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 asearly as Thursday morning to appear in next issue.

Samples of H. W. Johns' improved Asbestos Steam Packing will be sent free to inquirers. H. W. Johns M'f'g Co., 87 Maiden Lane, New York.

Lehigh Valley Emery and Corundum Wheels are acknowledged to be the sarest, freest cutting, and most durable wheels in use. Write for prices, stating sizes you use. L. V. E. W. Co., Lehighton, Pa,

Kochendoerfer & Urie, General Brokers, 200 Broadway. will attend to any business in New York,

For Sale-A Second-hand 6 Horse Engine and Boiler W. W. Oliver, Buffalo, N. Y.

Pure Water furnished Cities, Paper Mills, Laundries, Steam Boilers, etc., by the Multifold System of the Newark Filtering Co., 177 Commerce St., Newark, N. J.

100 New Lathes, Planers, Drills, Millers, etc. (light and heavy). Send for list. Kelly & Ludwig, 49 and 51 North Seventh St., Philadelphia, Pa.

Jas.F. Hotchkiss, 84 John St., N. Y .: Send me your free book entitled "How to Keep Boilers Clean," con- | for examination, should be careful to distinctly mark or taining useful information for steam users & engineers. label their specimens soas to avoid error in their identi- night glass. What should be the diameter and focal (Forward above by postal or letter; mention this paper.) fication.

For Sale -- Iron Planers, 2 x 8 feet; new. N. L. Sibley, Waltham, Mass.

Steel Stamps and Pattern Letters. The best made. J. F.W.Dorman, 21 German St., Baltimore. Catalogue free

Now Ready. Catalogue of Electrical Books; also gen eral catalogue. E. & F. N. Spon, 446 Broome St., N. Y.

Abbe Bolt Forging Machines and Palmer Power Hammers a specialty. S.C. Forsaith & Co., Manchester. N.H

Machinery for Light Manufacturing, on hand and For Power & Economy, Alcott's Turbine, Mt.Holly, N.J.

Combination Roll and Rubber Co., 27 Barclay St., N.Y. Wringer Rolls and Moulded Goods Specialties.

For Mill Macb'y & Mill Furnishing, see illus. adv. p.183. Send for Pamphlet of Compilation of Tests of Turbine Water Wheels. Barber, Keiser & Co., Allentown, Pa.

Presses & Dies (fruit cans) Ayar Mach.Wks., Salem, N.J.

Latest Improved Diamond Drills. Send for circular to M. C. Bullock, 80 to 88 Market St., Chicago, Ill.

Workmanship. Cordesman, Egan & Co., Cincinnati, O.

mation on any special engineering, mechanical, or scientific subject, can have catalogue of contents of the Sci-ENTIFIC AMERICAN SUPPLEMENT sent to them free. The SUPELEMENT contains lengthy articles embracing the whole range of engineering, mechanics, and physical science. Address Munn & Co., Publishers, New York.

Split Polleys at low prices, and of same strength and appearance as Whole Pulleys. Vocom & Son's Shafting Works. Drinker St., Philadelphia, Pa.

Malleable and GrayIron Castings, all descriptions, by Erie Malleable Iron Company, limited. Erie, I'a

Presses & Dies. Ferracute Mach. Co., Bridgeton, N.J. List 27.-Description of 3,000 new and second-hand Machines, now ready for distribution. Send stamp for

same. S.C.Forsaith & Co., Manchester, N.H., and N.Y.city. Presses, Dies, Tools for working Sheet Metals, etc. Fruit and other Can Tools. E. W. Bliss, Brooklyn, N. Y.

Improved Skinner Portable Engines. Erie, Pa. Draughtsman's Sensitive Paper.T.H.McCollin, Phila., Pa. C. B. Rogers & Co., Norwich, Conn., Wood Working

Machinery of every kind. See adv., page 206. Cope & Maxwell M'f'g Co.'s Pump adv., page 204.

The Sweetland Chuck. See illus. adv., p. 206.

Machine Knives for Wood-working Machinery, Book Binders, and Paper Mills. Also manufacturers of Solo-man's Parallel Vise, Taylor. Stiles & Co., Riegelsville.N.J. Electric Lights .- Thomson Houston System of the Arc

type. Estimatesgiven and contracts made. 631 Arch, Phil. Common Sense Dry Kiln. Adapted todrying of all material where kiln, etc., drving houses are used. See p.205.

Ball's Variable Cut-off Engine. See adv., page 221. Fire Brick, Tile, and Clay Retorts, all shapes. Borgner

& O'Brien, M'f'rs, 23d St., above Race, Phila., Pa. Peck's Patent Drop Press. See adv., page 220.

For best Portable Forges and Blacksmiths' Hand Blowers, address Buffalo Forge Co., Buffalo, N. Y. Paragon School Desk Extension Slides. See adv. p 222

for rubber and leather belts. Greene, Tweed & Co., N.Y. for gardening can be had near cheap land for the

The Chester Steel Castings Co., office 407 Library St.,



HINTS.'TO CORRESPONDENTS

No attention will be paid 1.0 communications unless accompanied with the full name and address of the writer.

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

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 do not appear after a reasonable time should repeat them. If not then published, they may conclude that, for good reasons, the Editor declines them.

Persons desiring special information which is purely of a personal character, and not of general interest should remit from \$1 to \$5, according to the subject, as we cannol be expected to spend time and labor to obtain such information without remuneration.

Any numbers of the SCIENTIFIC AMERICAN SUPPLE-MENT referred to in these columns may be had at this

office. Price 10 cents each.

(1) F. H. W. asks: What are the component parts of Belvedere metal? I indge it is a patent. A. It belongs to what is known as the sulphur sulphides rites marcasite) or chalcopyrite with a suitable quantity of sulphur. See Spence metal, in SCIENTIFIC AMERICAN SUPPLEMENT, No. 222.

mill, 60 inches bottom, 30 inches top saw, 26 feet fall, it under slight uniformly apportioned pressure for bath used in preparing the material for the gelatine copybuilt to order. E. E. Garvin & Co., 139 Center St., N. Y. and 25 inch American turbine; speed 250 per minute. twenty-fourhours. Then moisten the back of the paper, rapidly.

(3) C. F. W. asks: 1. If the exhaust of a five horse power engine be turned into a tank about twothirds full of water, would it lessen the power of the engine? If so, how much? A. Yes, the increased resistance would be that due to the head of water above the pipe-one pound per square inch to every 26 inches head. 2. Would the steam arising from the surface of Wood Working Machinery of Improved Design and , the water, in tank, be as great and expensive as the exhaust, even though the water was as warm as steam can temperature of the water: but escaping from a much larger surface it would appear only as a vapor.

> (4) F. C. S. asks: Do you know of any thing that will produce a growth of hair on head or face of man? A. Subcutaneous injection of small quantities of the salts of pilocarpine has lately produced some remarkable results in stimulation of and altering the color of hair.

(5) L. M. L. writes: I was greatly intersted by an article on "Silk Raising in the South," from the Louisville Courier Journal, that appeared in the allowed to remain overnight in a dry locality, when the SCIENTIFIC AMERICAN of the 11th instant. May I ask your advice on the following points? 1. Would you advise a woman with a small sum of money, say four hundred dollars, to buy a small piece of land, plant mulberry trees, and go into the business of silk culture? A. No. At present the business offers inducements only to such as have suitable waste land and spare time which they wish to make productive. 2. Could a person make a living by it? A. No. The silk harvest provides employment but for about six weeks, and the number of acid. 2. How does its hardness compare with the vorms that one person can care for is too small to diamond? On a scale of 10 the hardness of quartz is make the business largely remunerative. Even in 7, of the diamond 10. Do these stones always retain China, where labor is cheapest, the silk harvest is profit- their brilliancy, and are they still found? A. No. Quartz able mainly because it fills the space just preceding the crystals are of very common occurrence in some localitea harvest, when there would otherwise be nothing to do. 3. What latitude or what States are best adapted genuine stone? A. The chief distinguishing features to the business? A The mulberry thrives almost everywhere in the United States, and silk worms can be raised difference of specific gravity (that of quartz being 2.6 wherever the mulberry grows. The season is longest in the Southern States, and three broods of worms a Consult Dana's Mineralogy. year can be raised there against one brood in New England and two in Pennsylvania. 4. Could it be made profitable by combining with it the cultivation of small fruits and rearing of poultry? A. It might be, though poultry requires most attention about the time of the silk harvest. 5. What place would be suited to make these combined occupations profitable? A. Probably Blake's Belt Studs. The strongest and best fastening in proximity to city markets, especially where good soil Brass & Copper in sheets, wire & blanks. See ad. p. 221. poultry and the mulberry bushes. 6. How long does it take the mulberry to grow large enough to afford food for the silk worm? A Four or five years from three years, from good cuttings. 7. Could a place be found with the trees already growing on it? A. Probably not, though it would not be hard to find trees enough almost anywhere to experiment with. Women's Silk Culture Association of Philadelphia sell mulberry cuttings, and also eggs for experimental cultivation. The chief promise of silk culture in this country arises from the circumstance that many women have unoccupied time which might be pleasantly employed material, etc., running from fifty to sixty wood work- obstacle to the passage of the actinic rays, the proof in this way. It is a home employment that requires ing machines (saws, planers, stickers, mortisers, etc.). coming out full deep blue the same as the portions but little outlay, and though the product of individual effort may be small, say from \$25 to \$100 a season, it will be for the most part cleargain. (6) D. T. E. asks: 1. How is the fine finish put on gold and silver articles such as on the inside of watch cases, etc.? A. Usually by means of suitably shaped burnishing tools made of bloodstone and hard polished steel. 2. How is the cvanide of gold made, and how is gold solution prepared? A. See electro-gold deposits in SUPPLEMENT. No. 310. 3. What is meant by gold rolled plate, and how is it put on? A. A bar or strip of basealloyhas soldered to it a thin sheet or foil of gold. and the bar or strip thus covered is 'passed repeatedly | the columns of your valuable paper of a process for whit. position in a retort.

between heavy rollers until it is spread out into thin ening scorched larch? A. It will be necessary to sand plating. During the rolling operation it is necessary to frequently soften the metal by annealing.

(7) G. L. F. asks: 1, Is water-glass known by any other name? I have asked for it, but the druggists don't know what it is. A. Water-glass is generally subulied to the trade under then a mesof soluble glass or silicate of soda. 2. In using the stereotype composition known as Jamin's cement, I find it adheres very firmly tomy claster of Paris moulds. How am I to avoid it? A. Try oiling the mould slightly.

(8) A. C. asks: Can you suggest some mode to remove from a large pane of glass a film or | says no. 2. Will not the steam in the flues have a tencloud, which I cannot account for. It is not in the glass, but on the surface. Have tried ammonia and whitening, also rottenstone, but failed to remove. A. Slightly moisten finest rouge with water, and apply with 'fronts, but the flame and gases naturally take the neara chamois leather cushion, rubbing it in every direction est course, and the bulk goes to the two middle boilers until the film has disappeared and the glass is glossy.

(9) F. C. writes I have made a cement of bisulphide of carbon and crude rubber, but cannot get it to stick. What is the matter? A. Gently warm the parts to be joined, smear them with the clear cement, and press the parts strongly together, continuing the pressure until the solvent has escaped. You will then find the pieces firmly cemented. See Supplement, No. Correspondents sending samples of minerals, etc., 158, for receipts for better cements. 2. Please give directions for making a good Galilean telescope and length of object glass and eye piece? A. You will find a good paper on telescopes in SUPPLEMENT, Nos. 1 and 252

(10) J. C. H. asks: What is the best method prepared by fusing certain metallic sulphides (as py-introduction of copying engravings in ink from paper on generation Try the following method: Flow the glass plate with good photographer's negative varnish thinned down somewhat, and when this has partly dried (so that the varnish will not run into the paper) lay the smoothly

(2) G. M. S. writes: I have a standard saw printed sidedown upon the varnished surface, and put Can I, by using one pair of bevel wheels, couple di- and by means of a piece of soft rubber rub off the softrectly to saw mandrel, and run as well as from drum ened paper. If this is done with care the inked lines with belt? A. No; the velocity of the wheels would be will remain attached to the varnished glass surface. As so great that they would be very noisy and wear out the thin varnish is quite transparent, this is equivalent to transferring the engraving to the glass surface. The quantity of soap. transfer is frequently improved in appearance by giving the plate (and transfer) a second coat of the varnish. For lantern purposes it is better to cover the surface bearing the transfer with a second plate of glass, and bind the edges with thin cloth or stout paper.

(11) S. M. S. asks: Could you give me a good formula for producing a fine gloss on photographs? A. The beautiful gloss called enameling is produced as follows: After the prints have been toned, washed, Supplement Catalogue .- Persons in pursuit of infor. heat it? A. The total quantity would be the same, if and trimmed in the usual way they are immersed in a you make no allowance for that required to keep up the warm filtered aqueous solution of gelatin of about the consistence of collodion, to which is after added a small quantity of sugar candy. When the paper has become well impregnated with the liquid the pieces are removed and placed, smooth face downward, upon a plate of glass previously coated with a four per cent normal collodion, and air dried. In placing the print care must be taken to quickly press out all air bubbles. Afterwards a sheet of stout white paper, cut somewhat larger than the prints, is cemented to the back of each photograph to protect the pictures in the event of their spontaneously leaving the glass on drying. The plates are portraits may be separated from the glass by making an incision of the film all around the paper

> the chemical composition of the stone called the quantity of steam. So I think this speaks for itself. "Lake George diamond?" A. So called "Lake George (22) P. J. M. asks: What heating surf diamonds" are commonly small, well formed, clear quartz crystals, backed with or mounted over bits of silver foil. Quartz crystals are native crystallized silicic ties. 4. What are its distinguishing qualities from the are the difference in hardness, as above noted, the and of the diamond 3.48), and the crystalline structure.

(13) G. K. T. writes: While experimenting with electric batteries, I had occasion to use a common flower pot for a porous cup. To fill up the hole in the bottom of the pot, I poured in a small quantity of melted tar. When nearly hard I pressed the tar firmly on the inside and outside of the bottom of the pot, thereby pressing the tar firmly into the hole. After or in the dark for use. To sensitize the paper moisten using it in the bichromate of potash battery three it uniformly with this liquid by means of a soft clean weeks, I removed the pot and found the tar drawn into sponge, and suspend it in a dark room to dry. When the pot to the extent of balf an inch. What caused it? dry it is ready for use. To preserve it for use it must Did not the heat and resistance of the current draw it be kept from the light. in? A. The reaction of acid and water is very frequentlysufficient to warm a liquid so as to soften tar. When the column of liquid in the outer jar is greater than in the porous cup the pressure is naturally inward. It is very improbable that electricity had anything to do with softening or displacing the tar. a company manufacturing wagon, carriage, and sleigh pale blue; while the blue crayon appeared to afford no When the machines are all running, the engine will lag | under the clear white cloth. What is the explanation with 80 pounds of steam. The engine is 18x28 inches, runs 85 revolutions per minute; common slide valve, upper (blue or violet) end of the spectrum, and as yellow cuts off at 22 inches; band wheel 10 feet diameter, weight and red transparent (or translucent) media intercept the 3 tons; fly-wheel 14 feet dismeter, weight 6 tons. 1. How much power will it take to run such a fly-wheel 85 revolutions perminute? A. All the power required is that necessary to overcome the friction; the wheel consumes no power. 2. Is the fly-wheel a benefit or a damage in this case? A. A benefit. You could not run your machines without it.

[April 15, 1882.

sheets or rods, every part of which retains a gold surface paper the wood to remove the film of carbonaceous matter. The stain cannot be otherwise remove

> (16) V. D. G. asks. What is the best facing for heavy castings like plow beams, etc.? A. We believe powdered charcoal is considered the best facing.

> (17) W. W. writes 1. A battery of four boilers, two 15-inch flues in each, have a small steam jet in each flue at the back end to increase the draught. The boilers are 28 feet long and 42 inches diameter; smoke stack 50 inches diameter, and 60 feet high. Would it not bemore economical to place a jet in the smokestack equal in size to the eight in the flues? A. Experience dency to cool the gases entering the flues? A. No such effect as to be appreciable in practice. 3. The furnace is continuous, or extending the whole width of the four flues. Would not a thin partition wall between each boiler, extending from the firebridge to the back end, remedy this evil, and by distributing the heat better, generate more steam with the same amount of fuely A. Ves. 4. The steam from these boilers is used by a rollingmill engine, and although the engine is unusually large, still it seems under its work even with steam at 80 to 90 pounds. The steam course from the boilers to the engine is very crooked, there being no less than six sharp bends and three valves between steam drum and cylinder. Will not the friction on these valves and bends greatly diminisb the steam pressure by the time it gets to the cylinder? A. It will: how much will depend upon the size of the pipe in proportion to the demand for steam.

> (18) J. J. C. asks: What will take nitrate of silver from woolen cloth? A. Try moistening the part first with a drop of iodine solution, and after a few minutes with an aqueous solution of cyanide of potassium, finally rinsing with plenty of warm water.

> (19) N. S. C. asks: 1. Why is a salt water ing pad? A. Salt water boils at a higher temperature than pure water. 2. Sometimes the material of my pad peels off and adheres to the paper while I am printing. How can this be prevented? A. Use a larger proportion of glue in the composition, or add to it a small

(20) L. M. C. writes: Please give me best process for determining the CO_2 in baking powders, also alum⁹ A For best methods of determining carbonic acid and alum in such preparations consult Thorp's Quantitative Chemical Analysis." See also Mott's Chemist's Manual.'

(21) J. X. N. writes: In looking over my paper I see a question asked by F. M. L: "Has there been any means devised of using as fuel the siftings or dust of coal mines? A. Yes, they are burned successfully on the Pennsylvania Railroad by a patent process." Now, I do not know whether the Pennsylvania Railroad has any dirt-burning locomotives or not, but I hardly think they have. I do know, however, that the Reading Railroad has in the neighborhood of sixty locomotives in daily use in passenger and freight and heavy coal trains, and they are a complete success. I speak from experience, being an engineer, and having one under my control every day. This furnace is the patent of our general manager, Mr. John E Wooten, and is, in my estimation, one of the greatest things extant A Mogul locomotive, built by the Baldwin Locomotive Works with Wooten's patent furnace, can leave Richmond with 150 empty coalcars, run 93 miles without cleaning the fire; come down from Palo-Alto, 93 miles, (12) J. B. asks: 1. Can you inform me of 145 loaded cars, without cleaning the fire, and have any

> (22) P. J. M. asks: What heating surface should there be in a feed water heater for a high pressure steam engine, working with 75 pounds steam pressure, and making 100 revolutions per minute-that is to say, the heating surface per actual horse power; and to what degree of heat will such heating surface heat the water? A. There is no established rule for the surface offeed heaters, nor can there be, so long as the difference is so great in quantity of water used in different boilers, varying from 18 to 35 pounds per horse power. The usual proportion is three-quarters to one square foot per horse power; but a larger proportion would be better.

(23) A. C. S. asks: Will you be so kind as to give the preparation of the blue process paper that is used for copying tracings? A. Dissolve in 8 ounces of distilled or pure rain water 1% ounces of pure ammoniocitrate of iron, and in a separate vessel 11/4 ounces of pure ferricyanide of iron (red prussiate) in a similar quantity of water. Mix these solutions and keep in a yellow bottle (24) A. M. writes: A short time ago I drew some plans on tracing cloth, and colored portions of them on the back with Faber's wax crayons, red, dark blue, light blue, and light yellow. I afterward had occasion to strike off some copies by the " blue process." They gave clear impressions, but where I had used yel-(14) C. B. T. H. writes: There is in this city low, the copy showed white; where red was used, very of this? A. As the actinic rays reside mostly in the greater portion of the blue or violet rays the cause of the non-printing (or weak printing) is obvious. (25) C. M. K. asks: Will you please inform me of what the "vitalized air" is composed which dentists use to deaden pain? A. Probably you refer to the anæsthetic laughing gas or nitrous oxide. This gas is an oxide of nitrogen, usually obtained by (15) A. S. asks: Can you inform us through heating pure ammonium nitrate to the point of decom-

Philadelphia Pa can prove by 15000 Crank Shafts and 10,000 Gear Wheels, now in use, the superiority of their Castings over all others. Circular and price list free.

The Improved Hydraulic Jacks, Punches, and Tube Expanders. R. Dudgeon. 24 Columbia St., New York. Diamond Drills, J. Dickinson, 64 Nassau St., N. Y.

Tight and Slack Barrel machinery a specialty. John Greenwood & Co., Rochester, N. Y. See illus. adv. p 222 Gould & Eberhardt's Machinists' Tools. See adv., p. 238.

Granville Hydraulic Elevator Co., 1193 B'way, N.Y. Heavy Trimmed Walrus Leather, by the Hide or in Wheels for Polishing Metal. Greene, Tweed & Co., N.Y. For Shafts, Pulleys, or Hangers, call and see stock kept at 79 Liberty St., N. Y. Wm, Sellers & Co.

Combined Concentric and Eccentric Universal and Independent Jaw Chucks. The Pratt & Whitney Co., Hart ford. Conn.

Saw Mill Machinery. Stearus Mfg. Co. See p. 221.

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

Supplee Steam Engine. See adv. p. 221. Patent Key Seat Cutter. See last or next issue.

Scientific .

American.	
[OFF1CIAL.]	Fertil
INDEX OF INVENTIONS	pu Fireat
FOR WHICH	Firea
Cuers Patent of the United States were Granted in the Week Ending	Firea: Fire e
Manah 01 1000	Flask.
ND FACH REARING THAT DATE.	Flour.
[Those marked (r) are reissued patents.]	Flowe
A printed conv of the specification and drawing of any	Foldin
atent in the annexed list, also of any patent issued	Fur fa Fur n
nce 1866, will be furnished from this office for 25 cents. I ordering please state the number and date of the	Furs,
atent desired and remit to Munn & Co., 261 Broad-	Furna Furna
ay, corner of Warren Street, New York city. We so furnish copies of patents granted prior to 1866:	Garm
at at increased cost, as the specifications not being	Gauge
rinted, must be copied by hand.	Gate,
ir compressor, A. C. Rand 255,270	Gener Glass
ir compressor, W. Wang 255.222	Grain
larm. See Till alarm.	Grain
larm and door bell, M. Truby 255,356	Grain
ag. See Canvas bag.	Grap
aling press, I. V. Jones	Grind
and of hy wheel, E. W. Ross	Hair C
atb. See Shower bath.	Hair J
eusteau, W.J. Byers	Ham
erth, self-leveling, G. Sickels	Hand
og cutter, Brewster & Sherwood	Hang
oiler. See Steam boiler.	Harve
ook cover, removable, T. D. Price	Hasp
oot and shoe heel plate, H. W. Arnold 255,234 oot and shoe sole edges, machinery for hurnish-	Hats
ing, M. Dudley 255,152	Hay 1
oots and shoes, machine for crimping seamless, T. T. Marshall	Hay r Hay t
ottles, chuck for holding, W. Fox 255,384	Heati
ottling machine, A. R. Weisz 255,360 ox. See Paper box.	Hides J.
ox fastener, M. Mayer	Hinge
racelet, Gon & Lenau 255.278 rake. See Wagon brake.	Hogr
read making utensil, M. J. Cook 255,255	Hoisti
rick machine, W. E. Gard 255,385	Horn
rick press, J. Crabtree 255,146	Horse
uckle, tug, M. T. Shadduck 255,341	Hose
uggies, head block for side bar. A. D. Hickok 255.288 alendar. time piece. G. E. Sanford 255.198	Hubb ms
an. See Oil can.	Hydra
an opener, w. B. Montgomery	Hydro
ane, umbrelia handle, etc T. V. Keam 255,299	Indica
anvas bags for hams, L. V. walkley 255,221 ar coupling, J. & J. Billon <i>et al</i> 255,240	Journ
ar coupling, G. F. Bond	Kiln. Knjfo
ar coupling, W. J. Roberts	Lamp
ar coupling, G. Tuerkisch	Lamp
ar spring, C. T. Schoen	Lamp.
ar starter, Barker & Slauson	Lamp
field 255,169	Lamp Lamp
arbon conductors, manufacture of, H. S. Maxim 255,309	Lamp.
arriage top, R. J. Parrett	·Lamp
arrier. See Trace carrier.	Lamp.

((c)) 1. 0. 0. as 1. 1. 0. as 1. Proserve a	about tengallons of parsnip wine, the product of par-	[OFF1CIAL.]	Fertilizers, apparatus for reducing material to a
boiler when not at work, for instance, one used in the	snips, sugar and dough of yeast cakes, spread on toast;		pulverulent, H. S. Firman,
harvest field for thrashing? It is only used a few months	usually after having gone through fermentation this	INDEX OF INVENTIONS	Firearm, breech-loading, E. Pierce 255,330
in the summer, and perhaps once every month or two dur-	wine gets perfectly clear, but this time it got cloudy,	FOR WHICH	Firearm lock, Bled & Warnant
ing the winter, and the balance of the time it is corrod-	and so far we have not been able to clear it, although	Letters Patent of the United States were	Firearm, magazine, W. H. Elliot
ing and wasting away. It is my judgment that a boiler	Can you recommend a remedy? A Try thead dition of	Granted in the Week Ending	Fire escape, T. Darby 255,379
used so will not last as long as if used all the time.	a small quantity of egg albumen—white of egg—allow-	Monch 01 1990	Flask. See Dental flask.
nortable boiler out of use blow out or otherwise emoty	ing the liquid to remain quiescent for forty-eight hours.	March 21, 1002,	Flour bolt, J. N. McConnell
the water from the boiler thoroughly while the iron	Then rack off from the sediment and cap.	AND EACH BEAKING THAT DATE.	Flower stand, W. D. McCallum 255,314
is warm, so it will dry off inside. Take off a hand hole	(35) M. A. asks. Can you tell me how to	[Those marked (r) are reissued patents.]	Foldingseat and table, W. Tetley (r) 10.065
plate, and (if no man-hole plate) take out the safety	color feathers? Is aniline used? A. Use any of the	A printed copy of the specification and drawing of any	Folding table, E. J. B. Whitaker
valve so as to permit a circulation of air through the in-	soluble aniline or coal tar dyes of suitable color, usually	patent in the annexed list, also of any patent issued	Fur nanned fabrics, making, W. E. Doubleday 255,381
terior. Take out the grate bars, and thoroughly clean	a quarter of an ounce to the gallon of liquid (water, or	since 1866, will be furnished from this office for 25 cents.	Furs, taping, C. Schoenchen
off the ashes and soot from all parts of the furnace	water and alcohol) is sufficient. Steam the feathers or	n ordering please state the number and date of the patent desired and remit to Nunn & Co., 261 Broad-	Furnace. See Desulphurizing furnace.
walls and the interior of the tubes. Store the boiler in	put them through boiling water before immersing in the	way, corner of Warren Street, New York city. We	Furnace, Clabaugh & McDowell 255,253
a dry slew or parh, with the chimney stack standing, or	dye beck. Usually no mordant or developer is required	also furnish copies of patents granted prior to 1866;	Gauge See Contour gauge Saw table gauge
stack so that dry air will draw through the furnage	except for the reds or pinks. For these chloride of	but at increased cost, as the specifications not being	. Surface gauge.
and tubes.	tin and tartaric acid may be employed as brighteners,	printed, must be copied by hand.	Gate, J. Ferguson 255,267
(07) N D W muitage I am in need of in	atone of in connection with soap.	Adding machine, J. G. Fischer 255,270	Generator. See Steam generator.
(21) S. P. W. writes: 1 am in need of in-	(36) T. N. writes: I have been using a	Air compressor, A. C. Rand	Glass cover handle, D. E. Ladd 255,388
formation. I wish to indicate how to color wood black	4 gallon gold solution about eighteen months. For the	Air compressor, J. B. Waring 255 400	Grain drving annaratus F. W. Wiesebrock 255 371
tried and failed I wish to make maple black enough	last two months the anodes coat over with gold. I am	Alarm. See Till alarm.	Grain separator, J. F. Hatfield
for knife handles and have the color so that they can	using one electrotype copper anode and one gold, and I	Alarm and door bell, M. Truby 255,356	Grain separator or sizer, J. Felsing 255,266
befinished to look something like ebony. They are all	do not understand why they coat over. I am using a	Amalgamator, H. M. Thompson 255.239	Grappling bucket, automatic, F. G. Johnson 255,172
cut into about the sizes that are required. A. Steep in a	wooden vessel, coated inside and outside with asphalt.	Bag. See Canvas bag.	Grinding machine, J. H. Taylor
strong boiling aqueous solution of logwood extract	bly deficient in evenide See "Gold Deposite " in Sup	Band or fly wheel, E. W. Ross	Gun, spring, F. Caspar
for several hours, and then for twenty-four hours more	PLEMENT. No. 310.	Basket, etc., G. S. Long 255,177	Hair crimper, Corwin & Butler 255.101
in a strong hot solution of sulphate of iron.	(ON) I G I calca Diana dia ma informa	Batb. See Shower bath.	Hair pin, Hussey & Lyman 255,292
(28) J. F. writes: Please advise us if you	(37) J. S. J. asks: Please give me informa-	Bedstead, W. J. Myers	Halter, H. Rorebeck
can name some process whereby we could make our	tion how to construct a small nickel plater, for plating	Berth self-leveling, G. Sickels	Handle. See Glass cover handle.
own carbon paper. We use large quantities, and it	small articles, the plates to cost as little as possible;	Bertbs. locking bolt for ships'. G. A. Parks 255,190	Handle fastener, R. W. Hardie 255,166
comes very expensive buying it from stationers. A.	polish for polishing brass and steel. A. You will find	Bog cutter, Brewster & Sherwood 255,376	Hanger. See Eaves trough hanger.
Clear lard, 5 ounces; beeswax, 1 ounce: Canada	practical receipts and directions on these subjects in	Boiler. See Steam boiler.	Harvester.grass seed, 11. H. Spears
of heat and mix Apply with a farmal and mix	SUPPLEMENT, No. 310.	Book cover, removable, T. D. Price	Hasp lock, J. F. Robinson
ing as much as nossible with clean woolen was	MINERALS, ETCSpecimens have been re-	Boot and shoe heel plate, H. W. Arnold 255,234	Hats and other fur faced fabrics, manufacturing,
(00) T N	ceived from the following correspondents and	Boot and shoe sole edges, machinery for burnish-	W. E. Doubleday
(29) L. N. writes: I have a telephone from	arominad with the needle state	ing, M. Dudley 255,152	Hay rake, horse, H. Myers
my house to that of a friend. The diaphragm is made	examined, with the results stated:	Boots and shoes, machine for crimping seamless,	Hay rake, revolving, E. Huber
or Dugn animal tissue, or drumhead. I formerly used	Wm. FIt is genuine nutmeg, of poor qualityJ.	Bottles, chuck for holding, W. Fox	Heating apparatus. steam, M. P. Hathaway 255.167
of repair, on account of the different conditions of the	B.—it is pyrogallic acid.	Bottling machine, A. R. Weisz 255,360	Hides or animal membranes and tissues, treating,
atmosphere I tried wire but it rings so I cannot under-	·	Box. See Paper box.	J. M. & G. F. Ordway 255,326
stand. I stuffed it behind the diaphragm, and inserted	NEW BOOKS AND PUBLICATIONS.	Box fastener, M. Mayer 255,313	Hinge, spring, I. S. Davis
a soft substance between the diaphragm and the tin	INCANDERCENT FLECTER LOUIS	Brake. See Wagon brake.	Hog scraping machine, R. C. Tompkins
fastening of the wire, and yet it does not work perfectly.	York D Van Nostrand 50 cents	Bread making utensil, M. J. Cook 255,255	Hoisting apparatus. E. L. Stocking 255,351
I think the diaphragm is too sensitive. What must I	N IN AN A BOARD OF A	Brick kiln. C. D. Page 255,189	Holder. See Cow tail holder. Pen holder.
do for it? A. Try small wire cable cord.	No. 57 OI van Nostrand's Science Series: contains	Brick machine, W. E. Gard 255,385	Horne neuron I Schweigen 255,134
(30) G. H. writes: I wish to patch a black-	electric lights (particularly Edison's) exhibited at the	Broiler, W. P. Dodson	Hose coupling, E. A. Rix
smith's bellows. What is the best cement for gluing	Paris Electrical Exhibition: with papers on the economy	Buckle, tug, M. T. Shadduck 255.341	Hose or pipe, flexible, M. J. Walsh 255,357
such work? A. Use rubber cement. See receipts in	of this mode of lighting, by John W. Howell, and on	Buggles, head block for side bar. A. D. Hickok 255.288	Hub boring machine, wheel, Richmond & Cordes-
SUPPLEMENT, NO. 158.	the steadiness of the electric current, by C. W. Siemens.	Calendar, time piece, G. E. Sanford 255,198	man, Jr 255,994
(31) S A H asks: 1. What is the shade	A NEW METHOD OF SIGNALING ON BAIL.	Can opener, W. B. Montgomery. 255390	Hydrocarbon to hurners apparatus for supplying
of green on inclosed sample, and how can I obtain a	WAYS. By Sir David Solomons. Tun-	Cane mill. D. Wilde 255,228	A.M. Brainard 255,244
shellac lacquer for tin? A. The colorant of the lac-	bridge Wells, Eng. : A. Baldwin.	Cane, umbrelia handle, etc T. V. Keam	Indicator. See Power indicator.
quer appears to be Frankfurt or Scheele's green-	Describes with some minuteness the electrical sig-	Car coupling, J. & J. Billon et al	Journals oil hole cover for S. A. Skinner (r) 10.064
an aceto-arsenite of copper. When in a fine state of di-	nals for railways patented by the author in 1874, with	Car coupling, G. F. Bond	Kiln. See Brick kiln. Tile kilp.
vision it mixes readily with shellac lacquer. It can be	the improvements since made.	Car coupling, W. H. Farra et al 255,154	Knife. See Pruning knife.
replaced to advantage by some of the antime or	ONE OF CLEOPATRA'S NIGHTS, AND OTHER	Car coupling, W. J. Roberts	Lamp. A. Rosenbusch 255,396
gold be deposited in various colors say green red	FANTASTIC ROMANCES. By Theophile	Car door, grain. M. Graff	Lamp, electric, C. H. Gimingham
purple, etc., by galvanism? And if so, can the same be	Gautier. Faithfully translated by Lafcadie	Carspring, C. T. Schoen	Lamp, electric, A. G. Holcombe
	Hearn New York, R. Worthington		,
done with other metals and their alloys, such as brass,	Hearn. Hew York, H. Worthington.	Car starter, Barker & Slauson 255,238	Lamp, electric, Holcombe & Colborne 255,171
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in-	The translator has done his work rather better than	Car starter, Barker & Slauson	Lamp, electric, Holcombe & Colborne
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way.	The translator has done his work rather better than such work is usually done. And the same may be said	Car starter, Barker & Slauson	Lamp, electric, Holcombe & Colborne
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT,	The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased	Car starter, Barker & Slauson	Lamp, electric, Holcombe & Colborne
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Few of the brighter colors can be obtained	The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories is so fine an English drass	Car starter, Barker & Slauson	Lamp, electric, Holcombe & Colborne
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fex of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied to give articles of brass, such as	The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress.	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 255,675 Carriage spring, J. E. Bell 255,875 Carriage top, R. J. Parrett 255,328 Chain machine, W. A. Reid 255,402	Lamp, electric, Holcombe & Colborne
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Few of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear-	The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIREC- TORY OF THE WORLD 2 Wels Store pp.	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 255,675 Carriage spring, J. E. Beil. 255,675 Carriage top, R. J. Parrett 255,328 Carriare, See Trace carrier. 255,402 Chain machine, W. A. Reid. 255,402 Chair. See Rocking chair. 255,402	Lamp, electric, Holcombe & Colborne
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fex of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. The lacquer to be used depends	The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIREC- TORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven H P	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 255,675 Carriage spring, J. E. Bell. 255,675 Carriage top, R. J. Parrett 255,328 Carriage top, R. J. Parrett 255,402 Chain machine, W. A. Reid. 255,402 Chair. See Rocking chair. 255,173	Lamp, electric, Holcombe & Colborne
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass	The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIREC- TORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882.	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 255,375 Carriage spring, J. E. Bell 255,575 Carriage top, R. J. Parrett 255,328 Carrier, See Trace carrier. 254,875 Chain machine, W. A. Reid 255,402 Chair. See Rocking chair. 255,473 Chuck lathe, S. J. Kirk 255,173 Churn dasher, T. A. Miller 255,173 Churn dasher, T. A. Miller 255,173	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim .255,304 Lamp, electric, J. Oimsted .355,186 Lamp, electric, A. G. Waterhouse .255,223 Lamp, electric, E. Weston .255,233 Lamp, electric, E. Weston .255,233 Lamp, electric, E. Weston .255,233 Lamp, electric, Weston & Curtis .255,232 Lamp, electric, Weston & Curtis .255,225 Lamps, absorbent for electric, W. L. Voelker .255,219 Lamps, globe supporter for electric, Tregoning & Latimer Latimer .255,212 Light. See Drop light. .255,212
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Few of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow-	The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIREC- TORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10, 1882. These volumes give a Xeet amount of information	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. 8. Maxim 255,309 255,257 Carriage spring, J. E. Bell 255,575 Carriage top, R. J. Parrett 255,375 Chain machine, W. A. Reid 255,402 Chair. See Trace carrier. 254,402 Chair. See Rocking chair. 255,173 Churn dasher, T. A. Miller 255,321 Charn motor, Schott & Leepy 255,321 Charn motor, Schott & Schott & 255,320	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim .255,304 Lamp, electric, J. Oimsted .355,186 Lamp, electric, A. G. Waterhouse .255,232 Lamp, electric, E. Weston .255,233 Lamp, electric, E. Weston .255,233 Lamp, electric, E. Weston .255,233 Lamp, electric, Weston & Curtis .255,233 Lamps, absorbent for electric, W. L. Voelker .255,219 Lamps, absorbent for electric, E. Weston .255,262 Lamps, globe supporter for electric, Tregoning & Latimer .255,212 Light. See Drop light. .255,212 Locomotive frames, manufacture or, C. T. Parry. 255,329
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1.	The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Gautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIREC- TORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodi-	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 255,260 Carriage spring, J. E. Bell 255,575 Carriage top, R. J. Parrett 255,328 Carrier, See Trace carrier. 255,402 Chain machine, W. A. Reid 255,402 Chair. Bee Rocking chair. 254,202 Churck lathe, S. J. Kirk 255,317 Churn dasher, T. A. Miller 255,320 Cigar lighter, A. C. Moss 255,320 Clock casees, manufacturing celuloid, R. T. Trip-	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim .255,304 Lamp, electric, J. Oimsted .255,186 Lamp, electric, A. G. Waterhouse .255,233 Lamp, electric, E. Weston .255,233 Lamp, electric, E. Weston .255,233 Lamp, electric, Weston & Curtis .255,233 Lamp, electric, E. Weston .255,219 Lamps, absorbent for electric, E. Weston .255,262 Lamps, globe supporter for electric, Tregoning & Latimer. Light. See Drop light. .255,212 Light. See Firearm lock. Hasp lock. Locomotive frames, manufacture or, C. T. Parry. 255,229 Lubricator, A. W. Swift .255,363
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces: soffron 1 onnee: wine spiit 10 plus 9	The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Gautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIREC- TORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodi- cal publications, and the people who make and read	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het-field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 255,260 Carriage apring, J. E. Bell 255,375 Carriage top, R. J. Parrett 255,375 Carriage top, R. J. Parrett 255,326 Chain machine, W. A. Reid 255,402 Chair. See Rocking chair. 255,402 Churd, lathe, S. J. Kirk. 255,413 Churn dasher, T. A. Miller 255,321 Cigar lighter, A. C. Moss 255,322 Clock cases, manufacturing celluloid, R. T. Triplett 255,325	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim .255,304, 255,305 Lamp, electric, J. Oimsted .255,186 Lamp, electric, A. G. Waterhouse. .255,223 Lamp, electric, E. Weston .255,333 Lamp, electric, E. Weston .255,233 Lamp, electric, E. Weston .255,233 Lamp, electric, E. Weston .255,233 Lamp, electric, E. Weston .255,219 Lamps, absorbent for electric, E. Weston .255,262 Lamps, globe supporter for electric, Tregoning & Latimer. Latimer. .255,212 Light. See Drop light. Lock. See Firearm lock. Hasp lock. Locomotive frames, manufacture or, C. T., Parry. .255,323 Magnet, electro, E. Weston .255,365
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2.	The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIREC- TORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodi- cal publications, and the people who make and read them, together with a directory to some 20,000 American	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 255,169 Carriage spring, J. E. Bell 255,375 Carriage top, R. J. Parrett 255,375 Carriage top, R. J. Parrett 255,375 Carriage top, R. J. Parrett 255,376 Chain machine, W. A. Reid 255,402 Chair. See Rocking chair. 255,173 Churn dasher, T. A. Miller 255,319 Churn motor, Schott & Leepy 255,121 Cigar lighter, A. C. Moss 255,355 Clock cases, manufacturing celuloid, R. T. Trip- lett 255,355 Clothes sprinkler, E. J. B. Whitaker 255,355	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim .255,304 Lamp, electric, J. Oimsted .255,186 Lamp, electric, J. Oimsted .255,186 Lamp, electric, A. G. Waterhouse .255,223 Lamp, electric, E. Weston .255,233 Lamp, electric, E. Weston .255,233 Lamp, electric, E. Weston .255,233 Lamp, electric, E. Weston .255,219 Lamps, absorbent for electric, Tregoning & Latimer. .255,212 Light. See Drop light. Lock. See Firearm lock. Hasp lock. Locomotive frames, manufacture of, C. T. Parry. .255,363 Magnet. electro, E. Weston .255,365 Mashing malt and mait substitutes, method of and paratus for G. Seitz .255,285
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum juniper, each 12 ounces; wine spirit, 12 ounces. 3.	The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIREC- TORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodi- cal publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps,	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 255,169 Carriage spring, J. E. Bell. 255,375 Carriage top, R. J. Farrett 255,326 Carriage spring, J. E. Bell. 255,375 Carriage top, R. J. Farrett 255,326 Chain machine, W. A. Reid. 255,402 Chair. See Rocking chair. 255,173 Churn dasher, T. A. Miller 255,319 Churn motor, Schott & Leepy. 255,251 Cigar lighter, A. C. Moss 255,325 Clock cases, manufacturing celuloid, R. T. Trip- lett 255,325 Clothes sprinkler, E. J. B. Whitaker 255,355 Clothes sprinkler, E. J. B. Whitaker 255,355 Coffin, C. H. Olson. 255,112 Coilar, horse, J. Straus. 255,206	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim .255,304 Lamp, electric, J. Oimsted .255,186 Lamp, electric, J. Oimsted .255,186 Lamp, electric, A. G. Waterhouse .255,232 Lamp, electric, E. Weston .255,233 Lamp, electric, E. Weston .255,233 Lamp, electric, E. Weston .255,232 Lamp, electric, Weston & Curtis .255,232 Lamp, electric, Weston & Curtis .255,219 Lamps, globe supporter for electric, Tregoning & Latimer. .255,212 Light. See Drop light. Lock. See Firearm lock. Hasp lock. Loocomotive Firames, manufacture of, C. T. Parry. .255,363 Magnet. electro, E. Weston .255,365 Mashing mait and mait substitutes, method of and apparatus for, G. Seitz .255,203 Matches, manufacture of friction. H. Baker
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Few of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum juniper, each 12 ounces; wine spirit, 12 ounces. 3. Gamboge, ½ ounce; aloes, 1½ ounce; shellac, 8 ounces;	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside 	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 255,169 Carriage spring, J. E. Bell. 255,375 Carriage top, R. J. Parrett 255,328 Carriage spring, J. E. Bell. 255,325 Carriage top, R. J. Parrett 255,322 Chain machine, W. A. Reid. 255,402 Chair. See Rocking chair. 255,413 Churn dasher, T. A. Miller 255,319 Churn motor, Schott & Leepy 255,321 Clock cases, manufacturing celluloid, R. T. Trip- let 255,325 Clothes sprinkler, E. J. B. Whitaker 255,355 Collar, horse, J. Straus. 255,206 Collar, horse, J. Straus. 255,206 Collar, horse, J. Straus. 255,206 Coloring matter, manufacture of blue, J. H. Steb- 25112	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim .255,304 Lamp, electric, J. Olmsted .255,186 Lamp, electric, J. Olmsted .255,186 Lamp, electric, A. G. Waterhouse. .255,232 Lamp, electric, E. Weston .255,233 Lamp, electric, E. Weston .255,233 Lamp, electric, E. Weston .255,232 Lamp, electric, E. Weston .255,219 Lamps, globe supporter for electric, Tregoning & .255,212 Light. See Drop light. Lock. See Firearm lock. Hasp lock. Locomotive frames, manufacture of, C. T. Parry. .255,333 Magnet. electro, E. Weston .255,365 Mashing mait and mait substitutes, method of and apparatus for, G. Seitz. .255,203 Matches, manufacture of friction. H. H. Baker
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Few of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum juniper, each 13 ounces; wine spirit, 12 ounces. 3. Gamboge, ½ ounce; aloes, 1½ ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209,	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporer business with the people who was a side from its value to advertisers and in spite of the temporer business and the people with a side from its value to advertisers and in spite of the temporer business and the people with the people with the temporer business with the people with a side from its value to advertisers and in spite of the temporer business and the people with the people with a side from its value to advertisers and in spite of the temporer business and the people with the side with the s	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 255,169 Carriage spring, J. E. Bell. 255,375 Carriage top, R. J. Farrett 255,328 Chain machine, W. A. Reid. 255,328 Chair. See Trace carrier. 255,402 Chair. See Rocking chair. 255,402 Churn dasher, T. A. Miller 255,319 Churn motor, Schott & Leepy 255,321 Clock cases, manufacturing celluloid, R. T. Trip- lett 255,325 Clothes sprinkler, E. J. B. Whitaker 255,355 Collar, horse, J. Straus 255,206 Collar, horse, J. Straus 255,206 Coloring matter, manufacture of blue, J. H. Steb- bins, Jr. 255,329	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim .255,304 Lamp, electric, J. Olmsted .255,186 Lamp, electric, J. Olmsted .255,186 Lamp, electric, A. G. Waterhouse. .255,232 Lamp, electric, K. Weston .255,233 Lamp, electric, E. Weston .255,232 Lamp, electric, Weston & Curtis .255,232 Lamp, electric, Weston & Curtis .255,225 Lamp, absorbent for electric, Noelker .255,219 Lamps, globe supporter for electric, Tregoning & Latimer .255,212 Light. See Drop light. Lock. See Firearm lock. Hasp lock. Locomotive frames, manufacture of, C. T. Parry255,329 Lubricator, A. W. Swift Lubricator, A. W. Swift .255,365 Mashing malt and mait substitutes, method of and apparatus for, G. Seitz .255,095 Matches, manufacture of friction. H. H. Baker
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum juniper, each 12 ounces; wine spirit, 12 ounces. 3. Gamboge, 1/2 ounce; aloes, 1/2 ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are clear, heat	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with adirectory tosome 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, 	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 255,375 Carriage spring, J. E. Bell 255,375 Carriage top, R. J. Parrett 255,328 Carrier, See Trace carrier. 254,875 Chain machine, W. A. Reid 255,402 Chair. See Rocking chair. 255,402 Chuck lathe, S. J. Kirk 255,317 Churn dasher, T. A. Miller 255,312 Cligar lighter, A. C. Moss 255,325 Clock cases, manufacturing celluloid, R. T. Trip- lett 255,325 Clothes sprinkler, E. J. B. Whitaker 255,326 Coloring matter, manufacture of blue, J. H. Steb- bins, Jr. 255,230 Contourgauge and tool, H. C. Barker. 255,350 Conotourgauge and tool, M. C. Barker. 255,350 Conotourgauge and tool, M. C. Barker. 255,350 Conotourgauge and tool, M. C. Barker. 255,350	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim .255,304 Lamp, electric, J. Oimsted .255,186 Lamp, electric, A. G. Waterhouse .255,233 Lamp, electric, E. Weston .255,232 Lamp, electric, E. Weston .255,232 Lamps, absorbent for electric, W. L. Voelker .255,202 Lamps, globe supporter for electric, Tregoning & .255,202 Laitmer .255,202 Locomotive frames, manufacture of, C. T. Parry. .255,323 Magnet. electro, E. Weston .255,363 Magnet. electro, E. Weston .255,363 Magnet. electro, E. Weston .255,365 Mashing mait and mait substitutes, method of
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum juniper, each 12 ounces; wine spirit, 12 ounces. 3. Gamboge, ½ ounce; aloes, 1,½ ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of @autier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it 	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. 8. Maxim 255,309 255,375 Carriage spring, J. E. Bell 255,375 Carriage top, R. J. Parrett 255,375 Chain machine, W. A. Reid 255,402 Chair. See Trace carrier. 254,402 Chair. See Rocking chair. 255,402 Churn dasher, T. A. Miller 255,312 Chourn motor, Schott & Leepy 255,312 Cligar lighter, A. C. Moss 255,326 Coffin, C. H. Olson 255,326 Collar, horse, J. Straus 255,326 Coloring matter, manufacture of blue, J. H. Steb- bins, Jr. 255,320 Cooker, steam, A. M. Amos 255,320 Cooker, steam, A. M. Amos 255,320	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim .255,304 Lamp, electric, J. Oimsted
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum juniper, each 12 ounces; wine spirit, 18 ounces. 3. Gamboge, ½ ounce; aloes, 11/2 ounces is shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of @autier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the worl section. 	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 255,257 Carriage spring, J. E. Bell 255,575 Carriage top, R. J. Parrett 255,328 Carrier, See Trace carrier. 254,202 Chain machine, W. A. Reid 255,402 Chair. Bee Rocking chair. 254,202 Churck Lathe, S. J. Kirk 255,319 Churn dasher, T. A. Miller 255,329 Clock cases, manufacturing celuloid, R. T. Trip- lett 255,328 Colar, horse, J. Straus. 255,328 Colar, horse, J. Straus. 255,325 Coloring matter, manufacture of blue, J. H. Steb- bins, Jr. 255,320 Cooker, steam, A. M. Amos 255,320 Cootourgauge and tool, H. C. Barker. 255,320 Cootour, implement for siding and thinning, Dick 255,100	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim .255,304 Lamp, electric, J. Oimsted .255,304 Lamp, electric, A. G. Waterhouse .255,223 Lamp, electric, E. Weston .255,233 Lamp, electric, E. Weston .255,233 Lamp, electric, E. Weston .255,233 Lamp, electric, E. Weston .255,232 Lamps, absorbent for electric, W. L. Voelker .255,219 Lamps, globe supporter for electric, Tregoning & .255,212 Light. See Drop light. Locomotive frames, manufacture of, C. T. Parry. .255,223 Lubricator, A. W. Swift .255,363 .255,363 Magnet. electro, E. Weston .255,363 .255,363 Magnet. electro, E. Weston .255,363 .255,363 Mashing malt and mait substitutes, method of .255,363 .255,362 Matches, manufacture of friction. H. H. Baker. .255,329 Matches, manufacture of friction. H. H. Baker. .255,323 Matches, manufacture of friction. H. H. Baker. .255,323 Meter. See Electrical meter. .255,323 Milk pan cover, C. C. Fairlamb. .255,263 Milk pan cover, C. C. Fair
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum juniper, each 12 ounces; wine spirit, 12 ounces. 3. Gamboge, ½ ounce; aloes, 1½ ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they re- ouire to be heated in an over to hardon the become	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Gautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10, 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The 	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het-field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 255,275 Carriage spring, J. E. Bell 255,575 Carriage top, R. J. Parrett 255,328 Carrier, See Trace carrier. 254,402 Chain machine, W. A. Reid 255,402 Chair. See Rocking chair. 254,402 Churck lathe, S. J. Kirk 255,329 Cligar lighter, A. C. Moss 255,320 Clock cases, manufacturing celuloid, R. T. Triplett 255,320 Coffin, C. H. Olson 255,328 Colar, horse, J. Straus 255,320 Coloring matter, manufacture of blue, J. H. Stebbins, J. 255,320 Cootoring matter, manufacture of blue, J. H. Stebbins, J. 255,200 Cootoring matter, M. M. Amos 255,200 Contourgauge and tool, H. C. Barker 255,100 Contourgauge and tool, H. C. Barker 255,200 Contourgauge and tool, H. C. Barker 255,200 </td <td>Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim .255,304 Lamp, electric, J. Oimsted .255,186 Lamp, electric, A. G. Waterhouse. .255,233 Lamp, electric, E. Weston .255,232 Lamps, absorbent for electric, W. L. Voelker .255,252 Lamps, globe supporter for electric, Tregoning & .255,219 Laight. See Drop light. Lock. See Firearm lock. Hasp lock. Locomotive frames, manufacture or, C. T. Parry255,329 Lubricator, A. W. Swift Lubricator, A. W. Swift .255,365 Mashing malt and mait substitutes, method of and apparatus for, G. Seitz .255,303 Matches, manufacture of friction. H. H. Baker .255,303 Matches, manufacture of friction. H. H. Baker .255,303 Matches, manufacture of friction. H. Baker .255,303 Matches, manufacture of friction. H. H. Baker .255,303 Matches, manufacture of friction. H. H. Baker .255,303 Matches, manufacture of friction. H. H. Baker .255,303 Matches, de Electrical meter.</td>	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim .255,304 Lamp, electric, J. Oimsted .255,186 Lamp, electric, A. G. Waterhouse. .255,233 Lamp, electric, E. Weston .255,232 Lamps, absorbent for electric, W. L. Voelker .255,252 Lamps, globe supporter for electric, Tregoning & .255,219 Laight. See Drop light. Lock. See Firearm lock. Hasp lock. Locomotive frames, manufacture or, C. T. Parry255,329 Lubricator, A. W. Swift Lubricator, A. W. Swift .255,365 Mashing malt and mait substitutes, method of and apparatus for, G. Seitz .255,303 Matches, manufacture of friction. H. H. Baker .255,303 Matches, manufacture of friction. H. H. Baker .255,303 Matches, manufacture of friction. H. Baker .255,303 Matches, manufacture of friction. H. H. Baker .255,303 Matches, manufacture of friction. H. H. Baker .255,303 Matches, manufacture of friction. H. H. Baker .255,303 Matches, de Electrical meter.
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum juniper, each 12 ounces; wine spirit, 12 ounces. 3. Gamboge, ½ ounce; aloes, 1½ ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. XIV. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they re- quire to be heated in an oven to harden the lacquer.	The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIREC- TORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodi- cal publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the tempo- rary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 255,169 Carriage spring, J. E. Bell 255,375 Carriage top, R. J. Parrett 255,375 Carriage top, R. J. Parrett 255,328 Chain machine, W. A. Reid 255,402 Chain machine, W. A. Reid 255,402 Chair. See Rocking chair. Chuck lathe, S. J. Kirk 255,313 Churn dasher, T. A. Miller 255,320 Clock cases, manufacturing celuloid, R. T. Trip- lett 255,320 Colothes sprinkler, E. J. B. Whitaker 255,326 Colothes sprinkler, E. J. B. Whitaker 255,326 Coloring matter, manufacture of blue, J. H. Steb- bins, Jr. 255,206 Contourg auge and tool, H. C. Barker. 255,320 Contourg auge and tool, H. C. Barker. 255,100 Cotton sheller, M. S. Cook 255,100 Cotton shipper, R. H. Goldsmith 255,271	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim .255,304 Lamp, electric, J. Oimsted .255,186 Lamp, electric, A. G. Waterhouse. .255,223 Lamp, electric, E. Weston .255,233 Lamp, electric, E. Weston .255,233 Lamp, electric, E. Weston .255,233 Lamp, electric, E. Weston .255,219 Lamps, absorbent for electric, Tregoning &
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Few of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. Tbe lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum juniper, each 18 ounces; wine spirit, 10 pints. 2. Gamboge, ½ ounce; aloes, 1½ ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they re- quire to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4. How is the lacquer made and applied on the gilt	The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIREC- TORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodi- cal publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the tempo- rary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns.	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 255,275 Carriage spring, J. E. Bell 255,375 Carriage top, R. J. Parrett 255,375 Chain machine, W. A. Reid 255,402 Chair. See Rocking chair. 255,402 Churn dasher, T. A. Miller 255,319 Churn motor, Schott & Leepy. 255,121 Cigar lighter, A. C. Moss 255,355 Clock cases, manufacturing celuloid, R. T. Triplett 255,355 Collar, horse, J. Straus. 255,206 Collar, horse, J. Straus. 255,206 Coloring matter, manufacture of blue, J. H. Stebbins, Jr. 255,232 Contourgauge and tool, H. C. Barker. 255,200 Cootoning matter, M. S. Cook 255,232 Corton sheller, M. S. Cook 255,232 Cotton miplement for siding and thinning, Dickert & Heller 255,255 Cotton stalk and weed cutter, J. H. Vannoy. 255,257 <tr< td=""><td>Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim .255,304 255,186 Lamp, electric, J. Oimsted .255,186 </td></tr<>	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim .255,304 255,186 Lamp, electric, J. Oimsted .255,186
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum juniper, each 12 ounces: wine spirit, 12 ounces. 3. Gamboge, ½ ounce; aloes, 1½ ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. Xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they re- quire to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4. How is the lacquer moulding, the leaf used in	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticant fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's point of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. 	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 255,169 Carriage spring, J. E. Bell. 255,375 Carriage top, R. J. Parrett 255,369 Carriar, See Trace carrier. 256,328 Chain machine, W. A. Reid. 255,402 Chair. See Rocking chair. 255,417 Churn dasher, T. A. Miller 255,319 Churn motor, Schott & Leepy. 255,212 Cigar lighter, A. C. Moss 255,325 Clock cases, manufacturing celuloid, R. T. Trip- lett 255,325 Colthes sprinkler, E. J. B. Whitaker 255,325 Colthes sprinkler, E. J. B. Whitaker 255,325 Colloring matter, manufacture of blue, J. H. Steb- bins, Jr. 255,206 Coloring matter, manufacture of blue, J. H. Steb- bins, Jr. 255,232 Contourgauge and tool, H. C. Barker. 255,232 Corton, sheller, M. S. Cook 255,232 Cotton inplement for siding and thinning, Dick- ert & Heller 255,232 Cotton stalk and weed cutter, J. H. Vannoy. 255,237 Coupling. See Hose coupling. Shaft coupling. 255,271 <	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim .255,304 Lamp, electric, J. Oimsted .255,186 Lamp, electric, A. G. Waterhouse. .255,223 Lamp, electric, E. Weston .255,233 Lamp, electric, Weston & Curtis .255,219 Lamps, globe supporter for electric, Tregoning & Latimer. .255,212 Light. See Drop light. Locomotive frames, manufacture of, C. T. Parry. .255,323 Magnet. electro, E. Weston .255,365 Mashing malt and mait substitutes, method of and apparatus for, G. Seitz .255,303 Matches, manufacture of friction. H. H. Baker. .255,303 Matches, manufacture of friction. H. H. Baker. .255,303 Matches, manufacture of friction. H. H. Baker. .255,303 Matches, manufacture of friction. H. H. Baker. .255,303 Matches, manufacture of friction. H. H. Baker. .255,303 Matches, manufacture of friction. H. H. Baker. .255,303 Milk pan cover, C. C. Fairlamb. .255,263 Mill. See Cane mill. Grinding mill. Windmill. Movers and reapers, cutter bar for, A. M. Lackey (55,387
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Few of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. Tbe lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum juniper, each 13 ounces; wine spirit, 10 pints. 2. Gamboge, ½ ounce; aloes, 1½ ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. Xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they re- quire to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4. How is the lacquer moulding, the leaf used in making it being tin foil? A. The lacquer ordinarily	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. Svo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given it world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. 	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 255,375 Carriage spring, J. E. Bell. 255,375 Carriage top, R. J. Parrett 255,325 Carriage spring, J. E. Bell. 255,375 Carriage top, R. J. Parrett 255,325 Chain machine, W. A. Reid. 255,402 Chair. See Trace carrier. 255,402 Chair. See Rocking chair. 255,319 Churn dasher, T. A. Miller 255,319 Churn motor, Schott & Leepy. 255,312 Cigar lighter, A. C. Moss 255,325 Clock cases, manufacturing celluloid, R. T. Trip- lett 255,325 Colthes sprinkler, E. J. B. Whitaker 255,325 Coloring matter, manufacture of blue, J. H. Steb- bins, Jr. 255,320 Coloring matter, manufacture of blue, J. H. Steb- bins, Jr. 255,320 Contourg age and tool, H. C. Barker. 253,320 Cotton, implement for siding and thinning, Dick- ert & Heller 255,253 Cotton stalk and weed cutter, J. H. Vannoy. 255,257 Coupling. Ste Coupling. 255,272 Couton w	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim .255,304 Lamp, electric, J. Oimsted .255,186 Lamp, electric, J. Oimsted .255,186 Lamp, electric, A. G. Waterhouse. .255,223 Lamp, electric, E. Weston .255,233 Lamp, electric, E. Weston & Curtis .255,233 Lamp, electric, Weston & Curtis .255,232 Lamp, electric, Weston & Curtis .255,233 Lamp, imandescent electric, W. L. Voelker .255,219 Lamps, globe supporter for electric, Tregoning & Latimer .255,212 Light. See Drop light. .2000 Lock. See Firearm lock. Hasp lock. .255,233 Magnet. electro, E. Weston .255,363 Magnet. electro, E. Weston .255,363 Magnet. electro, E. Weston .255,363 Matches, manufacture of friction. H. H. Baker. .255,363 Matches, manufacture of friction. H. H. Baker. .255,363 Matches, manufacture of friction. H. H. Baker. .255,363 Milk pan cover, C. C. Fairlamb. .255,363 Mill. See Cane mill. Grinding mill. Windmill. Motor. See Churn motor. Ratchet motor. Mowers and reapers, cutter bar for,
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum juniper, each 13 ounces; wine spirit, 12 ounces. 3. Gamboge, ½ ounce; aloes, 1½ ounce; shellac, a sounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they re- quire to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4. How is the lacquer moulding, the leaf used in making it being tin foil? A. The lacquer ordinarily employed is composed of an alcoholic shellac solution	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory tosome 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves. \$1.25. 	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. 8. Maxim 255,309 255,375 Carriage spring, J. E. Bell 255,375 Carriage top, R. J. Parrett 255,402 Chain machine, W. A. Reid 255,402 Chair. See Trace carrier. 254,402 Chair. See Rocking chair. Chuck lathe, S. J. Kirk 255,173 Churn dasher, T. A. Miller 255,312 Clock cases, manufacturing celuloid, R. T. Trip- lett 255,325 Clock cases, manufacturing celuloid, R. T. Trip- lett 255,326 Collar, horse, J. Straus. 255,326 Collar, horse, J. Straus. 255,326 Coloring matter, manufacture of blue, J. H. Steb- bins, Jr. 255,320 Cooker, steam, A. M. Amos 255,325 Cortourgauge and tool, H. C. Barker. 255,320 Cotton, implement for siding and thinning, Dick- ert & Heller 255,238 Cotton stalk and weed cutter, J. H. Vannoy. 255,273 Cotton stalk and weed cutter, J. H. Vannoy. 255,271 Cotton stalk and weed cutter, J. H. Vannoy. 255,272 Coupling. See Hose coupling. Shaft coupling. <	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim .255,304 Lamp, electric, J. Oimsted .255,304 Lamp, electric, J. Oimsted .255,304 Lamp, electric, A. G. Waterhouse .255,303 Lamp, electric, E. Weston .255,203 Lamp, electric, E. Weston .255,203 Lamp, electric, E. Weston .255,203 Lamps, absorbent for electric, W. L. Voelker .255,203 Lamps, globe supporter for electric, Tregoning & .255,202 Laimer .255,202 Light. See Drop light. .255,203 Locomotive frames, manufacture of, C. T. Parry. .255,303 Magnet. electro, E. Weston .255,303 Magnet. electro, E. Weston .255,303 Magnet. electro, E. Weston .255,303 Mashing mait and mait substitutes, method of
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No 310. Few of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gun juniper, each 12 ounces; wine spirit, 12 ounces. 3. Gamboge, ½ ounce; aloes, 1½ ounce; shellac, a sounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brash or rag at one operation over the surface. When the articles are small they re- quire to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4 How is the lacquer made and applied on the gilt moulding known as lacquer moulding, the leaf used in making it being tin foil? A. The lacquer ordinarily employed is composed of an alcoholic shellac solution colored with turmeric and annato. 5. Is sheet zinc as	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves. \$1.25. 	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 255,375 Carriage spring, J. E. Bell 255,575 Carriage top, R. J. Parrett 255,375 Chain machine, W. A. Reid 255,402 Chair. See Trace carrier. 254,402 Church Lathe, S. J. Kirk 255,319 Churn dasher, T. A. Miller 255,329 Clock cases, manufacturing celuloid, R. T. Triplett 255,328 Colck cases, manufacturing celuloid, R. T. Triplett 255,328 Collar, horse, J. Straus. 255,320 Coloring matter, manufacture of blue, J. H. Stebbins, Jr. 255,320 Coloring matter, and tool, H. C. Barker 255,320 Cotton stak and weed cutter, J. H. Vannoy. 255,100 Cotton, implement for siding and thinning, Dickert & Heller 255,237 Cotton whipper, R. H. Goldsmith. 255,237 Couton whipper, R. H. Goldsmith. 255,237 Couton stak and weed cutter, J. H. Vannoy. 25,245 Cotton stak and weed cutter, J. H. Vannoy. 25,257 Couton whipper, R. H. Goldsmith. 255,237 Cou	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim .255,304 Lamp, electric, J. Oimsted .255,304 Lamp, electric, A. G. Waterhouse .255,203 Lamp, electric, E. Weston .255,203 Lamps, absorbent for electric, W. L. Voelker .255,203 Lamps, globe supporter for electric, Tregoning & .255,202 Laitmer .255,212 Light. See Drop light. .255,212 Locomotive frames, manufacture of, C. T. Parry. .255,223 Lubricator, A. W. Swift .255,303 Mashing mait and mait substitutes, method of .255,303 Mashing mait and mait substitutes, method of .255,303 Matches, manufacture of friction. H. H. Baker. .255,303 Matches, manufacture of friction. H. H. Baker. .255,303 Meter. See Electricial meter. .255,303 Milk pan cover, C. C. Fairlamb. .255,283 Milk pan cover, C. C. Fairlamb. .255,284 Milk pan cover, C. C. Fairlamb. .255,287 Milk
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum juniper, each 12 ounces; wine spirit, 12 ounces. 3. Gamboge, $\frac{1}{2}$ ounce; aloes, $\frac{1}{2}$ ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they re- quire to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4. How is the lacquer made and applied on the gilt moulding known as lacquer moulding, the leaf used in making it being tin foil? A. The lacquer ordinarily employed is composed of an alcoholic shellac solution colored with turmeric and annatto. 5. Is sheet zinc as pure as the commercial (cast) zinc found in the mar- ter in the shore or black or diverse in the short we made	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves. \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the art of 	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 255,257 Carriage spring, J. E. Bell 255,575 Carriage top, R. J. Parrett 255,328 Chain machine, W. A. Reid 255,402 Chair. See Trace carrier. 254,303 Chuck Lathe, S. J. Firk 255,313 Churn dasher, T. A. Miller 255,320 Clock cases, manufacturing celuloid, R. T. Trip- let 255,320 Colck cases, manufacturing celuloid, R. T. Trip- let 255,325 Colar, horse, J. Straus 255,326 Coloring matter, manufacture of blue, J. H. Steb- bins, Jr. 255,320 Coloring matter, M. M. Amos 255,320 Cotton, implement for siding and thinning, Dick- ert & Heller 255,221 Cotton stak and weed cutter, J. H. Vannoy. 255,271 Coutoning. See Hose coupling. 255,223 Cotton whipper, R. H. Goldsmith 255,223 Couton whipper, R. H. Goldsmith 255,223<	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim .255,304 Lamp, electric, J. Oimsted .255,304 Lamp, electric, A. G. Waterhouse. .255,203 Lamp, electric, E. Weston .255,203 Lamp, electric, E. Weston .255,223 Lamp, electric, E. Weston .255,223 Lamp, electric, E. Weston .255,223 Lamps, absorbent for electric, W. L. Voelker .255,225 Lamps, globe supporter for electric, Tregoning & .255,219 Laintmer. .255,212 Light. See Drop light. .255,221 Locomotive frames, manufacture of, C. T. Parry. .255,223 Lubricator, A. W. Swift .255,363 Magnet. electro, E. Weston .255,363 Magnet. electro, E. Weston .255,363 Mashing malt and mait substitutes, method of .255,363 Mashing malt and mait substitutes, method of .255,363 Matches, manufacture of friction. H. H. Baker. .255,363 Meter. See Electricial meter. Water meter. Milk pan cover, C. C. Fairlamb. .255,263 Mill. See Cane mill. Grinding mill. Windmill. Motor. Mowers and
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 810. Few of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum junjer, each 12 ounces; wine spirit, 10 pints. 2. Gamboge, ½ ounce; aloes, 1½ ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they re- quire to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4. How is the lacquer made and applied on the gilt moulding known as lacquer moulding, the leaf used in making it being tin foil? A. The lacquer ordinarily employed is composed of an alcoholic shellac solution colored with turmeric and annatto. 5. Is sheet zine as pure as the commercial (cast) zine found in the mar- ket in the shape of shabs and pigs; or is the sheet alloyed with leaf or other metal's and if so in what rescaring single solution colored with turmeric and annatto.	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves. \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the art of cooking. Both qualifications are shown in the "Apple- 	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het-field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 255,275 Carriage spring, J. E. Bell 255,575 Carriage top, R. J. Parrett 255,328 Chain machine, W. A. Reid 255,402 Chain machine, W. A. Reid 255,402 Chain machine, W. A. Reid 255,402 Chair. See Trace carrier. Chouck latche, S. J. Kirk 255,313 Churn dasher, T. A. Miller 255,320 Clogar lighter, A. C. Moss 255,320 Clock cases, manufacturing celuloid, R. T. Triplett 255,328 Colok cases, manufacturing celuloid, R. T. Triplett 255,328 Colok cases, manufacturing celuloid, R. T. Triplett 255,328 Coloring matter, manufacture of blue, J. H. Stebbins, J. 255,206 Coloring matter, manufacture of blue, J. H. Stebbins, J. 255,100 Contourgauge and tool, H. C. Barker 255,200 Cotton sheller, M. S. Cook 255,200 Cotton sheller, M. S. Cook 255,201 Cotton staik and weed cutter, J. H. Vannoy 255,212 Cotton staik and weed cutter, J. H. Vannoy 255,225 </td <td>Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim .255,304 Lamp, electric, J. Oimsted .255,304 Lamp, electric, A. G. Waterhouse. .255,303 Lamp, electric, E. Weston .255,223 Lamps, absorbent for electric, W. L. Voelker .255,225 Lamps, globe supporter for electric, Tregoning & .255,219 Laight. See Drop light. Lock. See Firearm lock. Hasp lock. Locomotive frames, manufacture or, C. T. Parry. .255,323 Magnet. electro, E. Weston .255,365 Mashing malt and mait substitutes, method of and apparatus for, G. Seitz .255,303 Matches, manufacture of friction, H. H. Baker. .255,303 Matches, manufacture of friction, H. H. Baker. .255,305 Measure and seales, liquid. Becker & Jacob .255,326 Mill. See Cane mill. Grinding mill. Windmill. Motor. See Churn motor. Ratchet motor. .255,246 Oatmeal machine, A. Heinz .255,237 Oil can, L. A. Harker. .255,261 Oil, manufactu</td>	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim .255,304 Lamp, electric, J. Oimsted .255,304 Lamp, electric, A. G. Waterhouse. .255,303 Lamp, electric, E. Weston .255,223 Lamps, absorbent for electric, W. L. Voelker .255,225 Lamps, globe supporter for electric, Tregoning & .255,219 Laight. See Drop light. Lock. See Firearm lock. Hasp lock. Locomotive frames, manufacture or, C. T. Parry. .255,323 Magnet. electro, E. Weston .255,365 Mashing malt and mait substitutes, method of and apparatus for, G. Seitz .255,303 Matches, manufacture of friction, H. H. Baker. .255,303 Matches, manufacture of friction, H. H. Baker. .255,305 Measure and seales, liquid. Becker & Jacob .255,326 Mill. See Cane mill. Grinding mill. Windmill. Motor. See Churn motor. Ratchet motor. .255,246 Oatmeal machine, A. Heinz .255,237 Oil can, L. A. Harker. .255,261 Oil, manufactu
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Few of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. Tbe lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum junjer, each 18 ounces; wine spirit, 12 ounces. 3. Gamboge, ½ ounce; aloes, 1½ ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they re- quire to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4. How is the lacquer moulding, the leaf used in making it being tin foil? A. The lacquer ordinarily employed is composed of an alcoholic shellac solution colored with turmeric and annatto. 5. Is sheet zinc as pure as the commercial (cast) zinc found in the mar- ket in the shape of slabs and pigs; or is the sheet alloyed with lead or other metal; and if so, in what proportionf A. No; it usually contains small quantities of antimony	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves, \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the art of cooking. Both qualifications are shown in the "Appledore." The numerous recipes are plainly and terscly 	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 255,275 Carriage spring, J. E. Bell 255,375 Carriage top, R. J. Parrett 255,375 Carriage top, R. J. Parrett 255,375 Chain machine, W. A. Reid 255,402 Chain machine, W. A. Reid 255,402 Chain machine, W. A. Reid 255,402 Churck lathe, S. J. Kirk 255,402 Churn dasher, T. A. Miller 255,319 Churn motor, Schott & Leepy 255,121 Clock cases, manufacturing celuloid, R. T. Triplett 255,308 Colthes sprinkler, E. J. B. Whitaker 255,305 Coltoning matter, manufacture of blue, J. H. Stebbins, Jr. 255,102 Coltoning matter, manufacture of blue, J. H. Stebbins, Jr. 255,100 Contourg auge and tool, H. C. Barker. 255,100 Cotton stalk and weed cutter, J. H. Vannoy. 255,206 Cotton stalk and weed cutter, J. H. Vannoy. 255,100 Cotton stalk and weed cutter, J. H. Vannoy. 255,207 Couton stalk and weed cutter, J. H. Vannoy. 255,207 Couton stalk a	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, J. Oimsted
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum juniper, each 12 ounces: wine spirit, 10 pints. 2. Turmeric, 1 gounce; aloes, 1½ ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. Xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they re- quire to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4. How is the lacquer moulding, the leaf used in making it being tin foil? A. The lacquer ordinarily employed is composed of an alcoholic shellac solution colored with turmeric and anatto. 5. Is sheet zinc as pure as the commercial (cast) zinc found in the mar- ket in the shape of slabs and pigs; or is the sheet alloyed with lead or other metal; and if so, in what proportionf A. No; it usually contains small quantities of antimony and lead. 6. When impure zinc is used for a gravity	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The Graves. \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the art of nooking. Both qualifications are shown in the "Appledore." The numerous recipes are plainly and tersely put; and the author claims to have tested and approved them. 	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 255,375 Carriage spring, J. E. Bell 255,375 Carriage top, R. J. Parrett 255,375 Chain machine, W. A. Reid 255,402 Chair. See Rocking chair. 255,402 Churn dasher, T. A. Miller 255,319 Churn motor, Schott & Leepy 255,212 Cigar lighter, A. C. Moss 255,355 Clock cases, manufacturing celuloid, R. T. Triplett 255,355 Colthes sprinkler, E. J. B. Whitaker 255,355 Coltar, horse, J. Straus 255,206 Coloring matter, manufacture of blue, J. H. Stebbins, Jr. 255,230 Contourgauge and tool, H. C. Barker 255,230 Cotton sheller, M. S. Cook 255,200 Cotton stalk and weed cutter, J. H. Vannoy. 255,230 Cotton stalk and weed cutter, J. H. Vannoy. 255,255 Cotton stalk and weed cutter, J. H. Vannoy. 255,255	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, J. Oimsted
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. Tbe lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum juniper, each 12 ounces: wine spirit, 10 pints. 2. Turmeric, 1 gounce; aloes, 1½ ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. Xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they re- quire to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4. How is the lacquer moulding, the leaf used in making it being tin foil? A. The lacquer ordinarily employed is composed of an alcoholic shellac solution colored with turmeric and anatoto. 5. Is sheet zine as pure as the commercial (cast) zinc foound in the mar- ket in the shape of slabs and pigs; or is the sheet alloyed with lead or other metal; and if so, in what proportionf A. No; it usually contains small quantities of antimony and lead. 6. When impure zinc is used for a gravity battery, may the difficulty be overcome same as in the	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves. \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the att of nooking. Both qualifications are shown in the "Appledore." The numerous recipes are plainly and terscly put; and the author claims to have tested and approved them all. 	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 255,275 Carriage spring, J. E. Bell 255,375 Carriage top, R. J. Parrett 255,326 Chain machine, W. A. Reid 255,375 Churn dasher, T. A. Miller 255,317 Churn dasher, T. A. Miller 255,312 Cigar lighter, A. C. Moss 255,325 Clock cases, manufacturing celuloid, R. T. Triplett 255,325 Collack cases, manufacture of blue, J. H. Stebbins, Jr. 255,326 Coloring matter, manufacture of blue, J. H. Stebbins, Jr. 255,320 Contourg auge and tool, H. C. Barker 255,320 Cotton sheller, M. S. Cook 255,120 Cotton stalk and weed cutter, J. H. Vannoy. 255,235 Cotton stalk and weed cutter, J. H. Vannoy. 255,257 Cotton stalk and weed cutter, J. H. Vannoy. 255,258 Cotton stalk and weed cutter, J. H. Vannoy. 255,252 Cotton stalk and weed cut	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, J. Oinsted. 255,304 Lamp, electric, J. Oinsted. 255,186 Lamp, electric, J. Oinsted. 255,186 Lamp, electric, A. G. Waterhouse. 255,223 Lamp, electric, E. Weston 255,233 Lamp, electric, E. Weston 255,225 Lamp, globe supporter for electric, Tregoning & 255,212 Laitmer. 255,212 Light. See Drop light. 255,212 Locomotive frames, manufacture of, C. T. Parry. 255,323 Magnet, electro, E. Weston 255,323 Magnet, electro, E. Weston 255,323 Magnet, electro, E. Weston 255,363 Magnet, electro, E. Weston 255,365 Mashing malt and mait substitutes, method of and apparatus for, G. Scitz 255,323 Matches, manufacture of friction. H. H. Baker. 255,323 Meter. See Electrical meter. Water meter. 255,283 Milk pan cover, C. C. Fairlamb. 255,283 Musicsheetfor orguinettes, L. Brauer 255,283 Musicsheetfor orguinettes, L. Brauer 255,286 Oatmeal machine, A. Heinz 255,290 Oil can, L. A. Harker. </td
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in th is way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. Tbe lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum juniper, each 12 ounces; wine spirit, 10 pints. 2. Turmeric, 1 gound; annatto, 2 ounces; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they re- quire to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4. How is the lacquer moulding, the leaf used in making it being tin foil? A. The lacquer ordinarily employed is composed of an alcoholic shellac solution colored with turmeric and anatto. 5. Is sheet zinc as pure as the commercial (cast) zinc found in the mar- ket in the shape of slabs and pigs; or is the sheet alloyed with lead or other metal; and if so, in what proportionf A. No; it usually contains small quantities of antimony and lead. 6. When impure zinc is used for a gravity battery, may the difficulty be overcome same as in the Grove battery, by keeping the zincs amalgamated, or	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10, 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves. \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the art of rooking. Both qualifications are shown in the "Appledore." The numerous recipes are plainly and tersely put; and the author claims to have tested and approved them all. 	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. 8. Maxim 255,309 255,375 Carriage spring, J. E. Bell 255,375 Carriage top, R. J. Parrett 255,325 Carriage top, R. J. Parrett 255,325 Chain machine, W. A. Reid 255,402 Chair. See Trace carrier. 251 Chuck lathe, S. J. Kirk 255,173 Churm dasher, T. A. Miller 255,312 Clock cases, manufacturing celluloid, R. T. Trip- lett 255,325 Clock cases, manufacturing celluloid, R. T. Trip- lett 255,326 Colar, horse, J. Straus. 255,236 Coloring matter, manufacture of blue, J. H. Step- bins, Jr. 255,320 Coloring matter, manufacture of blue, J. H. Step- bins, Jr. 255,320 Cotton, implement for siding and thinning, Dick- ert & Heller 255,323 Cotton stalk and weed cutter, J. H. Vannoy. 255,237 Coupling. See Hose coupling. Shaft coupling. 255,238 Cuttor whipper, R. H. Goldsmith. 255,236 Cutton whipper, R. H. Goldsmith. 255,256 Cutton whipper, R. B. Cauplum 255,256	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim 255,304 Lamp, electric, J. Oimsted 255,305 Lamp, electric, J. Oimsted 255,305 Lamp, electric, A. G. Waterhouse 255,223 Lamp, electric, E. Weston 255,223 Lamp, electric, E. Weston 255,223 Lamp, electric, E. Weston 255,225 Lamps, absorbent for electric, W. L. Voelker 255,202 Lamps, globe supporter for electric, Tregoning & 255,202 Laimer 255,202 Locomotive frames, manufacture of, C. T. Parry. 255,329 Lubricator, A. W. Swift 255,335 Mashing mait and mait substitutes, method of 265,332 Mashing mait and mait substitutes, method of 255,332 Matches, manufacture of friction. H. H. Baker 255,332 Measure and scales, liquid. Becker & Jacob 255,333 Meter. See Electrical meter. Water meter. 255,332 Mill, See Cane mill. Grinding mill. Windmill. Motor. See Churn motor. Ratchet motor. Mowers and reapers, cutter bar for, A. M. Lackey 255,345 353,346 Mustcsheetfor orguinettes, L. Brauer 255,264 Oatmeal machine,
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum juniper, each 13 ounces; wine spirit, 10 pints. 2. Turmeric, 1 apound; annatto, 2 ounces; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they re- quire to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4. How is the lacquer moulding, the leaf used in making it being tin foil? A. The lacquer ordinarily employed is composed of an alcoholic shellac solution colored with turmeric and annatto. 5. Is sheet zinc as pure as the commercial (cast) zinc found in the mar- ket in the shape of slabs and pigs; or is the sheet alloyed with lead or other metal; and if so, in what proportion? A. No; it usually contains small quantities of an timony and lead. 6. When impure zinc is used for a gravity battery, may the difficulty be overcome same as in the Grove battery, by keeping the zincs amalgamated, or will the mercury be likely to drop from the zinc on to the convert and informer the the net of the zinc on to whe convert and informer the the net of the zinc	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a Vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves. \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the art of cooking. Both qualifications are shown in the "Appledore." The numerous recipes are plainly and tersely put; and the author claims to have tested and approved them all. REPORT TO THE STATE BOARD OF HEALTH ON METHODS OF SEWERAGE FOR CITIES AND VILLAGES IN THE STATE OF New York. 	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. 8. Maxim 255,309 255,375 Carriage spring, J. E. Bell 255,375 Carriage top, R. J. Parrett 255,375 Chain machine, W. A. Reid 255,402 Chair. See Trace carrier. 251 Chair. See Rocking chair. 251 Churn dasher, T. A. Miller 255,312 Cligar lighter, A. C. Moss 255,325 Clock cases, manufacturing celuloid, R. T. Triplett 255,326 Coffin, C. H. Olson 255,325 Coloring matter, manufacture of blue, J. H. Stebbins, Jr. 255,326 Coloring matter, manufacture of blue, J. H. Stebbins, Jr. 255,326 Cortourgauge and tool, H. C. Barker 255,326 Cotton implement for siding and thinning, Dickert & Heller 255,237 Cotton stalk and weed cutter, J. H. Vannoy. 255,277 Coupling. 255,278 Cotton stalk and weed cutter, J. H. Vannoy. 255,278 Cotton stalk and weed cutter, J. H. Vannoy. 255,278 Couton whipper, R. H. Goldsmith. 255,258 Cutton whipper, R. B. Cullum	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim 255,304 Lamp, electric, J. Oimsted 255,186 Lamp, electric, A. G. Waterhouse. 255,223 Lamp, electric, E. Weston 255,225 Lamps, absorbent for electric, W. L. Voelker 255,219 Lamps, globe supporter for electric, Tregoning & 255,212 Light. See Drop light. 255,212 Locomotive frames, manufacture of, C. T. Parry. 255,223 Lubricator, A. W. Swift 255,303 Mashing mait and mait substitutes, method of 255,303 Mashing mait and mait substitutes, method of 255,303 Matches, manufacture of friction. H. H. Baker
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in th is way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum juniper, each 13 ounces; wine spirit, 12 ounces. 3. Gamboge, 15 ounce; aloes, 115 ounces, shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they re- quire to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4. How is the lacquer moulding, the leaf used in making it being tin foil? A. The lacquer ordinarily employed is composed of an alcoholic shellac solution colored with turmeric and annatto. 5. Is sheet zince as pure as the commercial (cast) zinc found in the mar- ket in the shape of slabs and pigs; or is the sheet alloyed with lead or other metal; and if so, in what proportion? A. No; it usually contains small quantities of antimony and lead. 6. When impure zinc is used for a gravity battery, may the difficulty be overcome same as in the Grove battery, by keeping the zinces amalgamated, or will the mercury be likely to drop from the zinc on to the copper and interfere with the action? A. Amalga-	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a Vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves. \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the art of cooking. Both qualifications are shown in the "Appledore." The numerous recipes are plainly and tersely put; and the author claims to have tested and approved them all. REPORT TO THE STATE BOARD OF HEALTH ON METHODS OF SEWERAGE FOR CITTES AND VILLAGES IN THE STATE OF NEW YORK. By James T. Gardner Albany. 	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 255,375 Carriage spring, J. E. Bell 255,575 Carriage top, R. J. Parrett 255,375 Chain machine, W. A. Reid 255,375 Chair See Trace carrier. 254,309 Chuck lathe, S. J. Kirk 255,373 Churn dasher, T. A. Miller 255,319 Churn motor, Schott & Leepy 255,123 Clegar lighter, A. C. Moss 255,326 Coffin, C. H. Olson 255,326 Coffin, C. H. Olson 255,326 Coloring matter, manufacture of blue, J. H. Stebbins, Jr. 255,320 Cootoring matter, manufacture of blue, J. H. Stebbins, Jr. 255,320 Cotton implement for siding and thinning, Dickert & Heller 255,320 Cotton, implement for siding and thinning, Dickert & Heller 255,320 Cotton stalk and weed cutter, J. H. Vannoy. 255,237 Couton whipper, R. H. Goldsmith. 255,237 Couton stalk and weed cutter, J. H. Vannoy. 255,237 Couton whipper, R. H. Goldsmith. 255,238 Cuttor, W. B. Cullum <t< td=""><td>Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim 255,304 Lamp, electric, J. Oimsted 255,186 Lamp, electric, A. G. Waterhouse. 255,223 Lamp, electric, E. Weston 255,233 Lamp, electric, E. Weston 255,223 Lamp, electric, E. Weston 255,232 Lamp, electric, E. Weston 255,232 Lamps, absorbent for electric, W. L. Voelker 255,219 Lamps, globe supporter for electric, Tregoning & 255,212 Light. See Drop light. 255,212 Locomotive frames, manufacture of, C. T. Parry. 255,223 Lubricator, A. W. Swift. 255,333 Mashing mait and mait substitutes, method of 255,333 Mashing mait and mait substitutes, method of 255,332 Matches, manufacture of friction. H. H. Baker. 255,333 Mill. See Cane mill. Grinding mill. Windmill. Motor. Motor. See Churn motor. Ratchet motor. Mowers and reapers, cutter bar for, A. M. Lackey 255,387 Musicsheetfor orguinettes, L. Brauer 255,263 255,264 Oil can, L. A. Harker. 255,264 255,264 Oil can, L. A. Harker. 255,264 255</td></t<>	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim 255,304 Lamp, electric, J. Oimsted 255,186 Lamp, electric, A. G. Waterhouse. 255,223 Lamp, electric, E. Weston 255,233 Lamp, electric, E. Weston 255,223 Lamp, electric, E. Weston 255,232 Lamp, electric, E. Weston 255,232 Lamps, absorbent for electric, W. L. Voelker 255,219 Lamps, globe supporter for electric, Tregoning & 255,212 Light. See Drop light. 255,212 Locomotive frames, manufacture of, C. T. Parry. 255,223 Lubricator, A. W. Swift. 255,333 Mashing mait and mait substitutes, method of 255,333 Mashing mait and mait substitutes, method of 255,332 Matches, manufacture of friction. H. H. Baker. 255,333 Mill. See Cane mill. Grinding mill. Windmill. Motor. Motor. See Churn motor. Ratchet motor. Mowers and reapers, cutter bar for, A. M. Lackey 255,387 Musicsheetfor orguinettes, L. Brauer 255,263 255,264 Oil can, L. A. Harker. 255,264 255,264 Oil can, L. A. Harker. 255,264 255
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum juniper, each 12 ounces; wine spirit, 12 ounces. 3. Gamboge, 14 ounce; aloes, 114 ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they re- quire to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4. How is the lacquer made and applied on the gilt moulding known as lacquer moulding, the leaf used in making it being tin foil? A. The lacquer ordinarily employed is composed of an alcoholic shellac solution colored with turmeric and annatto. 5. Is sheet zinc as pure as the commercial (cast) zinc found in the mar- ket in the shape of slabs and pigs; or is the sheet alloyed with lead or other metal; and if so, in what proportion? A. No; it usually contains small quantities of antimony and lead. 6. When impure zinc is used for a gravity battery, may the difficulty be overcome same as in the Grove battery, by keeping the zincs amalgamated, or will the mercury be likely to drop from the zinc on to the copper and interfere with the action? A. Amalg	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory tosome 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves. \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the art of cooking. Both qualifications are shown in the "Appledore." The numerous recipes are plainly and tersely put; and the author claims to have tested and approved them all. REPORT TO THE STATE BOARD OF HEALTH ON METHODS OF SEWERAGE FOR CITTES AND VILLAGES IN THE STATE OF NEW YORK. By James T. Gardner. Albany: Weed, Parsons & Co. Paper. pp. 15. 	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het-field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 Carriage spring, J. E. Bell. 255,575 Carriage top, R. J. Parrett 255,328 Carriage top, R. J. Parrett 255,325 Carriage top, R. J. Parrett 255,325 Carriage top, R. J. Parrett 255,325 Carriage top, R. J. Parrett 255,325 Carrier, See Trace carrier. Chain machine, W. A. Reid. 255,402 Chuck lathe, S. J. Kirk 255,319 Churn dasher, T. A. Miller 255,321 Chex cases, manufacturing celuloid, R. T. Triplett 255,325 255,326 Clock cases, manufacturing celuloid, R. T. Triplett 255,326 Collar, horse, J. Straus 255,326 Coloring matter, manufacture of blue, J. H. Stebbins, Jr. 255,102 Colton gauge and tool, H. C. Barker 255,320 Cotton, implement for siding and thinning, Dickert & Heller 255,237 Cotton, implement for siding and thinning, Dickert & Heller 255,237 Cotton stalk and weed cutter, J. H. Vannoy 255,237 Couton whipper, R. H. Goldsmith 255,236 Cutton whipper, R. H. Goldsmith 255,236 </td <td>Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim 255,304 Lamp, electric, J. Oimsted 255,304 Lamp, electric, A. G. Waterhouse. 255,223 Lamp, electric, E. Weston 255,225 Lamps, absorbent for electric, Tregoning & 255,262 Laimer. 255,212 Light. See Drop light. 255,225 Locomotive frames, manufacture of, C. T. Parry. 255,323 Magnet. electro, E. Weston 255,333 Mashing malt and mait substitutes, method of 255,333 Matches, manufacture of friction. H. H. Baker. 255,332 Meter. See Electrical meter. Water meter. Milk pan cover, C. C. Fairlamb. 255,243 Mill. See Chare mill. Grinding mill. Windmill. Motor. <</td>	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim 255,304 Lamp, electric, J. Oimsted 255,304 Lamp, electric, A. G. Waterhouse. 255,223 Lamp, electric, E. Weston 255,225 Lamps, absorbent for electric, Tregoning & 255,262 Laimer. 255,212 Light. See Drop light. 255,225 Locomotive frames, manufacture of, C. T. Parry. 255,323 Magnet. electro, E. Weston 255,333 Mashing malt and mait substitutes, method of 255,333 Matches, manufacture of friction. H. H. Baker. 255,332 Meter. See Electrical meter. Water meter. Milk pan cover, C. C. Fairlamb. 255,243 Mill. See Chare mill. Grinding mill. Windmill. Motor. <
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPTLEMENT, No 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gun juniper, each 12 ounces; wine spirit, 12 ounces. 3. Gamboge, $\frac{1}{2}$ ounce; aloes, $\frac{1}{2}$ ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they re- quire to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4 How is the lacquer made and applied on the gilt moulding known as lacquer moulding, the leaf used in making it being the foll? A. The lacquer ordinarily employed is composed of an alcoholic shellac solution colored with turmeric and annatto. 5. Is sheet zinc as pure as the commercial (cast) zinc found in the mar- ket in the shape of slabs and pigs; or is the sheet alloyed with lead or other metal; and if so, in what proportion? A. No; it usually contains small quantities of antimony and lead. 6. When impure zinc is used for a gravity battery, may the difficulty be overcome same as in the Grove battery, by keeping the zincs amalgamated, or will the mercury be likely to drop from the zinc on to the copper and interfere with the acti	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. Svo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves. \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the art of cooking. Both qualifications are shown in the "Appledore." The numerous recipes are plainly and tersoly put; and the author claims to have tested and approved them all. REPORT TO THE STATE BOARD OF HEALTH ON METHODS OF SEWERAGE FOR CITIES AND VILLAGES IN THE STATE OF NEW YORK. By James T. Gardner. Albany: Weed, Parsons & Co. Paper, pp. 15. Recommends the separate system of sewers for large 	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het-field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 Carriage spring, J. E. Bell. 255,575 Carriage top, R. J. Parrett 255,375 Carriage top, R. J. Parrett 255,325 Carriage top, R. J. Parrett 255,325 Carriage top, R. J. Parrett 255,325 Carriage top, R. J. Parrett 255,325 Carrier, See Trace carrier. Chain machine, W. A. Reid. 255,402 Chuck Lathe, S. J. Kirk 255,319 Churn dasher, T. A. Miller 255,321 Churn dasher, T. A. Miller 255,320 255,321 Clock cases, manufacturing celuloid, R. T. Triplett 255,325 25121 Colar, horse, J. Straus 255,326 255,320 Coloring matter, manufacture of blue, J. H. Stebbins, Jr. 255,320 Contourgauge and tool, H. C. Barker 255,320 Cotton, implement for siding and thinning, Dickert Heller 255,221 Cotton, implement for siding and thinning, Dickert Heller 255,225 Cotton stak and weed cutter, J. H. Vannoy 255,225 Cotton stak and weed cutter, J. H. Vannoy 255,233 Cuttin cord tightener, F. J. Werneth	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim 255,304 Lamp, electric, J. Oimsted 255,304 Lamp, electric, A. G. Waterhouse. 255,223 Lamp, electric, E. Weston 255,225 Lamps, absorbent for electric, W. L. Voelker 255,225 Lamps, globe supporter for electric, Tregoning & 141 Locomotive frames, manufacture of, C. T. Parry. 255,225 Lubricator, A. W. Swift 255,303 Magnet. electro, E. Weston 255,303 Magnet. electro, E. Weston 255,303 Mashing malt and mait substitutes, method of 255,303 Mashing malt and mait substitutes, method of 255,303 Matches, manufacture of friction. H. H. Baker. 255,303 Matches, manufacture of friction. H. H. Baker. 255,303 Mill. See Cane mill. Grinding mill. Windmill. Motor. Motor. See Churn motor. Ratchet motor. 255,263 Mill. See Cane mill. Grinding purposes.compound for absorbing., J. A. Wright. 255,260 Oil can, L. A. Harker.
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in th is way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Few of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. Tbe lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum juniper, each 12 ounces; wine spirit, 12 ounces. 3. Gamboge, ½ ounce; aloes, 1½ ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they re- quire to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4 How is the lacquer moulding, the leaf used in making it being tin foil? A. The lacquer ordinarily employed is composed of an alcoholic shellac solution colored with turmeric and annato. 5. Is sheet zinc as pure as the commercial (cast) zinc found in the mar- ket in the shape of slabs and pigs; or is the sheet alloyed with lead or other metal; and if so, in what proportion? A. No; it usually contains small quantities of an itmony and lead. 6. When impure zinc is used for a gravity battery, may the difficulty be overcome same as in the copper and interfere with the action? A. Amalga- mation of the zinc is useless in the sulphate of copper gravity form of battery.	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves, \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the art of rooking. Both qualifications are shown in the "Appledore." The numerous recipes are plainly and tersely put; and the author claims to have tested and approved them all. REPORT TO THE STATE BOARD OF HEALTH ON METHODS OF SEWERAGE FOR CITIES AND VILLAGES IN THE STATE OF NEW YORK. By James T. Gardner. Albany: Weed, Parsons & Co. Paper, pp. 15. Recommends the separate system of sewers for large towns with proper water supplies. and erv removal for 	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het-field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 Carriage spring, J. E. Bell. 255,575 Carriage top, R. J. Parrett 255,328 Carriage top, R. J. Parrett 255,325 Carriage top, R. J. Parrett 255,325 Carriage top, R. J. Parrett 255,325 Chain machine, W. A. Reid 255,402 Chain. 255,402 Chain Machine, W. A. Reid 255,321 Churn dasher, T. A. Miller 255,321 Clgar lighter, A. C. Moss 255,320 255,321 Clock cases, manufacturing celuloid, R. T. Triplett 255,385 250 Coloker, saes, manufacturing celuloid, R. T. Triplett 255,385 250 Coloring matter, manufacture of blue, J. H. Stebbins, J. 255,300 255,300 Coloring matter, manufacture of blue, J. H. Stebbins, J. 255,300 255,300 Contourgauge and tool, H. C. Barker 255,300 255,300 Cotton sheller, M. S. Cook 255,100 255,201 Cotton stalk and weed cutter, J. H. Vannoy 255,225 Cotton stalk and weed cutter, J. H. Vannoy 255,212 Coton whipper, R. H.	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, J. Oimsted 255,304 Lamp, electric, J. Oimsted 255,304 Lamp, electric, A. G. Waterhouse. 255,223 Lamp, electric, E. Weston 255,223 Lamp, electric, E. Weston 255,223 Lamp, electric, E. Weston 255,223 Lamp, globe supporter for electric, Tregoning & 255,225 Lamps, globe supporter for electric, Tregoning & 255,212 Light. See Drop light. 255,221 Locomotive frames, manufacture or, C. T. Parry. 255,223 Magnet. electro, E. Weston 255,363 Magnet. electro, E. Weston 255,365 Mashing malt and mait substitutes, method of and apparatus for, G. Seitz 255,323 Matches, manufacture of friction, H. H. Baker. 255,323 Matches, manufacture of friction, H. H. Baker. 255,325 Meter. See Electrical meter. 255,326 Mill. See Cane mill. Grinding mill. Windmill. Motor. See Churn motor. Ratchet motor. Mowers and reapers, cutter bar for, A. M. Lacker 255,237 Oil can, L. A. Harker. 255,246 Oatmeal machine, A. Heinz. 255,246 Oatmea
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in th is way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. Tbe lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum junjer, each 18 ounces; wine spirit, 12 ounces. 3. Gamboge, ½ ounce; aloes, 1½ ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they re- quire to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4. How is the lacquer moulding, the leaf used in making it being tin foil? A. The lacquer ordinarily employed is composed of an alcoholic shellac solution colored with turmeric and annatto. 5. Is sheet alloyed with lead or other metal; and if so, in what proportion? A. No; it usually contains small quantities of a raimony and lead. 6. When impure zinc is used for a gravity battery, may the difficulty be overcome same as in the Grove battery, by keeping the zincs amalgamated, or will the mercury be likely to drop from the zinc on to the copper and interfere with the action? A. Amalga- mation of the zinc is useless in the subphate of copper gravity form of battery. (32) G. C. W. writes: In your last issue yon gave recipes to oxidize gold, silver, an	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves. \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the art of cooking. Both qualifications are shown in the "Appledore." The numerous recipes are plainly and terscly put; and the author claims to have tested and approved them all. REPORT TO THE STATE BOARD OF HEALTH ON METHODS OF SEWERAGE FOR CITTES AND VILLAGES IN THE STATE OF NEW YORK. By James T. Gardner. Albany: Weed, Parsons & Co. Paper, pp. 15. Recommends the separate system of sewers for large towns with proper water supplies, and dry removal for villages, hamlets, and isolated dwellings. 	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het-field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 Carriage spring, J. E. Bell. 255,75 Carriage top, R. J. Parrett 255,375 Carriage top, R. J. Parrett 255,325 Carriage top, R. J. Parrett 255,325 Carriage top, R. J. Rarett 255,325 Chain machine, W. A. Reid. 255,402 Chair. See Trace carrier. Chouck lathe, S. J. Kirk. 255,321 Churn dasher, T. A. Miller 255,321 Cloak cases, manufacturing celuloid, R. T. Triplett 255,322 Colck cases, manufacturing celuloid, R. T. Triplett 255,326 Coloring matter, manufacture of blue, J. H. Stebbins, J. 255,102 Colar, horse, J. Straus. 255,206 Coloring matter, manufacture of blue, J. H. Stebbins, J. 255,202 Contourgauge and tool, H. C. Barker 255,203 Cotton sheller, M. S. Cook 255,102 Cotton staik and weed cutter, J. H. Vannoy. 255,271 Cotton staik and weed cutter, J. H. Vannoy. 255,272 Coupling. See Hose coupling. Shaft coupling. 255,206 Cutton staik and weed	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, J. Oimsted 255,304 Lamp, electric, J. Oimsted 255,304 Lamp, electric, A. G. Waterhouse. 255,223 Lamp, electric, E. Weston 255,223 Lamp, electric, E. Weston 255,223 Lamp, electric, E. Weston 255,223 Lamp, globe supporter for electric, Tregoning & 255,224 Lamps, globe supporter for electric, Tregoning & 255,212 Light. See Drop light. 255,212 Locomotive frames, manufacture or, C. T. Parry. 255,323 Magnet. electro, E. Weston 255,365 Mashing malt and mait substitutes, method of and apparatus for, G. Seitz 255,303 Magnet. electro. E. Weston 255,325 255,333 Magnet. electro, E. Weston 255,326 255,333 Magnet. electro. E. Weston 255,336 255,333 Magnet. electro. E. Weston 255,336 255,336 Mashing malt and mait substitutes, method of and apparatus for, G. Seitz 255,336 Mastches, manufacture of friction. H. H. Baker 255,336 Milk pan cover, C. C. Fairlamb 255,237 Milk ce Cane mill. Grin
 done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical instruction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fay of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appearance of gold? A. Tbe lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The following are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum juniper, each 18 ounces: wine spirit, 12 ounces. 3. Gamboge, ½ ounce; aloes, 1½ ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they require to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4. How is the lacquer moulding, the leaf used in making it being tin foil? A. The lacquer ordinarily employed is composed of an alcoholic shellac solution of the shape of slabs and pigs; or is the sheet alloyed with lead or other metal; and if so, in what proportion? A. No; it usually contains small quantities of antimony and lead. 6. When impure zinc is used for a gravity battery, may the difficulty be overcome same as in the grove battery, by keeping the zincs amalgamated, or will the mercury be likely to drop from the zinc or the copper and interfere with the action? A. Amalgamation of the zinc is useless in the sulphate of copper gravity form of battery. (32) G. C. W. writes: In your last issue you gave recipes to oxidize go	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. Svo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10, 1882. These volumes give a Vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves. \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the art of nooking. Both qualifications are shown in the "Appledore." The numerous recipes are plainly and tersely put; and the author claims to have tested and approved them all. REPORT TO THE STATE BOARD OF HEALTH ON METHODS OF SEWERAGE FOR CITTES AND VILLAGES IN THE STATE OF NEW YORK. By James T. Gardner. Albany: Weed, Parsons & Co. Paper, pp. 15. Recommends the separate system of sewers for large towns with proper water supplies, and dry removal for villages, hamilets, and isolated dwellings. 	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 255,375 Carriage spring, J. E. Bell 255,375 Carriage top, R. J. Parrett 255,375 Chain machine, W. A. Reid 255,375 Chair See Trace carrier. 255,402 Chair. See Rocking chair. Chuck lathe, S. J. Kirk 255,173 Churn dasher, T. A. Miller 255,325 Clock cases, manufacturing celuloid, R. T. Triplett 255,325 Clock cases, manufacturing celuloid, R. T. Triplett 255,326 Collar, horse, J. Straus. 255,236 Collar, horse, J. Straus. 255,236 Coloring matter, manufacture of blue, J. H. Stebbins, Jr. 255,320 Cootorn sheller, M. S. Cook 255,100 Cotton, implement for siding and thinning, Dickert & Heller 255,237 Cotton stalk and weed cutter, J. H. Vannoy 252,327 Coupling. Sce Hose coupling. 255,236 Cutton whipper, R. H. Goldsmith 255,236 Cutton whipper, R. H. Goldsmith 255,236 Cuttor for valve, B. Brazelle 255,360	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, H. S. Maxim 255,304 Lamp, electric, J. Oimsted 255,305 Lamp, electric, A. G. Waterhouse 255,223 Lamp, electric, E. Weston 255,223 Lamp, electric, E. Weston 255,223 Lamp, electric, E. Weston 255,225 Lamp, absorbent for electric, W. L. Voelker 255,202 Lamps, absorbent for electric, Tregoning & 255,202 Laimer. 255,202 Light. See Drop light. 255,203 Locomotive frames, manufacture of, C. T. Parry. 255,325 Lubricator, A. W. Swift 255,335 Mashing mait and mait substitutes, method of and apparatus for, G. Seitz 255,332 Matches, manufacture of friction. H. H. Baker. 255,323 Matches, manufacture of friction. H. Baker. 255,332 Meter. See Electrical meter. Water meter. 255,326 Mill. See Cane mill. Grinding mill. Windmill. Motor. See Churn motor. Ratchet motor. 255,236 Mustosheetfor orguinettes, L. Brauer 255,237 251,309 Oil, manufacture of, G. W. Banker 255,206 255,206 Oil for burning and illuminating purposes. c
 done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical instruction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fay of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appearance of gold? A. Tbe lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The following are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum juniper, each 13 ounces; wine spirit, 12 ounces. 3. Gamboge, ½ ounce; aloes, 1½ ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they require to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4. How is the lacquer modeling, the leaf used in making it being tin foil? A. The lacquer ordinarily employed is composed of an alcoholic shellac solution of the shape of slabs and pigs; or is the sheet alloyed with lead or other metal; and if so, in what proportion? A. No; it usually contains small quantities of antimony and lead. 6. When impure zinc is used for a gravity battery, may the difficulty be overcome same as in the Grove battery, by keeping the zincs amalgamated, or with the mercury be likely to drop from the zinc on to the copper and interfere with the action? A. Amalgamation of the zinc is useless in the subplate of copper gravity form of battery. (32) G. C. W. writes: In your last issue you gave recipes to oxidize	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. Svo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10, 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves. \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the art of rooking. Both qualifications are shown in the "Appledore." The numerous recipes are plainly and tersely put; and the author claims to have tested and approved them all. REPORT TO THE STATE BOARD OF HEALTH ON METHODS OF SEWERAGE FOR CITTES AND VILLAGES IN THE STATE OF NEW YORK. By James T. Gardner. Albany: Weed, Parsons & Co. Paper, pp. 15. Recommends the separate system of sewers for large towns with proper water supplies, and dry removal for villages, hamlets, and isolated dwellings. ARTIFUTC HOMES IN CITY AND COUNTRY. By Albert W. Fuller. Boston: James 	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 Carriage spring, J. E. Bell. 255,375 Carriage top, R. J. Parrett 255,375 Carriage top, R. J. Parrett 255,375 Chain machine, W. A. Reid. 255,402 Chair. See Trace carrier. 255,402 Chair. See Rocking chair. Chuck lathe, S. J. Kirk. 255,173 Churn dasher, T. A. Miller. 255,319 Clark abser, T. A. Miller. 255,320 Clock cases, manufacturing celuloid, R. T. Trip- lett 255,325 Clock cases, manufacturing celuloid, R. T. Trip- lett 255,326 Colaring matter, manufacture of blue, J. H. Steb- bins, Jr. 255,320 Coloring matter, manufacture of blue, J. H. Steb- bins, Jr. 255,320 Cotton implement for siding and thinning, Dick- ert & Heller 255,323 Cotton stalk and weed cutter. J. H. Vannoy. 255,235 Cotton whipper, R. H. Goldsmith. 255,236 Cutton whipper, R. H. Goldsmith. 255,256 Cutton whipper, R. J. Martenella, 255,256 254,242 Cuttor for tightener, F. J. Werneth. 255,256 Cutton whipper, B. B	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, J. Omsted 255,304 Lamp, electric, J. Omsted 255,305 Lamp, electric, A. G. Waterhouse. 255,233 Lamp, electric, E. Weston 255,233 Lamp, electric, E. Weston 255,232 Lamp, electric, E. Weston 255,203 Lamps, absorbent for electric, W. L. Voelker 255,203 Lamps, globe supporter for electric, Tregoning & 255,202 Laimer. 255,202 Light. See Drop light. 255,203 Locomotive frames, manufacture of, C. T. Parry. 255,323 Magnet. electro, E. Weston 255,335 Mashing mait and mait substitutes, method of 285,333 Maches, manufacture of friction. H. H. Baker 255,332 Measure and scales, liquid. Becker & Jacob 255,333 Meter. See Electrical meter. Water meter. 255,233 Mill. See Cane mill. Grinding mill. Windmill. Motor. See Churn motor. Ratchet motor. Mowers and reapers, cutter bar for, A. M. Lacker 255,346 03tenes. Oatmeal machine, A. Heinz 255,204 Oil, manufacture of, G. W. Banker. 255,206 Ore concentrator and separator.J. Garvin.
 done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical instruction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fay of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appearance of gold? A. Tbe lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The following are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum juniper, each 13 ounces; wine spirit, 12 ounces. 3. Gamboge, ½ ounce; aloes, 1½ ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they require to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4. How is the lacquer moulding, the leaf used in making it being tin foil? A. The lacquer ordinarily employed is composed of an alcoholic shellac solution colored with turmeric and anattot. 5. Is sheet zinc as pure as the commercial (cast) zinc found in the market in the shape of slabs and pigs; or is the sheet alloyed with lead or other metal; and if so, in what proportionf A. No; it usually contains small quantities of an gravity battery, may the difficulty be overcome same as in the Grove battery, by keeping the zincs amalgamated, or will the mercury be likely to drop from the zinc on to the copper and interfere with the action? A. Amalgamation of the zinc is useless in the suphate of copper gravity form of battery. (32) G. C	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. Svo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a Vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves. \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the art of cooking. Both qualifications are shown in the "Appledore." The numerous recipes are plainly and tersely put; and the author claims to have tested and approved them all. REPORT TO THE STATE BOARD OF HEALTH ON METHODS OF SEWERAGE FOR CITIES AND VILLAGES IN THE STATE OF NEW YORK. By James T. Gardner. Albany: Weed, Parsons & Co. Paper, pp. 15. Recommends the separate system of sewers for large towns with proper water supplies, and cry removal for villages, hamlets, and isolated dwellings. ARTISTIC HOMES IN CITY AND COUNTRY. By Albert W. Fuller. Boston: James R. Osgood & Co. 	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 Carriage spring, J. E. Bell. 255,375 Carriage top, R. J. Parrett 255,375 Carriage top, R. J. Parrett 255,375 Chain machine, W. A. Reid. 255,402 Chair. See Trace carrier. 255,402 Chair. See Rocking chair. Chuck lathe, S. J. Kirk. 255,173 Churn dasher, T. A. Miller. 255,312 Clock cases, manufacturing celuloid, R. T. Triplett 255,325 Clock cases, manufacturing celuloid, R. T. Triplett 255,326 Coffin, C. H. Olson 255,112 Collar, horse, J. Straus. 255,326 Coloring matter, manufacture of blue, J. H. Stebbins, Jr. 255,320 Cotton implement for siding and thinning, Dickert & Heller 255,323 Cotton implement for siding and thinning, Dickert & Heller 255,237 Cotton stalk and weed cutter, J. H. Vannoy. 255,237 Cotton whipper, R. H. Goldsmith. 255,236 Cutton whipper, R. H. Goldsmith. 255,236 Cutton whipper, R. J. Narneth. 255,236 Cuttin cord tightener, F. J. Werneth. 255,3	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, J. Omsted 255,304 Lamp, electric, J. Omsted 255,305 Lamp, electric, A. G. Waterhouse. 255,223 Lamp, electric, E. Weston 255,223 Lamp, electric, E. Weston 255,223 Lamp, electric, E. Weston 255,203 Lamps, absorbent for electric, W. L. Voelker 255,203 Lamps, globe supporter for electric, Tregoning & 255,202 Light. See Drop light. 255,212 Locomotive frames, manufacture of, C. T. Parry. 255,233 Magnet. electro, E. Weston 255,303 Magnet. electro, E. Weston 255,303 Mashing mait and mait substitutes, method of 255,303 Mashing mait and mait substitutes, method of 255,303 Matches, manufacture of friction. H. H. Baker 255,033 Mill. See Cane mill. Grinding mill. Windmill. Motor. See Churn motor. Ratchet motor. Movers and reapers, cutter bar for, A. M. Lackey 253,337 Musicsheetfor orguinettes, L. Brauer 255,264 Oatmeal machine, A. Heinz 255,204 Oatmeal machine, A. Heinz 255,264 Oatmeal machine, A. Heinz 255,264 Padlock, permutation, C. P. Grout
 done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical instruction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fay of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appearance of gold? A. Tbe lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The following are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum juniper, each 13 ounces, wine spirit, 12 ounces. 3. Gamboge, ½ ounce; aloes, 1½ ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they require to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4. How is the lacquer made and applied on the gilt moulding known as lacquer moulding, the leaf used in making it being tin foil? A. The lacquer ordinarily employed is composed of an alcoholic shellac solution colored with turmeric and annatto. 5. Is sheet zince as pure as the commercial (cast) zinc found in the market in the shape of slabs and pigs; or is the shape alloyed with lead or other metal; and if so, in what proportion? A. No; it usually contains small quantities of an gravity battery, may the difficulty be overcome same as in the Grove battery, by keeping the zincs amalgamated, or will the mercury be likely to drop from the zinc on to the copper and interfere with the action? A. Amalgamation of the zinc is useless in the sulph	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10, 1882. These volumes give a Vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves. \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the art of cooking. Both qualifications are shown in the "Apple. dore." The numerous recipes are plainly and tersely put; and the author claims to have tested and approved them all. REPORT TO THE STATE BOARD OF HEALTH ON METHODS OF SEWERAGE FOR CTITES AND VILLAGES IN THE STATE OF NEW YORK. By James T. Gardner. Albany: Weed, Parsons & Co. Paper, pp. 15. Recommends the separate system of sewers for large towns with proper water supplies, and dry removal for villages, hamlets, and isolated dwellings. ARTISTIC HOMES IN CITY AND COUNTRY. By Albert W. Fuller. Boston: James R. Osgood & Co. 	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het-field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 Carriage spring, J. E. Bell. 255,575 Carriage top, R. J. Parrett 255,328 Carriage top, R. J. Parrett 255,325 Carriage top, R. J. Parrett 255,325 Carriage top, R. J. Parrett 255,325 Chain machine, W. A. Reid 255,402 Chain. See Rocking chair. Chuck lathe, S. J. Kirk 255,319 Churn dasher, T. A. Miller 255,321 Chok cases, manufacturing celuloid, R. T. Triplett 255,325 Clock cases, manufacturing celuloid, R. T. Triplett 255,326 250 Collar, horse, J. Straus. 255,326 250 Coloring matter, manufacture of blue, J. H. Stebbins, Jr. 255,300 255,100 Cotton implement for siding and thinning, Dickert & Heller 255,230 250 Cotton, implement for siding and thinning, Dickert & Heller 255,237 250 Cotton stalk and weed cutter, J. H. Vannoy. 255,237 250 Cotton whipper, R. H. Goldsmith. 255,236 255,237 Couton whipper, R. H. Goldsmith. 255,236 255,237 Couton whipper	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, J. Oimsted. 255,304 Lamp, electric, J. Oimsted. 255,305 Lamp, electric, A. G. Waterhouse. 255,223 Lamp, electric, E. Weston 255,223 Lamp, electric, E. Weston 255,223 Lamp, electric, E. Weston 255,225 Lamps, absorbent for electric, W. L. Voelker 255,203 Lamps, globe supporter for electric, Tregoning & 255,212 Light. See Drop light. 255,212 Locomotive frames, manufacture of, C. T. Parry. 255,323 Mashing mait and mait substitutes, method of 255,333 Mashing mait and mait substitutes, method of 255,333 Matches, manufacture of friction. H. H. Baker. 255,033 Matches, manufacture of friction. H. H. Baker. 255,333 Matches, manufacture of friction. H. H. Baker. 255,332 Mill. See Cane mill. Grinding mill. Windmill. Motor. Motor. See Churn motor. Ratchet motor. Mowers and reapers, cutter bar for, A. M. Lackey 255,337 Musicsheetfor orguinettes, L. Brauer 255,264 Oatmeal machine, A. Heinz 255,267 Oir concentrator and separator. J. Garvin. 255,2
 done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical instruction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fay of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as a mountings for optical instruments, etc., the appearance of gold? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The following are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac, and gun juniper, each 12 ounces; wine spirit, 12 ounces. 3. Gamboge, ½ ounce; aloes, 1½ ounce; shellac, and gun juniper, each 12 ounces; wine spirit, 12 ounces. 3. Gamboge, ½ ounce; aloes, 1½ ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they require to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4 How is the lacquer made and applied on the gilt moulding known as lacquer moulding, the leaf used in making it being tin foil? A. The lacquer ordinarily employed is composed of an alcoholic shellac solution of the shape of slabs and pigs; or is the sheet alloyed with lead or other metal; and if so, in what proportion? A. No; it usually contains small quantities of antimony and lead. 6. When impure zinc is used for a gravity battery, may the difficulty be overcome same as in the Grove battery, by keeping the zincs amalgamated, or will the mercury be likely to drop from the zinc on to the copper and interfere with the actio	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. Svo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves. \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the art of cooking. Both qualifications are shown in the "Appledore." The numerous recipes are plainly and tersoly put; and the author claims to have tested and approved them all. REPORT TO THE STATE BOARD OF HEALTH ON METHODS OF SEWERAGE FOR CITIES AND VILLAGES IN THE STATE OF NEW YORK. By James T. Gardner. Albany: Weed, Parsons & Co. Paper, pp. 15. Recommends the separate system of sewers for large towns with proper water supplies, and dry removal for villages, hamlets, and isolated dwellings. ARTISTIC HOMES IN CITY AND COUNTRY. By Albert W. Fuller. Boston: James R. Osgood & Co. A selection of sketches, showing plans and perspective views of a number of artisti	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het-field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 Carriage spring, J. E. Bell. 255,575 Carriage top, R. J. Parrett 255,328 Carriage top, R. J. Parrett 255,325 Carriage top, R. J. Parrett 255,325 Carriage top, R. J. Parrett 255,325 Chain machine, W. A. Reid. 255,402 Chain. 255,402 Chuck lathe, S. J. Kirk 255,319 Churn dasher, T. A. Miller 255,321 Churn dasher, T. A. Miller 255,320 255,321 Clock cases, manufacturing celuloid, R. T. Triplett 255,325 Colker, sess, manufacture of blue, J. H. Stebbins, Jr. 255,326 Collar, horse, J. Straus. 255,320 Coltoning matter, manufacture of blue, J. H. Stebbins, Jr. 255,320 Contourgauge and tool, H. C. Barker 255,320 Cotton, implement for siding and thinning, Dickert & Heller 255,231 Cotton, implement for siding and thinning, Dickert & Heller 255,237 Couton stak and weed cutter, J. H. Vannoy 255,237 Couton whipper, R. H. Goldsmith 255,236 Cuttin cord tightener, F. J. Werneth	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, J. Oimsted. 255,304 Lamp, electric, J. Oimsted. 255,316 Lamp, electric, A. G. Waterhouse. 255,223 Lamp, electric, E. Weston 255,223 Lamp, electric, E. Weston 255,223 Lamp, electric, E. Weston 255,223 Lamp, globe supporter for electric, Tregoning & 255,225 Laimer. 255,212 Light. See Drop light. 255,212 Locomotive frames, manufacture of, C. T. Parry. 255,323 Magnet. electro, E. Weston 255,333 Mashing malt and mait substitutes, method of and apparatus for, G. Seitz 255,333 Matches, manufacture of friction. H. H. Baker. 255,332 Meter. See Electrical meter. Waitemetro. 255,343 Mill. See Cane mill. Grinding mill. Windmill. Motor. 255,243 Musticsheet for orguinettes, L. Braner 255,243 Oil can, L. A. Harker. 255,246
done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical in- struction for obtaining the various colors in th is way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appear- ance of gold? A. Tbe lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The follow- ing are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum junjer, each 12 ounces: wine spirit, 12 ounces. 3. Gamboge, ½ ounce; aloes, 1½ ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they re- quire to be heated in an oven to harden the lacquer Several coatings of a thin lacquer give the best results. 4 How is the lacquer made and applied on the gilt moulding known as lacquer moulding, the leaf used in making it being tin foil? A. The lacquer ordinarily employed is composed of an alcoholic shellac solution colored with turmeric and annatto. 5. Is sheet alloyed with lead or other metal; and if so, in what proportion? A. No; it usually contains small quantities of antimony and lead. 6. When impure zinc is used for a gravity battery, may the difficulty be overcome same as in the Grove battery, by keeping the zincs amalgamated, or will the mercury be likely to drop from the zinc on to the copper and interfere with the action? A. Amalga- mation of the zinc is useless in the subphate of copper gravity form of battery. (32) G. C. W. writes: In your las	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. Svo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves. \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the art of cooking. Both qualifications are shown in the "Appledore." The numerous recipes are plainly and tersoly put; and the author claims to have tested and approved them all. REPORT TO THE STATE BOARD OF HEALTH ON METHODS OF SEWERAGE FOR CITIES AND VILLAGES IN THE STATE OF NEW YORK. By James T. Gardner. Albany: Weed, Parsons & Co. Paper, pp. 15. Recommends the separate system of sewers for large towns with proper water supplies, and dry removal for villages, hamlets, and isolated dwellings. ARTISTIC HOMES IN CITY AND COUNTRY. By Albert W. Fuller. Boston: James R. Osgood & Co. Aselection of sketches, showing plans and perspective views of a number of artistic	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het-field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 Carriage spring, J. E. Bell 255,575 Carriage top, R. J. Parrett 255,328 Carriage top, R. J. Parrett 255,325 Carriage top, R. J. Parrett 255,325 Carriage top, R. J. Parrett 255,325 Chain machine, W. A. Reid 255,402 Chain machine, W. A. Reid 255,325 Chuck Lathe, S. J. Kirk 255,319 Churn dasher, T. A. Miller 255,321 Churn dasher, T. A. Miller 255,325 255,320 Clock cases, manufacturing celuloid, R. T. Triplett 255,325 Colker, sess, manufacture of blue, J. H. Stebbins, Jr. 255,326 Coloring matter, manufacture of blue, J. H. Stebbins, Jr. 255,320 Colton gauge and tool, H. C. Barker 255,320 Cotton stalk and weed cutter, J. H. Vannoy. 255,227 Cotton, implement for siding and thinning, Dickert & Heller 255,227 Cotton whipper, R. H. Goldsmith 255,226 Cotton whipper, R. H. Goldsmith 255,236 Cuttin cord tightener, F. J. Werneth 255,236 Cuttin cord tightener, F. J. Werneth <td>Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, J. Oimsted. 255,304 Lamp, electric, A. G. Waterhouse. 255,223 Lamp, electric, E. Weston 255,225 Lamp, globe supporter for electric, Tregoning & 255,225 Laimer. 255,212 Light. See Drop light. 255,212 Locomotive frames, manufacture of, C. T. Parry. 255,223 Lubricator, A. W. Swift. 255,333 Magnet. electro, E. Weston 255,333 Magnet. electro, E. Weston 255,333 Mashing malt and mait substitutes, method of and apparatus for, G. Seitz 255,333 Matches, manufacture of friction. H. H. Baker. 255,323 Matches, anaufacture of friding mill. Windmill. Motor. 255,263 Mill, See Cane mill. Grinding mill. Windmill. Wotor. 255,285 Musticsheet for orguinettes, L. Braner 255,283 Musticsheet for orguinettes, L. Braner 255,285 Oil can, L. A. Harker. 255,264 Oatmeal machine, A. Heinz</td>	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, J. Oimsted. 255,304 Lamp, electric, A. G. Waterhouse. 255,223 Lamp, electric, E. Weston 255,225 Lamp, globe supporter for electric, Tregoning & 255,225 Laimer. 255,212 Light. See Drop light. 255,212 Locomotive frames, manufacture of, C. T. Parry. 255,223 Lubricator, A. W. Swift. 255,333 Magnet. electro, E. Weston 255,333 Magnet. electro, E. Weston 255,333 Mashing malt and mait substitutes, method of and apparatus for, G. Seitz 255,333 Matches, manufacture of friction. H. H. Baker. 255,323 Matches, anaufacture of friding mill. Windmill. Motor. 255,263 Mill, See Cane mill. Grinding mill. Windmill. Wotor. 255,285 Musticsheet for orguinettes, L. Braner 255,283 Musticsheet for orguinettes, L. Braner 255,285 Oil can, L. A. Harker. 255,264 Oatmeal machine, A. Heinz
 done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical instruction for obtaining the various colors in th is way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appearance of gold? A. Tbe lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The following are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; shifton, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gun junjer, each 18 ounces: wine spirit, 10 pints. 9. Turmeric, 1 gound; annatto, and gamboge, each 4 ounce; shells and 18 ounces; wine spirit, 1 gallon. For other formula, see page 209, vi kliv. See that the finished articles are small they require to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4 How is the lacquer made and applied on the gilt moulding known as lacquer moulding, the leaf used in marking it being tin foil? A. The lacquer ordinarily with lead or other metal; and if so, in what proportion? A. No; it usually contains small quantities of antimony and lead. 6. When impure zinc is used for a gravity battery, may the difficulty be overoome same as in the copper and interfere with the action? A. Amalganation of the zinc is useless in the subplate of copper and interfere with the action? A. Amalganation of battery. (32) G. C. W. writes: In your last issue for no not be oxidized at all (malleable iron)? A. Iron is much more easily oxidized than the nobler metals. Fung the cicken worken time or your base, with the action? A. Amalganation of the zinc is useless in the subplate of copper and interfere with the action? A. Amalganation of the zinc is useles in	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. Svo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves. \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the art of cooking. Both qualifications are shown in the "Appledore." The numerous recipes are plainly and tersely put; and the author claims to have tested and approved them all. REPORT TO THE STATE BOARD OF HEALTH ON METHODS OF SEWERAGE FOR CITIES AND VILLAGES IN THE STATE OF NEW YORK. By James T. Gardner. Albany: Weed, Parsons & Co. Paper, pp. 15. Recommends the separate system of sewers for large towns with proper water supplies, and ery removal for villages, hamlets, and isolated dwellings. ARTISTIC HOMES IN CITY AND COUNTRY. By Albert W. Fuller. Boston: James R. Osgood & Co. A selection of sketches, showing plans and perspective views of a number of artistic villas, cottages, city homes, a ch	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het-field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 Carriage spring, J. E. Bell. 255,575 Carriage top, R. J. Parrett 255,328 Carriage top, R. J. Parrett 255,325 Carriage top, R. J. Parrett 255,325 Carriage top, R. J. Parrett 255,325 Chain machine, W. A. Reid 255,402 Chain machine, W. A. Reid 255,325 Chuck Lathe, S. J. Kirk 255,319 Churn dasher, T. A. Miller 255,320 Clock cases, manufacturing celuloid, R. T. Triplett 255,325 255,220 Clock cases, manufacturing celuloid, R. T. Triplett 255,326 Color, C. H. Olson 255,112 Colar, horse, J. Straus 255,200 Coloring matter, manufacture of blue, J. H. Stebbins, Jr. 255,200 255,100 Cotton, implement for siding and thinning, Dickert Heller 255,235 255,201 Cotton, stak and weed cutter, J. H. Vannoy. 255,273 Couton stak and weed cutter, J. H. Vannoy. 255,273 Couton whipper, R. H. Goldsmith 255,263 Cotton whipper, R. B. Cullum 255,285 Cotton whipper, R. B. Cullum	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, J. Oimsted. 255,304 Lamp, electric, A. G. Waterhouse. 255,203 Lamp, electric, E. Weston 255,223 Lamp, globe supporter for electric, Tregoning & 255,221 Light. See Drop light. 255,221 Locomotive frames, manufacture of, C. T. Parry. 255,223 Lubricator, A. W. Swift 255,303 Magnet. electro, E. Weston 255,303 Magnet. electro, E. Weston 255,303 Mashing malt and mait substitutes, method of and apparatus for, G. Seitz 255,303 Matches, manufacture of friction. H. H. Baker. 255,032 Matches, manufacture of friding mill. Windmill. Stops Motor. See Churn motor. Ratchet motor. Mowers and reapers, cutter bar for, A. M. Lacker 255,237 Mustesheet for orguinettes, L. Brauer 255,264 255,264 Oat meal machine, A. Heinz 255,265 255,260 Oil can, L. A. Harker. 255,260 255,260 Oil sof burning and
 done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical instruction for obtaining the various colors in th is way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appearance of gold? A. Tbe lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The following are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum junjer, each 18 ounces; wine spirit, 12 ounces. 3. Gamboge, ½ ounce; aloes, 1½ ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they require to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4. How is the lacquer moulding, the leaf used in making it being tin foil? A. The lacquer or dinarily employed is composed of an alcoholic shellac solution of A. No; it usually contains small quantities of an item of the zinc on to the copper and interfere with the action? A. Amalgamation of the zinc is useless in the subplate of copper gravity form of battery. (32) G. C. W. writes: In your last issue for a gravity battery, may the difficulty be overcome same as in the Grove battery, by keeping the zincs amalgamated, or one mercury be likely to drop from the zinc on to the copper and interfere with the action? A. Amalgamation of the zinc is useless in the subplate of copper gravity form of battery. (32) W. K. asks: How	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves. \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the art of cooking. Both qualifications are shown in the "Appledore." The numerous recipes are plainly and tersoly put; and the author claims to have tested and approved them all. REPORT TO THE STATE BOARD OF HEALTH ON METHODS OF SEWERAGE FOR CITTES AND VILLAGES IN THE STATE OF NEW YORK. By James T. Gardner. Albany: Weed, Parsons & Co. Paper, pp. 15. Recommends the separate system of sewers for large towns with proper water supplies, and dry removal for villages, hamlets, and isolated dwellings. ARTISTIC HOMES IN CITY AND COUNTRY. By Albert W. Fuller. Boston: James R. Osgood & Co. A selection of sketches, showing plans and perspective views of a number of artistic villas, cottages, city homes, a ch	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het-field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 Carriage spring, J. E. Bell. 255,375 Carriage top, R. J. Parrett 255,328 Carriage top, R. J. Parrett 255,325 Carriage top, R. J. Parrett 255,325 Carriage top, R. J. Parrett 255,325 Chain machine, W. A. Reid 255,326 Choin machine, W. A. Reid 255,326 Churn dasher, T. A. Miller 255,320 Clock cases, manufacturing celuloid, R. T. Triplett 255,325 Clock cases, manufacturing celuloid, R. T. Triplett 255,326 255,206 Coloring matter, manufacture of blue, J. H. Stebbins, J	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, J. Omsted
 done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical instruction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fay of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appearance of gold? A. Tbe lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The following are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum juniper, each 12 ounces: wine spirit, 12 ounces. 3. Gamboge, ½ ounce; aloes, 1½ ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they require to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4. How is the lacquer model and applied on the gilt moulding known as lacquer moulding, the leaf used in making it being tin foil? A. The lacquer ordinarily employed is composed of an alcoholic shellac solution value deater, but it usually contains small quantities of antimony and lead. 6. When impure zinc is used for a gravity battery, may the difficulty be overcome same as in the Grove battery, by keeping the zincs amalgamated, or the cooper and interfere with the action? A. Amalgamation of the zinc is useless in the subplate of copper gravity form of battery. (32) G. C. W. writes: In your last issue you gave recipes to oxilize gold, silver, and brass. Will the mereury be likely to drop from the zinc on to the cooper and inter	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a Vast amount of information with regard to the worl's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the worl's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves. \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the att of cooking. Both qualifications are shown in the "Appledore." The numerous recipes are plainly and tersely put; and the author claims to have tested and approved them all. REPORT TO THE STATE BOARD OF HEALTH ON METHODS OF SEWERAGE FOR CITTES AND VILLAGES IN THE STATE OF NEW YORK. By James T. Gardner. Albany: Weed, Parsons & Co. Paper, pp. 15. Recommends the separate system of sewers for large towns with proper water supplies, and ery removal for villages, hamlets, and isolated dwellings. ARTISTIC HOMES IN CITY AND COUNTRY. By Albert W. Fuller. Boston: James R. Osgood & Co. A selection of sketches, showing plans and perspective views of a number of artistic	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 255,375 Carriage spring, J. E. Bell. 255,375 Carriage top, R. J. Parrett. 255,375 Chain machine, W. A. Reid. 255,402 Chair. See Trace carrier. 255,173 Churn dasher, T. A. Miller. 255,319 Churn motor, Schott & Leepy. 255,121 Cligar lighter, A. C. Moss 255,325 Clock cases, manufacturing celuloid, R. T. Triplett 255,326 Colar, norse, J. Straus. 255,226 Coloring matter, manufacture of blue, J. H. Stebbins, Jr. 255,320 Cotton, implement for siding and thinning, Dickert & Heller 255,320 Cotton, implement for siding and thinning, Dickert & Heller 255,325 Cotton stalk and weed cutter, J. H. Vannov. 255,227 Coupling. Sce Hose coupling. 255,226 Cutton whipper, R. H. Goldsmith. 255,256 Cutton whipper, R. J. Calum 255,256 Cutter, See Bog cutter. Cotton stalk and weed Cutter, See Bog cutter. Cotton stalk and weed Cu	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, J. Oimsted 255,304 Lamp, electric, J. Oimsted 255,305 Lamp, electric, E. Weston 255,223 Lamp, electric, E. Weston 255,223 Lamp, electric, E. Weston 255,225 Lamp, electric, E. Weston 255,225 Lamps, absorbent for electric, W. L. Voelker 255,221 Lamps, globe supporter for electric, Tregoning & 255,222 Laitmer 255,222 Locomotive frames, manufacture or, C. T. Parry. 255,323 Magnet, electro, E. Weston 255,335 Mashing mait and mait substitutes, method of and apparatus for, G. Seitz 255,303 Matches, manufacture of friction. H. H. Baker. 255,323 Meter. See Electrical meter. Water meter. Milk pan cover, C. C. Fairlamb. 255,236 Mill. See Cane mill. Grinding mill. Windmill. Motor. See Churn motor. Ratchet motor. Mowers and reapers, cutter bar for, A. M. Lacker 255,337 Mustosheet for orguinettes, L. Brauer 255,204 031 031, manufacture of, G. W. Banker 255,204 Oil, manufacture of, G. W. Banker 255,204 031 035,005 035,006 Oils for burning
 done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical instruction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appearance of gold? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and <i>vice versa</i>. The following are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 200, vol. Xliv. See that the finished articles are elar, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they require to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4. How is the lacquer made and applied on the glit molding known as lacquer moulding, the leaf used in making it being tin foil? A. The lacquer ordinarily employed is composed of an alcoholic shellac solution colored with turmeric and annatto. 5. Is sheet alloyed with lead or other metal; and if so, in what proportion? A. No; it usually contains small quantities of antimony and lead. 6. When impure zinc is used for a gravity battery, may the difficulty be overcome same as in the Grove battery, by keeping the zincs amalgamated, or will the mercury be likely to drop from the zinc on to the copper and interfere with the action? A. Amalgamation of the zinc is useless in the subplate of copper and interfere with the action? A. Amalgamation of the zinc is useless in the subplate of copper and interfere with the action? A. Amalgamatis do nor wi	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. Svo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the work's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves. \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the art of cooking. Both qualifications are shown in the "Appledore." The numerous recipes are plainly and terscly put; and the author claims to have tested and approved them all. REPORT TO THE STATE BOARD OF HEALTH ON METHODS OF SEWERAGE FOR CITTIES AND VILLAGES IN THE STATE OF NEW YORK. By James T. Gardner. Albany: Weed, Parsons & Co. Paper, pp. 15. Recommends the separate system of severs for large towns with proper water supplies, and cry removal for villages, hamlets, and isolated dwellings. ARTISTIC HOMES IN CITY AND COUNTRY. By Albert W. Fuller. Boston: James R. Osgood & Co. A selection of sketches, showing plans and perspective views of a number of artisti	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 255,375 Carriage spring, J. E. Bell. 255,375 Carriage top, R. J. Parrett. 255,375 Chain machine, W. A. Reid. 255,402 Chair. See Trace carrier. 255,173 Churn dasher, T. A. Miller. 255,319 Churn motor, Schott & Leepy. 255,121 Charn machine, K. J. Kirk. 255,325 Clock cases, manufacturing celuloid, R. T. Trip- lett 255,325 Colker cases, manufacture of blue, J. H. Step- bins, Jr. 255,320 Coloring matter, manufacture of blue, J. H. Step- bins, Jr. 255,320 Contourgauge and tool, H. C. Barker. 255,320 Cotton, implement for siding and thinning, Dick- ert & Heller 255,320 Cotton sheller, M. S. Cook 255,100 Cotton stalk and weed cutter, J. H. Vannoy. 255,235 Cotton stalk and weed cutter, J. H. Vannoy. 255,237 Coupling. See Hose coupling. Shaft coupling. Fipe coupling. Cotton whipper, R. H. Goldsmith 255,236 Cutton whipper, R. B. Callum	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, J. Omsted. 255,186 Lamp, electric, A. G. Waterhouse. 255,233 Lamp, electric, E. Weston A. Curtis. 255,225 Lamp, appendent, E. Weston A. Curtis. 255,225 Lamps, absorbent for electric, W. L. Voelker. 255,203 Lamps, globe supporter for electric, Tregoning & 255,202 Lamps, globe supporter for electric, Tregoning & 255,202 Lumps, globe supporter for electric, Tregoning & 255,202 Lubricator, A. W. Swift. 255,305 Magnet electro, E. Weston 255,305 Mashing malt and mait substitutes, method of and apparatus for, G. Seitz. 255,005 Matches, manufacture of friction. H. H. Baker. 255,005 Milk pan cover, C. C. Fairlamb. 255,203 Milk pan cover, C. C. Fairlamb. 255,204 Oatmeal machine, A. Hei
 done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical instruction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appearance of gold? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and <i>vice versa</i>. The following are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounce; shellac, and gum juniper, each 12 ounces; while spirit, 12 ounces. 3. Gamboge, ½ ounce; aloes, 1½ ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. XIv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they require to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4 How is the lacquer moulding, the leaf used in making it being tin foil? A. The lacquer ordinarily employed is composed of an alcoholic shellac solution colored with turmeric and annatto. 5. Is sheet alloyed with lead or other metal; and if so, in what proportion? A. No; it usually contains small quantities of antimony and lead. 6. When impure zinc is used for a gravity battery, may the difficulty be overcome same as in the Grove battery, by keeping the zinces amalgamated, or will the mercury be likely to drop from the zinc on to the coper and interfere with the action? A. Amalgamation of the zinc is useless in the subplate of coper gravity form of battery. (32) W. K. asks: How can I dissolve bronze powdersos that I can put it on papi	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. Svo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves. \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the art of cooking. Both qualifications are shown in the "Appledore." The numerous recipes are plainly and tersely york. By James T. Gardner. Albany: Weed, Parsons & Co. Paper, pp. 15. Recommends the separate system of sewers for large towns with proper water supplies, and cry removal for villages, hamlets, and isolated dwellings. ARTISTIC HOMES IN CITY AND COUNTRY. By Albert W. Fuller. Boston: James R. Osgood & Co. A selection of sketches, showing plans and perspective views of a number of artistic villas, cottages, city homes, a church, with some interior views and explanations. THE STRUCTURE OF THE COTTON FIBER IN ITS RELATION TO TECHNICAL APPLICATIONS. By F.	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het-field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,339 Carriage top, R. J. Parrett 255,328 Carriage top, R. J. Parrett 255,328 Chair. See Trace carrier. 254,349 Chair. See Rocking chair. 255,373 Churn dasher, T. A. Miller. 255,320 Clock cases, manufacturing celuloid, R. T. Triplett 255,320 Clock cases, manufacturing celuloid, R. T. Triplett 255,320 Clock cases, manufacture of blue, J. H. Stebbins, Jr. 255,300 Collar, horse, J. Straus. 255,300 Coloring matter, manufacture of blue, J. H. Stebbins, Jr. 255,320 Cotton urgauge and tool, H. C. Barker. 255,300 Cotton stalk and weed cutter, J. H. Vannoy. 255,230 Cotton stalk and weed cutter, J. H. Vannoy. 255,252 Cotton whipper, R. H. Goldsmith. 255,253 Cotton whipper, R. H. Goldsmith. 255,253 Couton whipper, R. B. Callum 255,256 Cotton whipper, R. H. Goldsmith. 255,256 Cotton whipper, R. H. Goldsmith. 255,252 Cotton whipper, R. B	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, J. Omsted. 255,304 Lamp, electric, A. G. Waterhouse. 255,232 Lamp, electric, E. Weston 255,232 Lamp, electric, E. Weston & Curtis. 255,232 Lamp, electric, E. Weston & Curtis. 255,232 Lamp, absorbent for electric, W. L. Voelker 255,232 Lamps, absorbent for electric, Tregoning & 255,202 Lamps, absorbent for electric, Tregoning & 255,302 Lubricator, A. W. Swift. 255,303 Magnet. electro, E. Weston 255,303 Mashing malt and mait substitutes, method of and apparatus for, G. Seitz. 255,003 Matches, manufacture of friction. H. H. Baker. 255,003 Matches, manufacture of friction. H. H. Baker. 255,003 Matches, manufacture of friction. H. H. Baker. 255,003 Matches, manufacture of for A. M. Lacker 255,003 Mik pan cover, C. C. Fairlamb. 255,203 Musicsheet for orguinettes, L. Brauer 255,204 Oatmeal machine, A. Heinz. 255,205 Ore concentrator and separator. J. Garvin. 255,109 Oil, manufacture of, G. W. Banker 255,204
 done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical instruction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appearance of gole? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The following are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum juniper, each 12 ounces: wine spirit, 12 ounces. 3. Gamboge, ½ ounce; aloes, 1½ ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they require to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4. How is the lacquer modeling, the leaf used in making it being tin foil? A. The lacquer ordinarily employed is composed of an alcoholic shellac solution colored with turmeric and annatto. 5. Is sheet zinc as pure as the commercial (cast) zinc found in the market in the shape of slabs and pigs; or is the sheet alloyed with lead or other metal; and if so, in what proportion? A. No; it usually contains small quantities of an timony and lead. 6. When impure zinc is used for a gravity battery, may the difficulty be overcome same as in the Grove battery, by keeping the zincs amalgamated, or will the mercury be likely to drop from the zinc on to the copper and interfere with the action? A. Amalgamation of the zinc is useless in the subpate of	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, elvertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves, \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the art of rooking. Both qualifications are shown in the "Appledore." The numerous recipes are plainly and tersely put; and the author claims to have tested and approved them all. REPORT TO THE STATE BOARD OF HEALTH ON METHODS OF SEWERAGE FOR CITTES AND VILLAGES IN THE STATE OF NEW YORK. By James T. Gardner. Albany: Weed, Parsons & Co. Paper, pp. 15. Recommends the separate system of sewers for large towns with proper water supplies, and dry removal for villages, hamlets, and isolated dwellings. ARTISTIC HOMES IN CITY AND COUNTRY. By Albert W. Fuller. Boston: James R. Osgood & Co. A selection of sketches, showing plans and perspective views of a number of artistic villas, cottages, city homes, a ch	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,309 Carriage top, R. J. Parrett 255,328 Carriar, See Trace carrier. 255,402 Chair. See Rocking chair. 255,402 Chuck. Lathe, S. J. Kirk 255,173 Churn dasher, T. A. Miller 255,329 Clock cases, manufacturing celuloid, R. T. Trip- lett 255,320 Clotk cases, manufacturing celuloid, R. T. Trip- lett 255,325 Coltar, horse, J. Straus. 255,326 Coltar, horse, J. Straus. 255,326 Contourg auge and tool, H. C. Barker 255,326 Contourgauge and tool, H. C. Barker. 255,326 Cotton sheller, M. S. Cook 255,320 Cotton stak and weed cutter, J. H. Vannoy. 255,232 Cort stak and weed cutter, J. H. Vannoy. 255,237 Cotton stak and weed cutter, J. H. Vannoy. 255,237 Coupling. See Hose coupling. Shaft coupling. Pipe coupling. 255,238 Cutting machine, A. Marus & Prior. 255,238 Cutting machine, A. Warth. 255,236 Cutting machine, A. Warth.	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, J. Olmsted. 255,304 Lamp, electric, A. G. Waterhouse. 255,232 Lamp, electric, E. Weston A. Curtis. 255,232 Lamp, electric, E. Weston A. Curtis. 255,232 Lamp, electric, E. Weston A. Curtis. 255,232 Lamps, absorbent for electric, W. L. Voelker. 255,212 Lamps, ablobe supporter for electric, Tregoning & 255,202 Lamps, ablobe supporter for electric, Tregoning & 255,202 Lumps, ablobe supporter for electric, Tregoning & 255,203 Mathes, manufacture of, C. T. Parry. 255,232 Lubricator, A. W. Swift. 255,303 Matches, manufacture of friction. H. H. Baker. 255,032 Matches, manufacture of friction. H. H. Baker. 255,035 Matches, manufacture of friction. H. H. Baker. 255,233 Milk pan cover, C. C. Fairlamb. 255,236 Mill. See Cane mill. Grinding mill. Windmill. Motor. See Churn motor. Ratchet motor. Mowers and reapers, cutter bar for, A. M. Lacker 255,236 Oil can, L. A. Harker. 255,204 Oil can, L. A. Harker. 255,206 Ore concentrator and separator. J. Garvin. 255,
 done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical instruction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appearance of gole? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The following are good receipts for some of these lacquers: 1. Seedlac. Aragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gum juniper, each 12 ounces; wine spirit, 12 ounces. 3. Gamboge, j-j-g ounce; aloes, 11-g ounce, shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are clear, heat them as hot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they require to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4. How is the lacquer modeling, the leaf used in making it being tin foll? A. The lacquer ordinarily employed is composed of an alcoholic shellac solution colored with turmeric and annatto. 5. Is sheet zinc as pure as the commercial (cast) zinc found in the market in the shape of slabs and pigs; or is the sheet alloyed with lead or other metal; and if so, in what proportion? A. No; it usually contains small quantities of an timony and lead. 6. When impure zinc is used for a gravity battery, may the difficulty be overcome same as in the Grove battery, by keeping the zincs amalgamated, or will the mercury be likely to drop from the zinc on to the copper and interfere with the action? A. Amalgamatol of the zinc is useless in the subpate of cop	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves, \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the art of oooking. Both qualifications are shown in the "Appledore." The numerous recipes are plainly and tersely put; and the author claims to have tested and approved them all. REPORT TO THE STATE BOARD OF HEALTH ON METHODS OF SEWERAGE FOR CITIES AND VILLAGES IN THE STATE OF NEW YORK. By James T. Gardner. Albany: Weed, Parsons & Co. Paper, pp. 15. Recommends the separate system of sewers for large towns with proper water supplies, and ary removal for villages, hamlets, and isolated dwellings. ARTISTIC HOMES IN CITY AND COUNTRY. By Albert W. Fuller. Boston: James R. Osgood & Co. A selection of sketches, showing plans and perspective views of a number of artistic villas, cottages, city homes, a ch	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,339 Carriage top, R. J. Parrett. 255,328 Carriare or, R. J. Parrett. 255,329 Carriare or, R. J. Parrett. 255,329 Chair. See Rocking chair. 255,402 Chuck. lathe, S. J. Kirk. 255,321 Churn dasher, T. A. Miller. 255,320 Clock cases, manufacturing celuloid, R. T. Triplet 255,320 Clock cases, manufacturing celuloid, R. T. Triplet 255,320 Coltar, horse, J. Straus. 255,320 Coltong matter, manufacture of blue, J. H. Stebbins, Jr. 255,320 Cotton, implement for siding and thinning, Dickeert & Heller 255,320 Cotton, implement for siding and thinning, Dickeert & Heller 255,232 Cotton stalk and weed cutter, J. H. Vannoy. 255,235 Cotton whipper, R. H. Goldsmith. 255,235 Cotton stalk and weed cutter, J. H. Vannoy. 255,235 Cotton whipper, R. H. Goldsmith. 255,236 Cotton whipper, R. H. Goldsmith. 255,236 Cuttin cord tightener, F. J. Werneth. 255,236 <tr< td=""><td>Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, J. Smaxtan 255,303 Lamp, electric, A. G. Waterhouse. 255,186 Lamp, electric, E. Weston 255,231 Lamp, electric, E. Weston 255,232 Lamps, globe supporter for electric, Tregoning & 255,232 Lamps, globe supporter for electric, Tregoning & 255,212 Light. See Drop light. 255,212 Lock. See Firearm lock. Hasp lock. Locomotive frames, manufacture or, C. T. Parry. 255,323 Magnet. electro. E. Weston 255,335 Mashing mail and mait substitutes, method of and apparatus for, G. Seitz. 255,323 Matches, manufacture of friction. H. H. Baker. 255,032 Mathes, manufacture of friction. M. Madmill. Motor. See Electrical meter. 255,233 Milk pan cover, C. C. Fairlamb. 255,234 Milk. See Cane mill. Grinding mill. Windmill. Motor. See Churn motor. Ratchet motor. Mowers and reapers, cutter bar for, A. M. Lackey 255,237 Oil can, L. A. Harker. 255,236 Oatmeal machine, A. Heinz 255,237 Oil can, L. A. Harker. 255,236 Ore concentrator and separator. J. Garvin. 255,236 Oils for burning and illuminating purposes, compound</td></tr<>	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, J. Smaxtan 255,303 Lamp, electric, A. G. Waterhouse. 255,186 Lamp, electric, E. Weston 255,231 Lamp, electric, E. Weston 255,232 Lamps, globe supporter for electric, Tregoning & 255,232 Lamps, globe supporter for electric, Tregoning & 255,212 Light. See Drop light. 255,212 Lock. See Firearm lock. Hasp lock. Locomotive frames, manufacture or, C. T. Parry. 255,323 Magnet. electro. E. Weston 255,335 Mashing mail and mait substitutes, method of and apparatus for, G. Seitz. 255,323 Matches, manufacture of friction. H. H. Baker. 255,032 Mathes, manufacture of friction. M. Madmill. Motor. See Electrical meter. 255,233 Milk pan cover, C. C. Fairlamb. 255,234 Milk. See Cane mill. Grinding mill. Windmill. Motor. See Churn motor. Ratchet motor. Mowers and reapers, cutter bar for, A. M. Lackey 255,237 Oil can, L. A. Harker. 255,236 Oatmeal machine, A. Heinz 255,237 Oil can, L. A. Harker. 255,236 Ore concentrator and separator. J. Garvin. 255,236 Oils for burning and illuminating purposes, compound
 done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical instruction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SOPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as mountings for optical instruments, etc., the appearance of gold? A. The lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The following are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac and gun juniper, each 12 ounces; wine spirit, 12 ounces. 3. Gamboge, ½ ounce; aloes, 1½ ounce; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 200, vol. xliv. See that the finished articles are clear, heat the au shot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they require to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4. How is the lacquer made and applied on the gilt moulding known as lacquer moulding, the leaf used in making it being tin foil? A. The lacquer or dinarily employed is composed of an alcoholic shellac solution colored with turmeric and annatto. 5. Is sheet zinc as pure as the commercial (cast) zinc found in the market in the shape of slabs and pigs; or is the sheet alloyed with lead or other metal; and if so, in what proportion A. No; it usually contains small quantities of antimony and lead. 6. When impure zinc is useles in the subpate of copper and interfere with the action? A. Amalgamation of the zinc is useles in the subpate of copper gravity form of battery. (32) G. C. W. writes: In your last issue for a save boxidize gold	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, divertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves, \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the art of cooking. Both qualifications are shown in the "Appledore." The numerous recipes are plainly and tersely put; and the author claims to have tested and approved them all. REPORT TO THE STATE BOARD OF HEALTH ON METHODS OF SEWERAGE FOR CITTES AND VILLAGES IN THE STATE OF New YORK. By James T. Gardner. Albany: Weed, Parsons & Co. Paper, pp. 15. Recommends the separate system of sewers for large towns with proper water supplies, and ary removal for villages, hamiets, and isolated wellings. ARTISTIC HOMES IN CITY AND COUNTRY. By Albert W. Fuller. Boston: James R. Osgood & Co. A selection of sketches, showing plans and perspective views of a number of artistic	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Cartiage top, R. J. Parrett. 255,332 Carriage top, R. J. Parrett. 255,323 Carriar cop, R. J. Parrett. 255,323 Carriar cop, R. J. Parrett. 255,323 Chair. See Rocking chair. 255,402 Chair. See Rocking chair. 255,312 Churn motor, Schott & Leepy. 255,112 Clock cases, manufacturing celuloid, R. T. Triplett. 255,320 Clock cases, manufacturing celuloid, R. T. Triplett. 255,320 Coltar, horse, J. Straus. 255,320 Coltar, horse, J. Straus. 255,320 Contourgauge and tool, H. C. Barker. 255,330 Contourgauge and tool, H. C. Barker. 255,320 Cotton, implement for siding and thinning, Dickert & Heller 255,232 Cotton whipper, R. H. Goldsmith. 255,232 Coupling. See Hose coupling. Shaft coupling. Cow tall holder, Andrus & Prior. 255,236 Cuttor whipper, R. H. Goldsmith. 255,236 Cuttor we, B. Frazele. 255,336 Cuttor we, B. Frazele. 255,342 Cuttor	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, J. Maxim 255,283 Lamp, electric, A. G. Waterhouse. 255,283 Lamp, electric, E. Weston 255,283 Lamp, electric, E. Weston 255,283 Lamp, electric, Weston & Curtis 255,283 Lamps, globe supporter for electric, Tergoning & 255,282 Lamps, globe supporter for electric, Tregoning & Latimer. Lock. See Firearm lock. Hasp lock. 255,283 Locomotive frames, manufacture of, C. T. Parr. 255,303 Magnet. electro, E. Weston 255,303 Magnet. electro, G. Seitz 255,303 Masthes, manufacture of friction. H. H. Baker 255,035 Masthes, manufacture of friction. H. H. Baker 255,035 Masthes and reapers, cutter bar for, A. M. Lacker 255,246 Milk pan cover, C. C. Fairlamb. 255,246 Milk See Churn motor. Ratchet motor. Mowers and reapers, cutter bar for, A. M. Lacker 255,246 Oil can, L. A. Harker. 255,267 Oil and apparatus for, G. W. Banker 255,264 Palock, S. H. Falke 255,264 Palocker, S. H. Falke 255,109 Oil manufacture of, G. P. Gr
 done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical instruction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No. 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as montings for optical instruments, etc., the appearance of gold? A. Tbe lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The following are good receipts for some of these lacquers: 1. Seedlac. Aragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac, 8 ounces; wine spirit, 1 gallon. For other formula, see page 209, vol. xliv. See that the finished articles are elear, heat them as bot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they require to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4 How is the lacquer made and applied on the gilt malting it being tin foil? A. The lacquer or dinarily employed is composed of an alcoholic shellac solution colored with turmeric and annatot. 5. Is sheet alloyed with lead or other metal; and if so, in what proportion? A. No; it usually contains small quantities of ra gravity battery, may the difficulty be overcome same as in the Grove battery, by keeping the zincs amalgamated, or the copper and interfere with the action? A. Amalgamaton of the zinc is useless in the subplate of copper with the action of ferric chloride, then rines. Will the same method to for tron? If not, what will; or can from not be oxidized at all (malleable tron)? A. Iron is much more easily oxidized than the nobler metals, function of the zinc is useless on the zinc is useless to be discolve bronzs powders on that I can put i	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cattier will be pleased to see his artisticand fantastic, not to say erotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves, \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the art of cooking. Both qualifications are shown in the "Apple. dore." The numerous recipes are plainly and tersely put; and the author claims to have tested and approved them all. REPORT TO THE STATE BOARD OF HEALTH ON METHODS OF SEWERAGE FOR CITIES AND VILLAGES IN THE STATE OF NEW YORK. By James T. Gardner. Albany: Weed, Parsons & Co. Paper, pp. 15. Recommends the separate system of sewers for large towns with proper water supplies, and dry removal for villages, hamlets, and isolated aveilings. ARTISTIC HOMES IN CITY AND COUNTRY. By Albert W. Fuller. Boston: James R. Osgood & Co. A selection of sketches, showing plans and perspective views of a number of artis	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Carbon conductors, manufacture of, H. S. Maxim 255,339 Carriage top, R. J. Parrett 255,352 Carriar cop, R. J. Parrett 255,352 Chair. See Trace carrier. 255,402 Chair. See Rocking chair. 255,402 Churn dasher, T. A. Miller 255,317 Churn motor, Schott & Leepy 255,112 Clock cases, manufacturing celluloid, R. T. Triplet 255,320 Clock cases, manufacturing celluloid, R. T. Triplet 255,320 Coltar, horse, J. Straus 255,320 Coltong matter, manufacture of blue, J. H. Steb- bins, Jr. 255,320 Contourgauge and tool, H. C. Barker 255,320 Cotton, implement for siding and thinning, Dick- ert & Heller 255,232 Cotton, implement for siding and thinning, Dick- ert & Heller 255,232 Cotton whipper, R. H. Goldsmith 255,232 Coupling. See Hose coupling. Shaft coupling. Fipe coupling. 255,236 Cuttor wilper, Andrus & Prior. 255,236 Cuttor wilper, R. H. Goldsmith. 255,236 Cuttor wilper, P. J. Werneth. 255,236 C	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, J. Smsted 255,232 Lamp, electric, A. G. Waterhouse. 255,233 Lamp, electric, Weston 255,235 Lamp, electric, Weston & Curtis 255,225 Lamp, globe supporter for electric, E. Weston 255,632 Lamps, globe supporter for electric, E. Weston 255,632 Lamps, globe supporter for electric, Tregoning & Latimer. Light. See Drop light. 255,221 Locomotive frames, manufacture of, C. T. Parry. 255,233 Magnet. electro, E. Weston 255,333 Magnet. electro, E. Weston 255,333 Mashing mait and mait substitutes, method of and apparatus for, G. Seitz Matches, manufacture of friction. H. H. Baker. 255,332 Meter. See Electrical meter. Water meter. Mill. See Cane mill. Grinding mill. Windmill. Motor. See Charn motor. Ratchet motor. Mowers and reapers, cutter bar for, A. M. Lackey 255,346 Oatmeal machine, A. Heinz 255,250 Ore concentrator and separator. J. Garvin. 255,109 Oli manufacture of, G. W. Banker 255,260 Ore concentrator and separator. J. Garvin. 255,104 Outor ing and illuminating pur
 done with other metals and their alloys, such as brass, etc.? Please refer me to some work giving practical instruction for obtaining the various colors in this way. A. Yes. See "Electrometallurgy," in SUPPLEMENT, No 310. Fey of the brighter colors can be obtained with the baser alloys. 3. What is the best lacquer, and how applied, to give articles of brass, such as montings for optical instruments, etc., the appearance of gold? A. Tbe lacquer to be used depends somewhat upon the color of the brass: for a light brass a dark lacquer is required, and vice versa. The following are good receipts for some of these lacquers: 1. Seedlac. dragon's blood, annatto, and gamboge, each 4 ounces; saffron, 1 ounce; wine spirit, 10 pints. 2. Turmeric, 1 pound; annatto, 2 ounces; shellac, and gun juniper, each 19 ounces; wile spirit, 10 ounces. Turmeric, 1 gound, annatto, and gamboge, each 4 ounce; biol, annatto, and each see page 200, vol. xliv. See that the finished articles are clear, heat them as bot as the hand will bear, and distribute the lacquer quickly with brush or rag at one operation over the surface. When the articles are small they require to be heated in an oven to harden the lacquer. Several coatings of a thin lacquer give the best results. 4 How is the lacquer made and applied on the gilt making, it being tin foil? A. The lacquer or dinarily employed is composed of an alcoholic sheltac solution colored with turmeric and annatto. 5. Is sheet alloyed with lead or other metal; and if so, in what proportion? A, No; it usually contains small quantities of antimony and lead. 6. When impure zinc is used for a gravity battery, may the difficulty be overcome same as in the Grove battery, by keeping the zincs amalgamated, or with the action? A. Amalgamation of the zinc is useless in the subpate of copper arvity form of battery. (32) G. C. W. writes: In your last issue for a gravity battery, may the difficulty be overcome same as in the Grove battery, by keeping the zincs malgamatic, or with the action?	 The translator has done his work rather better than such work is usually done. And the same may be said of the publisher. Admirers of Cautier will be pleased to see his artisticand fantastic, not to say crotic, stories in so fine an English dress. HUBBARD'S NEWSPAPER AND BANK DIRECTORY OF THE WORLD. 2 vols. 8vo, pp. 1228 and 2591. New Haven: H. P. Hubbard. \$10. 1882. These volumes give a vast amount of information with regard to the world's thirty-five thousand periodical publications, and the people who make and read them, together with a directory to some 20,000 American and foreign banking houses, a large number of maps, advertisements, and much statistical matter. Aside from its value to advertisers and in spite of the temporary business utility of much of the information given, the work has, as a whole, a permanent value in that it gives for the first time an elaborate census of the world's periodical literature, and thus exhibits a fairly accurate picture of one phase of human progress. The index of names fills some two hundred closely printed columns. THE APPLEDORE COOK BOOK. New Edition. By M. Parloa. Boston: Andrew F. Graves, \$1.25. Miss Parloa is well known in this city and elsewhere as a skillful cook and successful teacher of the art of cooking. Both qualifications are shown in the "Apple. dore." The numerous recipes are plainly and tersely put; and the author claims to have tested and approved them all. REPORT TO THE STATE BOARD OF HEALTH ON METHODS OF SewERAGE FOR CITTES AND VILLAGES IN THE STATE OF NEW YORK. By James T. Gardner. Albany: Weed, Parsons & Co. Paper, pp. 15. Recommends the separate system of sewers for large towns with proper water supplies, and ery removal for villages, hamlets, and isolated dwellings. ARTISTIC HOMES IN CITY AND COUNTRY. By Albert W. Fuller. Boston: James R. Osgood & Co. A selection of sketches, showing plans and perspective views of a number of artistic villas, cottages, city homes, a	Car starter, Barker & Slauson 255,238 Cars, apparatus for delivering coal from, L. Het- field 255,169 Cartiage spring, J. E. Beil. 255,378 Carriage top, R. J. Parrett. 255,328 Carriage top, R. J. Parrett. 255,375 Chair. See Trace carrier. 256,402 Chair. See Rocking chair. 255,402 Churn dasher, T. A. Miller 255,319 Clock cases, manufacturing celuloid, R. T. Trip- lett. 255,320 Clock cases, manufacturing celuloid, R. T. Trip- lett. 255,320 Coloring matter, manufacture of blue, J. H. Steb- bins, Jr. 255,320 Coloring matter, manufacture of blue, J. H. Steb- bins, Jr. 255,320 Coloring matter, manufacture of blue, J. H. Steb- bins, Jr. 255,320 Cotors stem, A. M. Amos 255,320 Cotors, implement for siding and thinning, Dick- ert & Heller 255,320 Cotton stak and weed cutter, J. H. Vannoy. 255,237 Cotton stak and weed cutter, J. H. Vannoy. 255,237 Coupling. See Hose coupling. Shaft coupling. Pipe coupling. 255,238 Cutting mechanism, S. Danheim. 255,238 Cutting mechanism, S. Danheim. 255,336 Cutting mechanism, S. Danheim.	Lamp, electric, Holcombe & Colborne. 255,171 Lamp, electric, J. Smsted 255,233 Lamp, electric, A. G. Waterhouse. 255,233 Lamp, electric, Weston 255,233 Lamp, electric, Weston & Curtis 255,225 Lamp, globe supporter for electric, Tregoning & 255,263 Lamps, globe supporter for electric, Tregoning & 255,262 Lamps, globe supporter for electric, Tregoning & 255,263 Locomotive frames, manufacture of, C. T. Parry. 255,233 Magnet, electro, E. Weston 255,363 Magnet, electro, E. Weston 255,363 Mashing malt and mait substitutes, method of and apparatus for, G. Seitz Matches, manufacture of friction, H. H. Baker. 255,363 Matches, manufacture of friction, H. H. Baker. 255,363 Matches, manufacture of for, A. M. Lackey 255,373 Muster, See Electrical meter. Water meter. Mill, See Cane mill, Grinding mill. Windmill. Motor. See Churn motor. Ratchet motor. Movers and reapers, cutter bar for, A. M. Lackey 255,324 Oil can, L. A. Harker. 255,205 Ore concentrator and separator, J. Garvin. 255,100 Oven. baker's. H. Falke. 255,204