Build the brick lining an inch clear from the stone wall, and ram the space with equal parts coarse sand and Portland cement as you build the courses, so that you will have a solid and uniform portion of Portland cement concrete. The bottom should also have a continuous partition of the concrete under the brick floor.

- (53) F. L. B. writes (1) for a solution that will make either leather or India rubber adhere to goloshes. I have tried hyposulphide of carbon and gutta percha, but this won't act. A. Dissolve a quantity of gutta percha in chloroform in quantity to make a fluid of honey-like consistence. When spread, it will dry in a few minutes. Heat the surfaces at a fire or gas fiame until softened, and apply them together. Small patches of leather can thus be cemented on boots, etc., so as to almost defy detection. It is waterproof, and will answer almost anywhere unless exposed to heat, which will soften it.—Your other questions should be answered by some physician.
- (54) H. M. R. asks how to remove ink stains from linen. A. Wet the finger in water, then dip into a powder consisting of one part of finely powdered oxalic acid mixed with four parts of cream tartar, and rub it on the spot gently, keeping it rather moist, and the stain will disappear without injuring the fabric. After the stain disappears, wash the linen in pure water
- (55) G. B. B.—A fireproof whitewash can be readily made by adding one part silicate of soda (or potash) to every five parts of whitewash. The addition of a solution of alum to whitewash is recommended as a means to prevent the rubbing off of the wash. A coating of a good glue size made by dissolving half a pound of glue in a gallon of water is employed when the wall is to be papered.
- (56) W. J. D. asks how to make a small portable "filter," to be used on a faucet for filtering hydrant water. A. The essential feature of the ordinary portable filters is a layer or stratum of sand and coarsely powdered charcoal; the water, however, first passes through a sponge, in order to remove the coarser por tion of the impurities. This is inclosed in a brass tube fitting by means of a thread on to the faucet, and also itis capable of being opened at the center, so that from time to time the filtering substances can be renewed.
- (57) W. H. C.—A red ink for marking clothes, which is not attacked by soap alkalies or acids, can be prepared as follows: Enough finely pulverized cinnabar to form a moderately thick liquid is very intimately mixed with egg albumen previously diluted with an equal bulk of Water, and beaten to a froth and filtered through fine linen. Marks are formed on cloth with this liquid by means of a quill, and are fixed after they have become dry by pressing the cloth on the other side with a hot iron.
- (58) F. G. T.—It is wrong to paint the drums of meters; they should be of good enough material to stand without it unless the gas is very bad. As for the cases, if they are heavily tinned they should not need painting. If, however, you desire a coating, the or-dinary asphalt varnish will be found quite serviceable, or perhaps better still a mixture of red lead with linseed oil will be found to answer your wants.
- (59) J. G. H.—The so-called jeweler's chamois to which you refer are also obtained from abroad, and as far as we have been able to ascertain, no one has ever been successful in impregnating the skin with the polishing powder in this country. It is presumed that this operation is accomplished at some termediate stage during the process of preparing the skin for the market, and cannot be done after the skin
- (60) W. B. S. asks for information in regard to dissolving platinum. A. Dissolve the pla tinum in a boiling solution of aqua regia; this reagent consists of 1 part nitric and 2 of hydrochloric acid by measure. The operation must be continued until no nitric acid remains, thereby forming the platinum chloride. The fumes from this operation are very offensive and corrosive, so it may be found more satisfactory to purchase the platinum chloride rather than to attempt
- (61) E. F. S. asks: Has a rate of speed equal to 90 miles an hour, ever been attained by railroad locomotive? Do the Grant Locomotive Work make such an engine? A. It is extremely doubtful if any locomotive ever made so high a speed. A mile in 48 seconds is the shortest time we have heard of. A rate of 70 to 75 miles per hour has been made on a spurt, on good straight track. The Grant Locomotive Works could make such an engine. A. Is not 60 miles an hour considered remarkable time for trains on railroads to make, or is it something that is done frequently and by ordinary engines? A. 60 miles an hour for a train is considered a very high rate of speed, and is seldom attained in practice for more than a short run.
- (62) E. G. writes: I desire to operate an electromagnet under water: what effect will the water have on the magnetic power? A. None, provided the are insulated. 2. What is the best way to insucoating of paraffine or shellac will do it. 3. What is the best way to make a magnet lever so as to prevent rust in the journals, being operated under water? A. Make it of brass; or bronze, nickel, or copper the ex-
- (63) P. J. O'M.—Boilers should be tested when new at twice the pressure they are intended to be used. A majority of stationary boilers in New York are tested at 150 pounds. The New York sanitary test is about 50 per cent higher than the certificate of pressure allowed. Cold water pressure is usual. You may obtain a pump from \$10 to \$30. Any pump that will make the pressure will do, and there is a great variety
- (64) W. B. asks: 1. Will a two inch pipe with one inch faucet give more water than a one inch pipe with one inch faucet, both pipes leading from the bottom of the same tank, leaving friction out of consideration? A. The friction cannot be left out of the question. The 2inch pipe will give the greatest flow. Why do miners begin with a large inlet in hydraulic mining? A. Taper nozzles are found to give the best results, or quickest flow for a given head.

- older to be applied without a soldering iron. Can you give me the preparation of lead and tin and the method of preparing it? Does it require any acid or rosin mixed with it? I saw it sold on the street in New York seven years ago. A. Mix 2 parts tin, 1 part lead by melting. Stir well together and pour slowly into a little sheet iron pan with small holes perforated along the bottom edge, at the same time draw the pan along a plate of iron or a smooth stone. The solder will run through the holes, forming little parallel strips. A little practice will make you perfect.
- (66) A. S. asks how to make melted brass stickto wrought iron. Should the iron be hot, and how is it best to proceed? A. The iron should be at a full red heat. It should be clean, and covered with borax. The brass should be poured very hot, and in quantity so as to run over, that the surface of the iron may be brought up to the brazing temperature.
- (67) A. V. W. aks why it is that on the eiling of a lath and plastered room one can see every joist and lath, the space where the joist and lath are being alike. A. Plastered ceilings are porous, allowing air to circulate through them. The air carries dust and smoke with it, which lodge on the surface, the ceiling acting as a filter. Where beams and lath back the plaster, the circulation is impeded or entirely stopped, which prevents the lodgment of smoke and dust.
- (68) J. T. R. asks whether one could detect any free oxygen in a jar of nitrogen by means of a lighted candle. A. If the quantity of oxygen was slight, we do not think it could be detected. The fact that nitrogen does not support combustion would sustain the probability of oxygen being present in the mixture if a candle burnedin the jar. gest the use of pyrogallic acid as being a more satisfac tory test. This compound absurbs oxygen very readily. turning black.
- (69) A. N. D. asks for a receipt for a ement which will stick sheepskin firmly to white or sheet iron, and which will stand an occasional wetting. A. Spread over the metal a thin hot solution of good glue; soak the leather with a warm solution of gall nuts before placing on the metal, and leave to dry under pressure. If fastened in this manner, it is impossible to separate the leather from the metal without tearing it. See also receipts given in SCIENTIFIC AMERICAN SUP-PLEMENT, No. 158.
- (70) M. C. asks: 1. How is the silver currency of the United States made? A. See article entitled "United States Mint, Philadel phia, Pa," in Scien-TIFIC AMERICAN SUPPLEMENT, No. 117, 2. I have had occasion to use quicksilver and white of egg on furniture. Would it be safe to use hot soap suds therewith. Some say the quicksilver coming in contact with the hot water would salivate the person working with it, or any one in the room. A. We fail to see any reason why hot soap suds should not be used. The action of hot water on mercury would be so slight that probably no injurious effects would follow. Quicksilver itself is not poisonous, except in state of vapor or when finely divided. The salts, however, are injurious. If carefully handled, no danger should follow the use of hot water on mercury.
- (71) D. asks for a prepared chalk that could be used to mark patterns, before sending to foundry, that would not be rubbed off in handling, but that could be erased when desired. A. French chalk or colored chalks might be used. Ordinary colored pencils would make a mark quite permanent, and yet one which could easily be removed. The artists' pastels could like-
- (72) J. A. L.—Coil springs have been made of considerable power, say up to one or two horse, but it has been very expensive to make such springs, and it requires more power to wind them up than can be got from them. They are used to a limited extent for sewing machines and some other light machinery, mechanical toys, and clocks. The practical working of large springs has not as yet been a success, and they are liable to breakage, but for small powers are frequently available. Our advertising columns give names of manufacturers.
- (73) J. D. A. desires a recipe for making printers' inks-black and red. A. For black ink: Take of balsam of copaiba (pure) 9 ounces, lamp black 3 ounces, indigo and Prussian blue of each half an ounce, Indian red % ounce, yellow soap (dry) 3 ounces; grind the mixture to an impalpable smoothness by means stone and muller. Canada balsam may be substituted for balsam of copaiba where the smell of the latter is objectionable, but the ink then dries very quickly. The red inks are similarly made by using such pigments as carmine, lakes, vermilion, chrome yellow, red lead, orange red, Indian red, and Venetian red.
- (74) F. A. asks how the insides of telescopes, microscopes, and larvngoscopes are blackened. A. Lampblack mixed with turpentine answers well for this purpose. Lampblack mixed with alcohol having a late the magnet from the surrounding water? A. A very slight trace of shellac in it also answers very well
 - (75) A. H. asks: 1. What will produce a high polish on bleached cotton cloth? Must be colorless and applied with a brush, must wash off with ordinary soap and water, must be cheap. A. Try cold starch with one-quarter its weight of isinglass. Dissolve the isinglass in warm water, and stir in the starch. 2. What is the most nourishing steam bath that can be applied to a person who is unable to sweat, and can take but little food in the stomach? A. Produce the sweating by burning alcohol under a chair in which the person sits, with blanket covering to hold the heat. caution and but little alcohol. Fire it in a shallow iron pan or old saucer. 8. Where can I procure a steam boiler that will stand from 10 to 25 pounds pressure, the dimensions are say 2 feet in diameter by 3 feet high, with fire box under it, and at about what cost? A. From any boilermaker in cities nearest. Cost about \$125. 4. Supposing I have a deed, the original writing on the body of which is claimed to have been eliminated and rewritten, while the acknowledgment of same at the bottom of deed is claimed as the original acknowledgment. By what means can I detect this either chemi- Bag. See Feed bag.

(65) C. T. writes: I want to make a wire cally or with microscope? The ink used being an aniline or ordinary ink, such as is put on the market. A You should consult an expert, who can only advise afte examination of the document in question.

- (76) B. W. D. asks for a receipt for coloring meerschaum pipes without smoking. eerschaum is steeped or heated in linseed oil which has been suitably colored by means of dragon's blood and gamboge; or else the same effect may be produced by boiling in wax to which dragon's blood has been added as coloring material. The meerschaum to be treated must be dry and free from any previousapplica tion of oil or wax. The manipulation is one requiring skill and experience.
- (77) J. P. K.—For the manufacture of vinegar, the essentials are the oxidation of liquids containing alcohol by exposing such solutions to the action of the air at a temperature between 75° and 85° Fah. The details of the process depend upon the quantity you desire to make. Some expose the liquor in vats, others in barrels. The manufacture of vinegar by means of bacteria is described in SCIENTIFIC AMERI CAN SUPPLEMENT, No. 247, to which we refer you.
- (78) T. B. J. asks the proportions of oleic acid, glycerine, and water necessary to produce the bubbles alluded to in No. 2, vol. lii. A. Dissolve Castile soap in strong alcohol, let it settle or filter, and take the clear solution, from which evaporate the alcohol. The solid residue is oleate of soda. To this add half its weight of glycerine and sufficient water to give the proper consistency. Another method consists in shaking fine shavings of palm oil soap in a large bottle with distilled water, until a concentrated solution of the soap is obtained; this is filtered through gray filtering paper, and then mixed with about one-third its weight of pure glycerine. The fluid is to be ell shaken before using
- (79) J. W. P. writes: Can you give me a receipt for a cement or glue that will hold emery on a felt wheel for polishing iron or castings? glue will not hold, as the heat caused by the friction warms the glue and loosens the emery so that it rubs off. A. The felt wheel is first filled with oil, then the emery powder is poured on, and mixing with the oil forms the polishing material. No glue is to be used.
- (80) J. M. G. asks (1) how a crust of whitewash can be removed from the ceilings of rooms? A. Whitewash can readily be removed by scraping the ceiling or else by washing it off with water. 2. What system of shorthand would you advise a young man to learn? A. Either Graham's or Munson's system is good. Both are extensively used.
- (81) G. C. H. writes: I have a vat 12 feet wide and 10 feet high, holding about 7,000 gallons, which I use for storing vinegar in. It is constructed of American pitch pine (new wood). When the vinegar has stood in it a short while, it acquires an unpleasant smell and taste from the rosin or turpentine of the timber. I have tried to cure this by coating the inside with paraffine, but I have not succeeded. do to effectually overcome the evil? A. Your tank should have been constructed of white pine or else of white oak-the latter is the better; then lined with paraffine. If the latter be thickly applied, we fail to understand how any odor can penetrate it. Before the cess of paraffining became prevalent, a thick coat of whitewash used to be employed, and sometimes shellac was used to form the lining of the tank, but paraffine has at present replaced these substance
- (82) R. G. H.—Ordinary powdered glass is used with the varnish. A Bunsen burner is one which burns with a non-luminous flame, in consequence of the introduction of a current of air near the base of the burner. They may be readily obtained from any dealer in chemists' or druggists' outfits.
- (83) J. D. W. asks: Which is the most durable, iron or brass, for thin wire stretched on a fence and exposed to the sun and weather? A. Both wires being naked, and with no tension, the brass wire would last longest. With tension the iron wire will not break, while the brass wire becomes brittle, and soon breaks Galvanized iron wire is the best.
- (84) M. asks how to make a steam whistle at small cost that will act with amount of pressure used to run a fair sized toy engine. A. Make or buy a toy whistle of tin of the same pattern as the boys make of willow twigs, and solder a small pipe to the

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

A. & H.—The sample appears to be a limestone rock ontaining small shiny particles of mica. An assay to determine the pressure of either gold or silver would cost \$5.—J. B.—The specimen is clay and of no probable value in New York city on account of the nearness of the deposits in New Jersey.—C. S. C.—The button is composed essentially of silver; it contains some copper, and probably iron.

For which Letters Patent of the United States were Granted.

March 31, 1885,

AND EACH BEARING THAT DATE. [See note at end of list about copies of these patents.]

 Van Ruyven
 314,758

 Alcohol, purifying, Bang & Ruffin
 314,910

 Amagamating ores, F. Hollick
 314,578

 Animal trap, E. P. Peacock. 314,602
Ax bit blanks, die for making, C. W. Hubbard. ... 314,674 Ax poll clips, die for forming, J. U. Hubbard...... 314,845 Axes, hatchets, etc., machine for making, L. B.

	251
Bag holder, W. B. Emmons	
Bag holder, W. Yerdon	314,678
Bag or satchel handle, W. Romer	314,753
Barrel making machine, Freidel & Clough Barrel, transportation, R. H. Kachline	314,926
Bath tub, folding, J. A. Throckmorton Battery. See Electric battery. Second	314,752
tery.	-
Bearing boxes, machine for applying metal linings to, N. Shaw	314,614
Bearing for machinery, step, H. G. Huber Bed sofa, W. Reddell	rt 314,676 314,606
Bed, sofa, F. Ringemann Beehive, N. C. Mitchell	314,879
Bee keeping, N. C. Mitchell	314,973
Belting, machine for the manufacture Gandy	314,824
Bicycle, H. H. Jones Bicycle saddle, W. D. McCoy	314,701
Blackboard, H. E. Moon	314,600
Blasting powder, A. Gacon	314,824
Blower, J. F. Winchell	314,901
Bolster plate, R. Sergeant Boneblack oven, G. Murdoch	314,886
Book, duplicating counter check, Gebhard low	314.662
Bottle stopper, C. L. Morehouse Box. See Show box.	314,703
Box fastener, E. Andrews	314,641
Brake. See Car brake. Brake lever, G. M. Huffman	314,579
Brick and packing for furnaces and for ot poses, fire, J. F. Clinchard	
Bridge, suspension, S. T. Wilson Bridle, J. R. M. Crawford	314,500
Brush cutting machine for vineyards Rufus	. O. R.
Buckle, J. E. Lee	314,693
Buckle, trace, L. Carr	
Burring machines, toothed cylinder fo Goddard	214 664
Bustle, C. R. Davis. Button, S. C. Scott.	314 508
Button, T. I. Smith.	21.4 616
Button, collar, H. J. Geer	214 694
Button, separable, H. A. Cables	314,795
Buttons, machine for the manufacture of E. May	f pearl,
Calipers and dividers, O. Stoddard	314 695
Can, E. C. Hazard Car brake, automatic, Turner & Beard	214 022
Car brake, electro-magnetic, H. S. Park Car, coal, D. S. Dockstader	
Car coupling, R. Hitchcock	314,577
Car wheels, apparatus for removing and ing, J. H. Vreeland.	replac-
Carpet fastener, F. C. Hellmuth	814.671
Carpet rag looper, H. A. Morrow	314 903
Carriage top support, I. L. Umstead Carrier. See Cash and parcel carrier. I	314,631 Egg car-
rier. Cartridge shell extractor. C. M. Burton	814.588
Cartridge shell extractor, C. M. Burton Carts, conveyer for coal, T. A. Naylor Cash and parcel carrier, Badger & Lakin	
Caster, S. C. Mendenhall	14.948 to 314.968
Caster, F. K. Way Caster, furniture, F. W. Jackson	314,764
Casting mould, type, R. Gnichwitz Catch, safety, E. H. Johnson	314,827
Cell tray, W. A. Moore	314,864
Churn, G. S. D. Camp	314,796
Churn, P. A. Carter	Clarem-
beaux	314,800
C lap. See Shoe clasp. Clip. See Paper clip.	3-4-19
Cloak, lady's circular, L. Graner	314,665
Coasting device, roller, Stoddard & T	erwilli-
Coat collar and hood, combined, O. Flaig.	311,669
Cock for wash basins, J. Jungbluth Cock, gas, D. M. Parker	314,874
Collar mould, horse, T. F. Lemassena Coloring matter from beta-naphthol, M	314,589
mann	314,938
Coloring matter from gamma disulphonic beta-naphthol, red, M. Hoffmann	314,939
Compound jack, L. Becker Corn drill, M. Porter	314,604
Cotton gin, W. L. Crowson	314,917
Thill coupling. Cranes and other hoisting apparatus, tra	
ting power to, H. Young	314,906
Cranes, swinging, H. G. Hubert	314,767
Cultivator and weed cutter, S. E. A. Palme Cup. See Lubricating oil cup.	,
Disinfectant, R. A. Fisher	314,820 . A. M.
Lorves.	, A. M. 114.590 ~

Distillates, apparatus for separating and dis-

Drill. See Corn drill. Rock drill

Elevator. See Hay elevator. Elevator, U. P. Smith......

gine. Traction engine.

extractor.

Ditching machine, A. Long. 314,859 Drier. See Paper board drier.

Drill core catch or retainer, diamond, A. Ball..... 314,777

E. C. Roettger. 314,880

Dyes, steam box for fixing, W. Thomas. 314,629

Electric wire conduit, D. Brooks, Jr......................... 314,791

Electrical wire conduit, M. H. Devey......................... 314,655

Elevator safety appliance, G. H. Reynolds...... 314,721 Elevators, etc., valve for hydraulic, G. H. Rey-

Erasing compound, ink, C. Walpuski...... 314,759

Extractor. See Cartridge shell extractor. Stump

Drying machine, continuous-acting centrifugal.

252	Sur mitter
Fabric for wrappers, C. H. Leonard	Mirror, adjustable, S. K. Abbott
Fan, automatic, C. Bailey	Mould. See Collar mould.
Feed water, heating and purifying, W. Barag-	Moulder's flask, E. Friess
wanath	Nails, machine for making wrought, W. Truran 314,89 Neckwear, H. A. Cables
Dolge	Net, rotary fish, B. W. Clark. 314,568 Nut lock, P. Hebert. 314,578
Fence, J. Presler 314,605 Fence making machine, N. P. Bradish 314,646	Oil burner, E. A. Edwards
Fence post, metallic, Nendel & Knowlton	Oil press mat, Jones & Blake 314,679 Oiler, J. J. & J. Q. Leavitt 314,689
Fence, wire, F. H. Bissell 314,785 Fence, wire, Rains & Tarkington 314,877	Oiler for crank pins, automatic, J. M. Hartnett 314,834 Oscillating engine, A. H. Hafley 314,935
Fences, metallic post for wire, T. J. Cox 314,654 Fencing, machine for making wire and picket, T.	Overshoe, L. Elliott
B. Harrison	Pad. See Harness pad. Pail wiring machine, H. Mann
Fertilizer distributer, J. B. Denton 314,920 Fiber preparatory to being felted, machine for dis-	Paper board drier, E. Andrews 314,640 Paper clip, H. C. Yeiser 314,769
integrating, W. S. Archer	Paper for cigarettes, manufacture of reticulated, E. Abadie
Firearm, breechloading, W. H. Elliot	Paper hanging implement, O. L. Case
Firearm, revolving, W. Trabue. 314,754 Fire escape, D. S. Thomas. 314,628	Peanuts. etc., machine for assorting, C. J. Syme. 314,749 Photographic plates, apparatus for coating, B. J.
Fire escape ladder, R. M. Wilson	Edwards
Fire extinguishing compound, J. R. Smith. 314,896 Fish pole holder, T. P. Taylor 314,751 Flanging resolving H. W. Shengad	
Flanging machine, H. W. Shepard 314,615 Flax, etc., treatment of, J. R. Dry 314,921 Flax, Etc., treatment of, J. R. Dry 314,921	Pipe, machine for making, Russell & Wood 314,980 Planing machines, feed mechanism for wood, W.
Flood gate, F. M. Monger 314,865 Floor or area covering, P. H. Jackson 314,677 Flower pot, O. Kaiser 314,682	H. Gray. 314,666 Planter, combined potato and tree. E. J. Hamre. 340,830
Foundry plant, J. H. Whiting 314,768 Frame. See Picture frame.	Plow, Howard & Gibbs 314,673 Plow, J. C. F. Schenck 314,669
Furnace. See Regenerator furnace. Smelting furnace.	Plow pulverizing attachment, J. R. Summerson 314,882 Plow, sulky, T. H. Latimer
Furnaces, steam and air injector for, F. E. Fahrig	Plumber's trap, C. E. Heiss. 314,870 Poke, horse and mule, W. Simms. 314,883
Gas burner, T. Clough 314,653 Gas burner, T. Thorp 314,630	Post. See Fence post. Pot. See Flower pot.
Gas engine and pump, combined, A. W. Schleicher	Powder. See Blasting powder. Power. See Churn power.
Gas, process of and apparatus for manufacturing, T. G. Springer314,739	Preserving and transporting oysters, etc., apparatus for, D. W. Simonson
Gas retort door, J. Bartle	Press box, G. B. Boomer 314,911 Printing machine, E. Anthony 314,556
luminating, J. J. Newell	Printing machine delivery apparatus, E. Anthony
Gates, attachment for operating, W. T. Vann 314,632 Glass jar for fire extinguishing compounds, etc.,	Propelling device for boats, C. F. Smith
J. R. Smith	Bole
W. Norris	Bole
ing the same, S. C. Mendenhall	Pump, H. Mortensen
314,970, 314,971 Governor, marine engine, R. J. Smith	Pump, centrifugal, J. Richards
Grain separator blast regulator, J. Grube	Pump guard, J. B. Brown 314,912 Pump, rotary, D. L. Kelly 314,851
Grooving and seaming machine, A. A. Franklin. 314,822 Guard. See Car wheel guard. Pump guard.	Punch, blacksmith's, M. C. Brandenberg
Handle. See Bag or satchel handle. Saw handle,	Rack. See Hay rack. Railway and bridge, elevated, F. Sohmemann 314,728
Harness pad, H. A. Fonteine	Railway rail joint, J. L. Kimball
and adjusting the elevation of, J. F. Appleby 314,774 Hat and coat hook, Mack & Newbury 514,591	Railway signal, electrical, W. T. Waters
Hay elevator and carrier, B. Oborn	Railway tie, metallic, C. A. Van Orden 314,757 Rake. See Aay rake.
Hay rack, J Stormer	Refrigerator and filter, A. McClain
Hay stacker, W Klinker 314.853 Headlight, locomotive, J R. McCormick 314,700	Regulator. S Grain separator blast regulator. Roller millfeed regulator. Watch regulator.
Reater. See Water heater. Reating apparatus, E. Korting	Rock drill, Willetts & Ball
Hoisting machine, W. H. Lotz	Roller mill feed distributer, J. Kincaid
holder Sash holder Hook. See Hat and coat hook. Snap hook.	Rooting, compound for coating metallic, Johnston & Hunter
Hoop sawing machine, J. Hartmann	Roundabout, W. Sassack. 314,881 Roving can, D. R. Kennedy. 314,882
Horse cover, H. Rea. 314,718 Horseshoe, J. Johnson 314,563	Rowlock, O. B. Fenner
Horseshoe block, G. G. Snyder. 314,890 Hose coupling, C. E. Mark. 314,699	Sand washing machine, C. W. Kilborn 314,852 Sash cord fastener, W. H. Christ 314,799 Sash cord fastener, W. H. Christ 314,799
Hydraulic engine, S. N. Knight	Sash fastener, D. E. Bedell 314,782 Sash fastener, B. S. Curry 314,918 Sash fastener, B. S. Sash fastener, B. S. Noble 314,918
Ice cream freezer, G. M. Mills. 314,863 Ice harvesting apparatus, C. B. Church. 314,651	Sash fastener, R. S. Noble. 314,974 Sash holder, A. L. Wilkinson 314,876 Sash respectively to the control of the cont
Ice pick, E. Rogers 314,723 Indicator. See Electrical indicator. Induction coil, F. E. Fisher 314,816	Sash weight holder, J. Riley 314,608 Saw arbor, E. D. Wolcott 314,637 Saw handle, F. A. Buell 314,562
Jack. See Compound jack. Lifting jack.	Sawmill carriages, steam brake for, W. A. Campbell
Jar. See Glass jar. Jetty, F. A. Hyatt	Saw set, W. Kopf. 314,944 Sawing machine, circular, W. H. Gray 314,667
Joint. See Railway rail joint. Journal box, self-lubricating, F. Siebert 314,731	Scabbard for intrenching tools, La Point & Hop- pin
Kaleidoscope, R. Leach	Scale, automatic weighing, M. F. Koch
Knob, door, J. Bardsley	bined letter, A. C. Clausen
Lace, shirt, W. T. Gallt	Scale, weighing and price, J. E. Pitrat
Neff	Clark
Lantern, Blankley & Tallman	Screw pointing machine, Harvey & Clark
Lantern, J. B. Stetson 314,744 Latch, coach, W. Schollhorn 314,611	Starr
Latch, reversible, W. E. Sparks 314,738 Lathe, drilling, B. H. Hadley 314,574	F. S. Strong
Leg, artificial, J. F. Rowley 314,726 Leggin, G. C. Henning 314,840	Payne
Lifting jack, H. Austin 314,908 Lifting jack, J. W. Hawkins 314,937	Sewing machine attachment, C. S. Knowles
Lifting jack, T. Phares	ney
Linophanies or translucent pictures, manufacture of, E. O. Grunert	Sewing machine trimming attachment, T. S. Parker
Lock. See Mail pouch lock. Nut lock. Time lock.	Shaft shackle, B. F. Lewis 314,694 Shears, W. Schollhorn *314,729
Lock, Barnes & Woolaston 314,778 Locomotive, E. L. Stream 314,747	Shingle sawing machine, W. J. Perkins. 314,603 Shoe, T. F. Lemassena. 314,588
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E. Kauffeld	Skate, unicycle, J. B. Elliott
Match splint straightener, A. W. Jones	of, I. Klueber
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owlock, O. B. Fenner	314,930	w
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