. F. Dernell. Indicating the force of blows, H. J. Blakeslee Inhaler, W. Boekel Inhaler and respirator, I. S. Emery Insect destroyer, E. H. Fordtran Insect-destroying composition, J. M. Madding. Knife and butter extractor, J. N. Parker Labels, machine for gumming, L. Morganthau. Lamp wick, mineral, C. F. A. Hinrichs Lathe, J. R. Jacques Lathe, watchmaker's, C. Hopkins Leather-splitting machinery, Dancel & Smith Level and square, combined spirit, J. E. Kitchen Lightning rod, G. S. Knapp Lime and magnesia, hypocificorites of, E. Solvay. Loom, hand, Clements & Cagle Loom picker, Brennand and Hampson Match splint machine, Underwood and Holliday. Mower, lawn. T. D. Marsh Mowing machine, Loweth, Howe, and Labare Nail feeding and driving, B. F. Bergh. Nut lock and wash er for bolts, D. Cumming.	196,159 196,286 196,178 196,286 196,178 196,286 196,178 196,286 196,100 196,132 196,100 196,132 196,281 196,281 196,281 196,281 196,281 196,281 196,281 196,281 196,281 196,281 196,281 196,281 196,281 196,281 196,281 196,281 196,281 196,281 196,181
	Gate, M. J. McPherson. Gate, farm, H. Recher Governor for steam engines, Kurten & Kramer. Grain, etc., separating stones, etc., J. Arbuckle Grass cutter and rake, J. H. Stump Grinding machine die, J. A. Bidwell Grinding mill, D. C. Newell	196,159 196,101 196,281 196,101 196,282 196,102 196,282 196,002 196,183 196,100 196,100 196,10
	Gate, M. J. McPherson. Gate, farm, H. Recher. Governor for steam engines, Kurten & Kramer. Grain, etc., separating stones, etc., J. Arbuckle Grass cutter and rake, J. H. Stump Grindingmachine die, J. A. Bidwell Grinding mill, D. C. Newell Harness for breaking horses, C. H. Bowin Harrow, W. H. Hatfield Harvester, J. Pine (r) Hat-pouncing machine, F. R. & S. R. Going Hat-pouncing tool, F. R. Going Heaters, chimney attachment for, A. Young Hinge for window blinds, lock, D. W. Beal Hog-scraping machine, R. C. Tompkins Hoisting jack, W. A. Greenleaf. Horse collars, stuffing, L. H. Kindy. Horseshoe nail finishing machine, R. Hersey Hose nozzle, Gilchrist & Anderson. Hydraulic press, F. S. Kinney Lee runs, adjustable switch for, H. F. Dernell Indicating the force of blows, H. J. Blakeslee Inhaler, W. Boekel Inhaler and respirator, I. S. Emery. Insect destroyer, E. H. Fordtran Insect-destroying composition, J. M. Madding. Knife and butter extractor, J. N. Parker. Labels, machine for gumming, L. Morganthau Lamp wick, mineral, C. F. A. Hinrichs Lathe, jeweler's, J. A. De Vries Lathe, ewatchmaker's, C. Hopkins Leather-splitting machinery, Dancel & Smith Level and square, combined spirit, J. E. Kitchen Lightning rod, G. S. Knapp. Lime and magnessia, hypocfluorites of, E. Solvay. Loom, hand, Clements & Cagle Loom picker, Brennand and Hampson. Match splint machine, Underwood and Holliday. Mower, lawn. T. D. Marsh Mowing machine, Loweth, Howe, and Labare. Nail feeding and driving, B. F. Bergh. Nut lock and washer for bolts, D. Cumming. Orecrusher, P. W. Gates. Ore washing and amalgamating, J. H. Wilhelm Ores, amalgamating, Forster & Firmlin. Packing for oil wells, water, J. P. & S. H. Gordon	196,159 196,262 196,178 196,265 196,178 196,265 196,100 196,138 196,100 196,138 196,100 196,138 196,101 196,211 196,211 196,211 196,211 196,211 196,161
	Gate, M. J. McPherson. Gate, farm, H. Recher Governor for steam engines, Kurten & Kramer. Grain, etc., separating stones, etc., J. Arbuckle Grass cutter and rake, J. H. Stump Grindingmachine die, J. A. Bidwell Grinding mill, D. C. Newell	196,159 196,101 196,265 196,101 196,265 196,102 196,102 196,102 196,102 196,102 196,102 196,102 196,102 196,102 196,102 196,102 196,102 196,102 196,103 196,104 196,10
	Gate, M. J. McPherson. Gate, farm, H. Recher. Governor for steam engines, Kurten & Kramer. Grain, etc., separating stones, etc., J. Arbuckle Grass cutter and rake, J. H. Stump Grindingmachine die, J. A. Bidwell Grinding mill, D. C. Newell Harness for breaking horses, C. H. Bowin Harrow, W. H. Hatfield Harvester, J. Pine (r). Hat-pouncing machine, F. R. & S. R. Going. Hat-pouncing tool, F. R. Going. Heaters, chimney attachment for, A. Young. Hinge for window blinds, lock, D. W. Beal. Hog-scraping machine, R. C. Tompkins. Hoisting jack, W. A. Greenleaf. Horse collars, stuffing, L. H. Kindy. Horseshoe nail finishing machine, R. Hersey. Hose nozzle, Gilchrist & Anderson. Hydraulic engine, rotary, J. Talley, Jr. Hydraulic press, F. S. Kinney. Lee runs, adjustable switch for, H. F. Dernell. Indicating the force of blows, H. J. Blakeslee. Inhaler, W. Boekel Inhaler and respirator, I. S. Emery. Insect destroyer, E. H. Fordtran. Insect-destroying composition, J. M. Madding. Knife and butter extractor, J. N. Parker. Labels, machine for gumming, L. Morganthau. Lamp wick, mineral, C. F. A. Hinrichs. Lathe, jeweler's, J. A. De Vries. Lathe, watchmaker's, C. Hopkins Leather-splitting machinery, Dancel & Smith Level and square, combined spirit, J. E. Kitchen Lightning rod, G. S. Knapp Lime and magnesia, bypocificrites of, E. Solvay. Loom, hand, Clements & Cagle. Loom picker, Brennand and Hampson. Match splint machine, Underwood and Holliday. Mower, lawn. T. D. Marsh Mowing machine, Loweth, Howe, and Labare. Nail feeding and driving, B. F. Bergh. Nut lock and wash er for bolts, D. Cumming. Oracrush er. P. W. Gates. Ore washing and amalgamating, J. H. Wilhelm. Oraes, amalgamating, Forster & Firmlin Packing for piston rods, etc., E. Holt Padlock, permutation, G. Hamilton Parataloons, shaping, G. Franke Paper-folding machine, R. A. Connell.	196,159 196,101 196,161 196,286 196,178 196,181 196,100 196,182 196,191 196,281 196,181
	Gate, M. J. McPherson. Gate, farm, H. Recher Governor for steam engines, Kurten & Kramer. Grain, etc., separating stones, etc., J. Arbuckle Grass cutter and rake, J. H. Stump. Grindingmachine die, J. A. Bidwell Grinding mill, D. C. Newell Harness for breaking horses, C. H. Rowin Harrow, W. H. Hatfield Harvester, J. Pine (r). Hat-pouncing machine, F. R. & S. R. Going. Hat-pouncing machine, F. R. & S. R. Going. Hat-pouncing tool, F. R. Going. Hat-pouncing machine, F. R. & S. R. Going. Hat-pouncing machine, R. C. Tompkins Holseting jack, W. A. Greenleaf. Horse collars, stuffing, L. H. Kindy. Horseshoe nail finishing machine, R. Hersey Hose nozzle, Gilchrist & Anderson. Hydraulic engine, rotary, J. Talley, Jr Hydraulic press, F. S. Kinney. Ice runs, adjustable switch for, H. F. Dernell. Indicating the force of blows, H. J. Blakeslee Inhaler, W. Boekel Inhaler and respirator, I. S. Emery. Insect destroyer, E. H. Fordtran. Insect-destroying composition, J. M. Madding. Knife and butter extractor, J. N. Parker. Labels, machine for gumming, L. Morganthau Lamp wick, mineral, C. F. A. Hinrichs. Last, J. R. Jacques. Lathe, jeweler's, J. A. De Vries Lathe, watchmaker's, C. Hopkins Leather-splitting machinery, Dancel & Smith. Level and square, combined spirit, J. E. Kitchen Lightning rod, G. S. Knapp. Lime and magnesia, hypocific rites of, E. Solvay, Loom, hand, Clements & Cagle Loom picker, Brennand and Hampson. Match splint machine, Underwood and Holliday. Mower, lawn. T. D. Marsh Mowing machine, Loweth, Howe, and Labare. Nail feeding and driving, B. F. Bergh. Nut lock and washer for bolts, D. Cumming. Orecusher, P. W. Gates. Ore washing and amalgamating, J. H. Wilhelm Ores, amalgamating, Forster & Firmlin. Packing for piston rods, etc., E. Holt Padlock, permutation, G. Hamilton Pantaloons, shaping, G. Franke. Paper-folding machine, R. A. Connell Paper, machine for parchment, W. Martin.	196,159 196,101 196,285 196,101 196,128 196,286 196,178 196,286 196,100 196,132 196,286 196,286 196,181 196,286 196,287 196,181 196,181 196,286 196,287 196,181
	Gate, M. J. McPherson. Gate, farm, H. Recher. Governor for steam engines, Kurten & Kramer. Grain, etc., separating stones, etc., J. Arbuckle Grass cutter and rake, J. H. Stump Grinding mill, D. C. Newell Harness for breaking horses, C. H. Bowin Harrow, W. H. Hatfield Harvester, J. Pine (r) Hat-pouncing machine, F. R. & S. R. Going Hat-pouncing machine, F. R. & S. R. Going Heaters, chimney attachment for, A. Young Hinge for window blinds, lock, D. W. Beal Hog-scraping machine, R. C. Tompkins Hoisting jack, W. A. Greenleaf Horse collars, stuffing, L. H. Kindy Horseshoe nail finishing machine, R. Hersey Hose nozzle, Gilchrist & Anderson Hydraulic engine, rotary, J. Talley, Jr Hydraulic press, F. S. Kinney Lee runs, adjustable switch for, H. F. Dernell. Indicating the force of blows, H. J. Blakeslee Inhaler, W. Boekel Inhaler and respirator, I. S. Emery Insect destroyer, E. H. Fordtran Insect-destroying composition, J. M. Madding Knife and butter extractor, J. N. Parker Labels, machine for gumming, L. Morganthau Lamp wick, mineral, C. F. A. Hinrichs Last, J. R. Jacques Lathe, jeweler's, J. A. De Vries Lathe, jeweler's, J. A. De Vries Lathe, watchmaker's, C. Hopkins Leather-splitting machinery, Dancel & Smith Level and square, combined spirit, J. E. Kitchen Lightning rod, G. S. Knapp Lime and magnesia, hypocificrites of, E. Solvay. Loom, hand, Clements & Cagle Loom picker, Brennand and Hampson Match splint machine, Underwood and Holliday. Mower, lawn. T. D. Marsh Mowing machine, Loweth, Howe, and Labare Nail feeding and driving, B. F. Bergh Nut lock and washer for bolts, D. Cumming Orecusher, P. W. Gates Ore washing and amalgamating, J. H. Wilhelm. Ores, amalgamating, Forster & Firmlin. Packing for oil wells, water, J. P. & S. H. Gordon Packing for piston rods, etc., E. Holt Padlock, permutation, G. Hamilton Paper placer, A. F. Gerald. Pen, drawing, B. Perry	196,159 196,100 196,200 196,178 196,265 196,178 196,100 196,128 196,100 196,128 196,100 196,128 196,218 196,181
	Gate, M. J. McPherson. Gate, farm, H. Recher Governor for steam engines, Kurten & Kramer. Grain, etc., separating stones, etc., J. Arbuckle Grass cutter and rake, J. H. Stump Grindingmachine die, J. A. Bidwell Grinding mill, D. C. Newell	196,159 196,101 196,285 196,101 196,128 196,286 196,178 196,286 196,100 196,132 196,287
	Gate, M. J. McPherson. Gate, farm, H. Recher. Governor for steam engines, Kurten & Kramer. Grain, etc., separating stones, etc., J. Arbuckle Grass cutter and rake, J. H. Stump. Grindingmachine die, J. A. Bidwell Grinding mill, D. C. Newell Harness for breaking horses, C. H. Rowin Harrow, W. H. Hatfield Harvester, J. Pine (r). Hat-pouncing machine, F. R. & S. R. Going. Hat-pouncing machine, F. R. & S. R. Going. Hat-pouncing tool, F. R. Going. Hat-pouncing machine, F. R. & S. R. Going. Hat-pouncing machine, R. C. Tompkins Holser, Schimney attachment for, A. Young. Hinge for window blinds, lock, D. W. Beal. Hog-scraping machine, R. C. Tompkins Hoisting jack, W. A. Greenleaf. Horse collars, stuffing, L. H. Kindy. Horseshoe nail finishing machine, R. Hersey Hose nozzle, Gilchrist & Anderson. Hydraulic engine, rotary, J. Talley, Jr. Hydraulic press, F. S. Kinney. Ice runs, adjustable switch for, H. F. Dernell. Indicating the force of blows, H. J. Blakeslee Inhaler, W. Boekel Inhaler and respirator, I. S. Emery. Insect destroyer, E. H. Fordtran. Insect-destroying composition, J. M. Madding. Knife and butter extractor, J. N. Parker. Labels, machine for gumming, L. Morganthau Lamp wick, mineral, C. F. A. Hinrichs. Last, J. R. Jacques. Lathe, jeweler's, J. A. De Vries Lathe, watchmaker's, C. Hopkins Leather-splitting machinery, Dancel & Smith. Level and square, combined spirit, J. E. Kitchen Lightning rod, G. S. Knapp. Lime and magnesia, hypocificrites of, E. Solvay, Loom, hand, Clements & Cagle Loom picker, Brennand and Hampson. Match splint machine, Underwood and Holliday. Mower, lawn. T. D. Marsh Mowing machine, Loweth, Howe, and Labare. Nail feeding and driving, B. F. Bergh. Nut lock and washer for bolts, D. Cumming. Ore-crusher, P. W. Gates. Ore-washing and amalgamating, J. H. Wilhelm Ores, amalgamating, Forster & Firmlin Packing for piston rods, etc., E. Holt Padlock, permutation, G. Hamilton Pantaloons, shaping, G. Franke. Paper-folding machine, R. A. Connell Paper, machine for parchment, W. Martin Paper placer,	196,159 196,101 196,285 196,101 196,120 196,285 196,100 196,122 196,285 196,100 196,122 196,285 196,100 196,285 196,100 196,285 196,200 196,285 196,200 196,181 196,200 196,200 196,200 196,200 196,200 196,200 196,200 196,200 196,200 196,200 196,200 196,200 196,200 196,200 196,200 196,200 196,200 196,200 196,100 196,000
	Gate, M. J. McPherson. Gate, farm, H. Recher. Governor for steam engines, Kurten & Kramer. Grain, etc., separating stones, etc., J. Arbuckle Grass cutter and rake, J. H. Stump Grindingmachine die, J. A. Bidwell Grinding mill, D. C. Newell Harness for breaking horses, C. H. Bowin Harrow, W. H. Hatfield Harvester, J. Pine (r) Hat-pouncing machine, F. R. & S. R. Going Hat-pouncing tool, F. R. Going Heaters, chimney attachment for, A. Young Hinge for window blinds, lock, D. W. Beal Hog-scraping machine, R. C. Tompkins Hoisting jack, W. A. Greenleaf Horse collars, stuffing, L. H. Kindy Horseshoe nail finishing machine, R. Hersey Hose nozzle, Gilchrist & Anderson Hydraulic press, F. S. Kinney. Lee runs, adjustable switch for, H. F. Dernell. Indicating the force of blows, H. J. Blakeslee. Inhaler, W. Boekel Inhaler and respirator, I. S. Emery. Insect destroyer, E. H. Fordtran Insect-destroying composition, J. M. Madding. Knife and butter extractor, J. N. Parker. Labels, machine for gumming, L. Morganthau. Lamp wick, mineral, C. F. A. Hinrichs Last, J. R. Jacques Lathe, jeweler's, J. A. De Vries Lathe, jeweler's, J. A. De Vries. Lathe, swatchmaker's, C. Hopkins Level and square, combined spirit, J. E. Kitchen Lightning rod, G. S. Knapp Lime and magnesia, bypocificrites of, E. Solvay. Loom, hand, Clements & Cagle Loom picker, Brennand and Hampson Match splint machine, Underwood and Holliday. Mower, lawn. T. D. Marsh Mowing machine, Loweth, Howe, and Labare. Nail feeding and driving, B. F. Bergh Nut lock and washe r for bolts, D. Cumming. Oracrusher, P. W. Gates Ore washing and amalgamating, J. H. Wilhelm. Ores, amalgamating, Forster & Firmlin. Packing for piston rods, etc. E. Holt Padlock, permutation, G. Hamilton Panaking for piston rods, etc. E. Holt Packing for piston rods, etc. E. Holt Paper, machine for parchment, W. Martin. Paper placer, A. F. Gerald Pepe, drawing, B. Perry Pipe and hose coupling, T. Addison. Pipe coupling, H. Guyer Plane, corn, A. F	196,159 196,268 196,178 196,268 196,178 196,268 196,178 196,196 196,198 196,198 196,198 196,198 196,198 196,198 196,198 196,298 196,198
	Gate, M. J. McPherson. Gate, farm, H. Recher. Governor for steam engines, Kurten & Kramer. Grain, etc., separating stones, etc., J. Arbuckle Grass cutter and rake, J. H. Stump Grinding machine die, J. A. Bidwell Grinding mill, D. C. Newell Harness for breaking horses, C. H. Bowin Harrow, W. H. Hatfield. Harvester, J. Pine (r). Hat-pouncing machine, F. R. & S. R. Going Hat-pouncing tool, F. R. Going Heaters, chimney attachment for, A. Young Hinge for window blinds, lock, D. W. Beal Hog-scraping machine, R. C. Tompkins Hoisting jack, W. A. Greenleaf Horse collars, stuffing, L. H. Kindy Horseshoe nail finishing machine, R. Hersey Hose nozale, Gilchrist & Anderson Hydraulic press, F. S. Kinney Lee runs, adjustable switch for, H. F. Dernell. Indicating the force of blows, H. J. Blakeslee Inhaler, W. Boekel Inhaler and respirator, I. S. Emery Insect destroyer, E. H. Fordtran Insect-destroying composition, J. M. Madding. Knife and butter extractor, J. N. Parker Labels, machine for gumming, L. Morganthau. Lamp wick, mineral, C. F. A. Hinrichs Last, J. R. Jacques Lathe, jeweler's, J. A. De Vries Lathe, jeweler's, J. A. De Vries Lathe, watchmaker's, C. Hopkins Leather-splitting machinery. Dancel & Smith Level and square, combined spirit, J. E. Kitchen Lightning rod, G. S. Knapp Lime and magnesia, hypocificarites of, E. Solvay. Loom, hand, Clements & Cagle. Loom picker, Brennand and Hampson Match splint machine, Underwood and Holliday. Mower, lawn. T. D. Marsh Mowing machine, Loweth, Howe, and Labare Nail feeding and driving, B. F. Bergh. Nut lock and wash er for bolts, D. Cumming. Oracrush er, P. W. Gates Ore washing and amalgamating, J. H. Wilhelm. Orac, amalgamating, Forster & Firmlin. Packing for oil wells, water, J. P. & S. H. Gordon Packing for piston rods, etc., E. Holt Padlock, permutation, G. Hamilton Paper placer, A. F. Gerald. Pen, drawing, B. Perry Pipe and hose coupling, T. Addison. Pipe coupling, H. Guyer. Plane, bench, L. Bai	196,159 196,06 196,178 196,06 196,178 196,06 196,178 196,196 1
	Gate, M. J. McPherson. Gate, farm, H. Recher. Governor for steam engines, Kurten & Kramer. Grain, etc., separating stones, etc., J. Arbuckle Grass cutter and rake, J. H. Stump Grindingmachine die, J. A. Bidwell Grinding mill, D. C. Newell	196,159 196,101 196,285 196,101 196,128 196,286 196,181 196,286 196,181 196,286 196,181 196,281
	Gate, M. J. McPherson. Gate, farm, H. Recher. Governor for steam engines, Kurten & Kramer. Grain, etc., separating stones, etc., J. Arbuckle Grass cutter and rake, J. H. Stump Grinding mill, D. C. Newell Harness for breaking horses, C. H. Bowin Harrow, W. H. Hatfield Harvester, J. Pine (r) Hat-pouncing machine, F. R. & S. R. Going Hat-pouncing tool, F. R. Going Heaters, chimney attachment for, A. Young Hinge for window blinds, lock, D. W. Beal Hog-scraping machine, R. C. Tompkins Hoisting jack, W. A. Greenleaf Horse collars, stuffing, L. H. Kindy Horseshoe nail finishing machine, R. Hersey Hose nozale, Gilchrist & Anderson Hydraulic engine, rotary, J. Talley, Jr Hydraulic press, F. S. Kinney Lee runs, adjustable switch for, H. F. Dernell. Indicating the force of blows, H. J. Blakeslee Inhaler, W. Boekel Inhaler and respirator, I. S. Emery Insect-destroyer, E. H. Fordtran Insect-destroying composition, J. M. Madding. Knife and butter extractor, J. N. Parker Labels, machine for gumming, L. Morganthau. Lamp wick. mineral, C. F. A. Hinrichs Last, J. R. Jacques Lathe, jeweler's, J. A. De Vries Lathe, watchmaker's, C. Hopkins Leather-splitting machinery, Dancel & Smith Level and square, combined spirit, J. E. Kitchen Lightning rod, G. S. Knapp Lime and magnesia, hypocificarites of, E. Solvay. Loom, hand, Clements & Cagle. Loom picker, Brennand and Hampson Match splint machine, Underwood and Holliday. Mower, lawn. T. D. Marsh Mowing machine, Loweth, Howe, and Labare Nail feeding and driving, B. F. Bergh. Nut lock and wash er for bolts, D. Cumming. Oracrusher, P. W. Gates Ore washing and amalgamating, J. H. Wilhelm Ores, amalgamating, Forster & Firmlin. Packing for oil wells, water, J. P. & S. H. Gordon Packing for piston rods, etc., E. Holt Paper, machine for parchment, W. Martin Paper placer, A. F. Gerald Pen, drawing, B. Perry Pipe and hose coupling, T. Addison. Pipe coupling, H. Guyer. Plane, bench, L. Bailey. Planet, corn, A. C.	196,159 196,269 196,178 196,265 196,178 196,265 196,178 196,265 196,178 196,196 196 196 196 196 196 196 196 196 196
	Gate, M. J. McPherson. Gate, farm, H. Recher. Governor for steam engines, Kurten & Kramer. Grain, etc., separating stones, etc., J. Arbuckle Grass cutter and rake, J. H. Stump. Grindingmachine die, J. A. Bidwell Grinding mill, D. C. Newell. Harness for breaking horses, C. H. Rowin. Harrow, W. H. Hatfield. Harvester, J. Pine (r). Hat-pouncing machine, F. R. & S. R. Going. Hat-pouncing machine, F. R. & S. R. Going. Hat-pouncing tool, F. R. Going. Hat-pouncing tool, F. R. Going. Hat-pouncing machine, R. C. Tompkins. Holsting jack, W. A. Greenleaf. Horse collars, stuffing, L. H. Kindy. Horseshoe nail finishing machine, R. Hersey. Hose nozzle, Gilchrist & Anderson. Hydraulic engine, rotary, J. Talley, Jr Hydraulic press, F. S. Kinney. Ice runs, adjustable switch for, H. F. Dernell. Indicating the force of blows, H. J. Blakeslee. Inhaler, W. Boekel Inhaler and respirator, I. S. Emery. Insect destroyer, E. H. Fordtran. Insect-destroying comPosition, J. M. Madding. Knife and butter extractor, J. N. Parker. Labels, machine for gumming, L. Morganthau. Lamp wick, mineral, C. F. A. Hinrichs. Last, J. R. Jacques. Lathe, jeweler's, J. A. De Vries. Lathe, jeweler's, J. A. De Vries. Lathe, swatchmaker's, C. Hopkins Leather-splitting machinery, Dancel & Smith. Level and square, combined spirit, J. E. Kitchen Lightning rod, G. S. Knapp. Lime and magnesia, hypoofilorites of, E. Solvay. Loom, hand, Clements & Cagle. Loom picker, Brennand and Hampson. Match splint machine, Underwood and Holliday. Mower, lawn. T. D. Marsh Mowing machine, Loweth, Howe, and Labare. Nail feeding and driving, B. F. Bergh. Nut lock and washer for bolts, D. Cumming. Oracrusher, P. W. Gates. Ore washing and amalgamating, J. H. Wilhelm. Ores, amalgamating, Forster & Firmlin. Packing for piston rods, etc. E. Holt Paquer, machine for parchment, W. Martin. Paper placer, A. F. Gerald. Pen, drawing, B. Perry Pipe and hose coupling, T. Addison. Pipe coupling, H. Guyer. Plane, ench, L. Balley. Plane, ench, L. Balley. Plane, Plane, S. W. Babbitt. Plow, T. A. Bl	196,159 196,101 196,162 196,178 196,286 196,178 196,286 196,178 196,287 196,181 196,281 196,281 196,281 196,281 196,281 196,281 196,281 196,281 196,281 196,281 196,281 196,281 196,181 196,281 196,181 196,281 196,181
	Gate, M. J. McPherson. Gate, farm, H. Recher. Governor for steam engines, Kurten & Kramer. Grain, etc., separating stones, etc., J. Arbuckle Grass cutter and rake, J. H. Stump Grinding machine die, J. A. Bidwell Grinding mill, D. C. Newell. Harness for breaking horses, C. H. Bowin Harrow, W. H. Hatfield. Harvester, J. Pine (r). Hat-pouncing machine, F. R. & S. R. Going Hat-pouncing tool, F. R. Going Heaters, chimney attachment for, A. Young. Hinge for window blinds, lock, D. W. Beal. Hog-scraping machine, R. C. Tompkins. Hoisting jack, W. A. Greenleaf. Horse collars, stuffing, L. H. Kindy Horseshoe nail finishing machine, R. Hersey. Hose nozale, Gilchrist & Anderson. Hydraulic engine, rotary, J. Talley, Jr Hydraulic press, F. S. Kinney. Lee runs, adjustable switch for, H. F. Dernell. Indicating the force of blows, H. J. Blakeslee. Inhaler, W. Boekel. Inhaler and respirator, I. S. Emery. Insect destroyer, E. H. Fordtran. Insect-destroying composition, J. M. Madding. Knife and butter extractor, J. N. Parker. Labels, machine for gumming, L. Morganthau. Lamp wick, mineral, C. F. A. Hinrichs. Last, J. R. Jacques Lathe, jeweler's, J. A. De Vries. Lathe, ewatchmaker's, C. Hopkins Leather-splitting machinery, Dancel & Smith Level and square, combined spirit, J. E. Kitchen Lightning rod, G. S. Knapp. Lime and magnessa, bypocfluorites of, E. Solvay. Loom, hand, Clements & Cagle Loom picker, Brennand and Hampson Match splint machine, Underwood and Holliday. Mower, lawn. T. D. Marsh Mowing machine, Loweth, Howe, and Labare. Nail feeding and driving, B. F. Bergh. Nut lock and wash er for bolts, D. Cumming. Oracrush er, P. W. Gates Ore washing and amalgamating, J. H. Wilhelm Ores, amalgamating, Forster & Firmlin Packing for oil wells, water, J. P. & S. H. Gordon Packing for piston rods, etc., E. Holt Padlock, permutation, G. Hamilton Paper placer, A. F. Gerald Pen, drawing, B. Perry Pipe and hose coupling, T. Addison. Pipe coupling, H. Guyer Plane, bench, L. Bailey. Planter, corn, A. C. Kent. Planter,	196,159 196,101 196,162 196,178 196,286 196,178 196,196 196,198
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10,276.—HANDLE FOR POTTERY OR GLASS WARE.—T.

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10.277.—Dessert set.—W. J. Miller, Chicopee, Mass.

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