Business and Personal.

The Charge for Insertion under this head is One Dollar a line for each insertion; about eight words to a line. Advertisements must be received at publication office as early as Thursday morning to appear in next issue.

Notes & Queries

HINTS TO CORRESPONDENTS.

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

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

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 cannot be expected to spend time and labor to obtain such information without remuneration.

Any numbers of the SCIENTIFIC AMERICAN SUPPLEMENT referred to in these columns may be had at this office. Price 10 cents each.

Correspondents sending samples of minerals, etc., for examination should be careful to distinctly mark or label their specimens so as to avoid error in their identification.

(1) S. W. M. asks: 1. What is tea chest lead solder composed of? A. The solder used is said to be composed of 2¼ of lead and 1 of tin fused together. 2. Which is the strongest: two pieces, 2x6, spiked together, or one piece, 4x6, solid? I contend the latter; a friend, the former. A. The latter is the stronger.

(2) M. T. asks: Can you inform me whether glass is now manufactured in a spun state tough and malleable? A. Glass fibers such as you describe have not yet been produced. From the nature of the substance it is not likely that a malleable glass can be produced.

(3) M. A. M. asks: 1. How can I make a flour paste that will not sour? A. You will find good receipts for pastes under Cements, etc., in SUPPLEMENT, No 158. 2. Have you ever published anything on newspaper stereotyping—how to prepare matrix and paste for that purpose? A. See the stereotype process, page 4938, SUPPLEMENT, No. 310.

(4) R. R. asks: Can you give the usual proportions of glue, sirup, and glycerine used in making printer's rollers? Also, can you suggest any remedy to make the rollers less tacky or possess less suction in moist, humid weather? A. A good printing roller is prepared as follows: Weigh out equal quantities of good white glue and concentrated glycerine. Soften the glue by soaking it in a small quantity of soft, cold water over night, then heat it over the water bath (a strong salt water bath is preferable) with occasional stirring for five hours. Have the moulds (brass) well oiled, and give the composition plenty of time to harden in them. In stirring avoid beating air bubbles into the composition.

(5) T. H. J. asks: 1. How can I deposit a thin coating of copper on soft metal plates? The plates are composed of lead, tin, and type metal, and are about one-sixteenth inch thick and 1⅞ inch diameter. I wish to face them with copper on one side only. Can you tell me how to prepare the solution? A. Coat the parts not intended to receive a deposit with wax or asphalt varnish; wind a copper wire tightly around the edge of the plate, so as to make a firm electrical connection with the metal; then clean the surface by submitting it to the action of the wire scratch brush, and immediately connect with the wire proceeding from the zinc plate of the battery, and immerse in the following bath, facing but not touching a plate of clean copper, connected by wire with the copper or carbon of the battery. The bath may be composed of a solution of 2¼ pounds of pure sulphate of copper in a gallon of soft water. The water is first heated, the copper salt dissolved in it, and the bath allowed to cool before using. 2. Also, describe how to construct a cheap battery. A. For details of the construction of batteries see SUPPLEMENTS, Nos. 157, 158, and 159.

(6) F. P. S. asks: 1. Can the magneto-electric machine, described in No. 23, SCIENTIFIC AMERICAN, be used for plating small articles of hardware? If so, would it want to be arranged for "quantity" or "intensity?" A. Yes, for quantity. 2. Does hydrogen gas, when mixed with air, form an explosive compound? A. Yes. 3. If so, what proportion of each is necessary for the most marked results? A. For the pure gases, two volumes of hydrogen and one of oxygen, at the same temperature. 4. Is the explosion of the nature of a collapse or an expansion? A. The temperature accompanying the reaction momentarily expands the aqueous vapor formed beyond the volume of the mixed gases used, and the result is an explosion, not a collapse. 5. What is the explosive force per square inch? A. We have no data at hand on this point. It depends greatly upon the conditions—temperature, pressure, etc.

(7) J. A. B. asks: What is the best kind of oil or oils, or ingredients with oil, to use on canvas tents or wagon covers to make them waterproof? I have used linseed oil and beeswax, but the odor from it in summer is very unpleasant, and in winter it freezes so easy that you cannot handle it without first thawing out, as it will all break to pieces just like glass. What I want is something that will leave it pliable, have as little odor as possible, and will not mildew when rolled up wet or stick together in warm weather. A. You will find the information required under Waterproofing, page 81, vol. xlv.

(8) E. M. asks: 1. Will a furnace grate made of pipe for heating water and making steam get coated and stopped up with lime or other impurities in the water if a constant and forced circulation is maintained? A. If the water contains much lime it would gradually deposit and eventually choke the pipes. 2. If so, is there anything that can be put into the water that will prevent it and keep the pipes clean? I propose to supply my grate with water by attaching to the city water pipe, which will furnish a pressure of 40 pounds to the square inch. A. An examination to ascertain the precise nature of the impurities contained in the water would be necessary to properly answer the question.

(9) G. D. asks: What is the best process for melting platinum on a small scale? I cannot get up heat enough to melt it with charcoal fire. Do you know of a book published on compounding metals that would give the information? A. Platinum is melted in flat lime crucibles in the flame of a blowpipe fed with oxygen and hydrogen. It cannot be melted in any ordinary furnace. For books on metallurgy see addresses of bookdealers in our advertising columns.

(10) D. J. F. asks: How can I make a white ink that will write on black paper or card; and also, how to make a good black ink suitable for card writing? A. You will find good receipts for white and black ink in SUPPLEMENT, No 157.

(11) L. J. asks: Can an iron railroad tie, in your opinion, be made practicable? A. Yes; iron ties are in use.

(12) M. J. K. asks: 1. Can you give me a receipt for making a quickly drying polish or varnish to be applied to small turned articles while in the lathe? I want a hard and glossy surface. A. Dissolve ten ounces shellac in one gallon of wine spirit by gently heating over a water bath and stirring. Let it stand for several days in a covered vessel, then draw off the clear portion from any sediment, for use. 2. Can you give me some method of ebonizing articles of this kind? A. Put the wood for about half an hour into a hot solution of one ounce of logwood extract in a quart of water, and then transfer to a warm solution of one pound of copperas in a gallon of soft water, and let it remain in this bath for several hours. Give the pieces a second dip in the logwood and iron liquors, then rinse and dry.

(13) J. W. C. asks: 1. Will you please give receipt for making a stove polish paste that can be put on a stove when hot or cold, and will give a good polish without much friction? A. Reduce pure graphite to finest flour by grinding it in the moist state. Then mix into a stiff paste with a sufficient quantity of hot water in which has been dissolved perchloride of iron in the proportion of a quarter of a pound chloride to the gallon of water. Let it stand, with occasional stirring, for two weeks before using it. A few drops of oil of almonds or cloves may be added to the paste to cloak any unpleasant odor. 2. Please give me directions for making the liquid insulation that I find on wire on Ruhmkorff coil. Think it is varnish, or something similar. A. Use ordinary alcoholic shellac varnish mixed with enough vermilion to give it a suitable color.

(14) N. J. S. writes: At present the hemp, binder's twine, passing through the spindles of our balling machines, cuts the edges of the hole in deep grooves. The hardest steel bushings are soon cut, and the twine is thereby injured. As an experiment, we want to countersink a porcelain "pot-eye" in the bushing, to obviate this cutting, if possible. What cement will secure this pot-eye in its place, fastening porcelain to iron? A. You had better try some mechanical method of securing the porcelain on the iron; cement cannot always be depended on for such a joint. You can try the following cement: Melt together in an iron vessel over a moderate fire gutta percha and shellac in about equal proportions, and stir well together. Use hot.

(15) H. L. asks: What is meant by the expression "level of the sea?" A. It is the average level of the water of the ocean where it touches the land.

(16) T. S asks how two pieces of broken cast iron can be soldered together. A. See answer to A. G., on this page.

(17) A. G. asks (1) how to solder brass and iron together with soft solder. A. Dissolve zinc in muriatic acid until action ceases. Reduce with water, and apply to the surfaces to be soldered. If the brass and iron are clean there will be no difficulty in soldering them together with a soldering iron or blowpipe. 2. How is the wipe lead joint made? A. See Plumbing, in SUPPLEMENT 309.

(18) O. W. B. asks: How can I get a gold plate off a silver watch? A. If the plate is thin dip it momentarily in a little mercury and rub with a piece of soft chamois leather. Repeat the dipping (in fresh mercury) several times or until the gold color has been removed. Then heat the case until the film of mercury adhering to the silver has been dissipated. The mercury should not be allowed to remain too long in contact with the silver. The case should, of course, be separated from the works before being operated upon.

(19) D. H. D. asks: 1. What kind of carbon is used in Blake's transmitter used in connection with the bell telephone? A. Hard electric light carbon. 2. What kind of spring holds it in contact with the diaphragm of the transmitter? A. A piece of watch spring. 3. Is the diaphragm used in Blake's transmitter the same as that in the bell receiver? A. No; it is thicker. It is made of ordinary Russia stove pipe iron. 4. Why are not the Blake and Edison transmitters virtually the same, as the varying conducting power of the carbons under different pressure seems to be the principle on which both act in the telephone? A. The action is about the same when the Blake is working normally. 5. In what number of the SCIENTIFIC AMERICAN is Blake's transmitter fully described? A. SCIENTIFIC AMERICAN SUPPLEMENT, No. 250.

(20) G. F. M. writes: I am making a small magneto electric machine of the Clarke pattern, only with this difference: I intend to use two armatures, one on each side of the exciting magnet. What I wish to know through your correspondents' column is: Cannot I use an electro-magnet instead of permanent horseshoe magnets, and pass the current from the armature coils through its coil from the commutator before using it on the outside for work the two armatures will be set at right angles to each other. A. You can arrange the armatures and magnets as you propose; but for a very small machine permanent magnets are to be preferred to electro-magnets.

(21) D. C. asks: Do you know of any comprehensive tabular statement of liquids generally showing their specific gravity, specific heat, boiling temperatures, ratio of expansion upon being converted into steam under the ordinary pressure of the air, and caloric of fluidity of steam; or does there exist materials for compiling such a statement readily? A. Consult "The Constants of Nature," part I., published by the Smithsonian Institution, Washington, D. C.

(22) S. E. writes: Some time ago we put a set of condenser pipes on our launch which lasted only about five months. The pipes were made of some kind of brass or copper composition, 1¼ inch, tin lined. Fearing they would give out at any time we replaced them with a set of galvanized iron ones, 1½ inch; but they only lasted about four months, being completely honey-combed, as were the others, as far as the tin lining. We then replaced the second lot of pipes with the first set, having first given them a coat of a mixture of tar and asbestos, filling all the holes well with the mixture. Now we are in a fix. The pipes are of no use to us, for they will not condense. They worked very well before we covered them. What is wrong, and what kind of pipe should we use, and how long should a set last on our launch, which is covered with yellow metal? The launch is used only eight months of the year, the balance of the time at anchor. A. Copper or tinned copper pipes are the best for condensers. They are less affected than brass or iron. Asphaltum is a very poor heat conductor, hence the failure of the coated tubes. no varnish or enamel is admissible.

(23) W. E. F. asks: Why does solder melt under the soldering "iron," when it will not under real iron, and why is it necessary to have the tool coated with tin? Does it act as a flux? A. Solder will melt under any hot iron, but unless the iron (or other metal) is perfectly free from oxide, perfect contact between the melted solders and the "iron," which is essential, cannot occur. When properly cleaned and coated with tin (or solder) the coating prevents reoxidation of the metal while heating, and the fluid metal follows and can be directed by the tool.

(24) C. W. G. asks: What can be used for blacking scraps of upper leather on the grain side? It must be something that will not smut when dry, and do the work with one application. A. Dissolve one pound of good sulphate of iron in two quarts of warm soft water. It may be applied with a brush or by dipping.

(25) C. and S., of Halifax, N. S., write that they are driving a lot of sewing machines and a Siemens electric light machine with a five horse power caloric engine. They secure uniform motion by applying a four-foot balance wheel to the countershaft of the electric light machine, and say that the light is steady.

(26) C. E. R. writes I am thinking of having a "secondary battery" made for experimental purposes, and wish to ask if you can give or direct me to any lately acquired knowledge relative to its construction? A. We believe the latest thing in this line is to confine the minium in folds in the lead plates. Woolen flannel as a separating medium is preferable to cotton fabrics.

(27) S. M. asks: Can you inform me how the frosted appearance is given to new silver goods, such as bracelets, broaches, cups, portions of claret jugs, etc, and how I can make some coarse and others finely frosted, according to the article, be it large or small? I should also be thankful if you can give me the same information concerning 18 carat gold. I have often desired a frosty appearance on masonic and other jewels, and for lack of which my make of jewelry very considerably falls short of finish. I have tried several acids mixed, but with only a sprinkling of success, never approaching near to the frosted appearance I see

on manufactured goods from England. I have also tried experiments with the points of scratch brush; also the positive end of a battery, with the goods hanging in a cyanide solution. This last gave me the best results, but is evidently not the thing. A. A "dead luster" is imparted to articles of copper or copper alloy by dipping them for a few minutes in a bath composed of—

Nitric acid (36°)	20 pounds.
Sulphuric acid (66°)	10 "
Salt	½ pound.
Zinc sulphate	½ "

Mix the acids gradually, add the zinc salt, then the salt, a little at a time (out-of-doors to avoid the acid vapors), stir well together, and let it get cold before using; rinse thoroughly, and pass through the cyanide before putting in the plating bath. When such a surface is plated with silver it presents the frosted appearance required. Dead luster gilding is produced by the slow deposition of a considerable quantity of gold, by giving the metallic surface a dead luster before gilding (by means of acids), by first preparing a coating of frosted silver or by depositing the gold upon a heavy copper deposit produced with a weak current in a bath of copper sulphate. See "Electrometallurgy," in SUPPLEMENT, No. 310.

(28) O. P. inquires for a simple method of preserving iron surfaces without paint. A. Captain Bourdon has devised simple forms of apparatus for coating iron with Barff's magnetic lacquer. In the course of his experiments he found that the coat of oxide could be formed by the air in the following manner: The serpentine part of a sheet-iron reservoir communicates with air which is heated to 248° Fah. The current of hot air, after circulating through the serpentine, reaches the cylinder which contains the articles to be lacquered. The escape spout communicates with a water aspirator regulating the flow of air, which should be very gentle. The internal pressure is little more than one atmosphere, the apparatus being in communication with the open air. The temperature of the air in the cylinders is 536° Fah.; the operation lasts five hours, giving a coat of 0·05 of a milimeter thick (0·002 inch), of a beautiful greenish black, resisting the action of fine emery paper and of dilute sulphuric acid. After the articles are taken from the cylinder they are rubbed with a greasy rag, and spots are removed by fine emery paper or scouring grass. Spots may generally be avoided by suspending the pieces, so that they will not touch each other or the walls. If the temperature is raised to about 572° Fah., a thick coat is secured, but it is apt to scale. Articles thus lacquered have been exposed to snow and rain for a month without getting any spots of rust. If the black coating is removed by emery paper, there is a grayish layer on which rust does not take much hold; the spots can easily be removed by a bit of hard wood. Barff has observed the same peculiarity in articles which have been steam-lacquered.

(29) E. M. B. writes: Will you please inform me, under Notes and Queries, of one or two best modern books on steam boilers? A. "Barr on Steam Boilers;" "Catechism of the Locomotive," Forney; Wm. H. Shock, U. S. Navy, on "Boilers;" "Heat and Heat Engines," by Trowbridge.

(30) N. S. asks: Would it pay to work a mine of pure mica, if in large sheets, with say $15 or $20 freight per ton to San Francisco? A. See article on Mica and its Utilization, page 257, current volume.

(31) W. G. R. writes: In the SCIENTIFIC AMERICAN, dated December 14, 1878, on page 371, you describe a small foot lathe with directions for making the same. If the holes, instead of being babbitted, are bored, and the bars forming the shears are turned, and I should make my own turning and boring, what do you think would be the probable expense of making such a lathe? A. The materials would cost from $5 to $6.

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

N. F. W.—It is a silicious clay of fair quality. An analysis such as you require would cost $5.

[OFFICIAL.]

INDEX OF INVENTIONS

FOR WHICH

Letters Patent of the United States were Granted in the Week Ending

November 22, 1881,

AND EACH BEARING THAT DATE.

[Those marked (r) are reissued patents.]

A printed copy of the specification and drawing of any patent in the annexed list, also of any patent issued since 1866, will be furnished from this office for 25 cents. In ordering please state the number and date of the patent desired and remit to Munn & Co., 37 Park Row, New York city. We also furnish copies of patents granted prior to 1866; but at increased cost, as the specifications not being printed, must be copied by hand.

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Lamp, electric, A. E. Brown 249,824
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Lamp, signal, E. S. Piper 249,794
Lamp trimming shears, E. Bailey 249,818
Lamps, shade ring for extension, A. H. Jones 249,946
Lantern, F. J. Müller 249,785
Links, manufacture of, J. M. Baker 249,871
Liquids, apparatus for dispensing aerated, G. Rehfuss 249,993
Lock, E. Parker 249,789
Locomotive engine, E. Longstreth 249,962
Loom picker motion, W. C. Knowlton 249,951
Loom shuttle, R. W. Porter 249,857
Loom shuttle, C. T. Pratt 249,988
Lubricating compound, J. B. Norris 249,786
Lubricating compound, E. Smalley 250,009
Mash, machine for making sour, J. C. Peden 249,793
Meat draining device, P. Springstein 250,012
Mechanical movement, P. Broadbooks 249,887
Metal ring, hollow, W. Hutchison 249,838
Metal shearing machine, B. Gallagher 249,749
Metals, composition for coating, A. B. & W. P. Brown 249,889
Metallic fastening, G. W. McGill 249,850
Metallurgic furnace, W. Moller 249,971
Middlings purifier, C. S. Rider 249,998
Mill. See Fanning mill.
Millstone cooling apparatus, H. Dorrity 249,910
Millstone driver, L. Heiple 249,834
Mirror, ornamental, P. Wiederer 250,028
Mortising machine gauge, G. L. Muhn 249,784
Motor. See Rotary motor.
Motor, E. Phreaner 249,984
Mowing machine, J. L. Abell 249,732
Needle blanks, device for feeding, J. Berry 249,822
Newspaper wrapper, A. W. Boynton 249,883
Oatmeal machine, S. P. Sawyer 249,798
Oatmeal machine, S. G. Stein 249,804
Oil cloth varnishing machine, J. Haverstick 249,762
Oil from water, device for separating, P. Andrew 249,868
Oil tank, F. N. Forster 249,918
Oils, automatic reservoir for volatile, H. Fritz 250,041
Ore, etc., machine for reducing, W. F. Kilborn 249,949
Ore roasting furnace, J. M. Thompson 250,015
Ores, machinery for crushing and conveying, J. Richards 249,995
Oven, portable, Klein & Woodard 249,843
Oyster fattening apparatus, V. N. Hughes 249,942
Packing and toy box, F. M. Whitelaw 250,026
Pad. See Buffing pad. Harness pad.
Painting machine, barrel, Heward & Everhard 249,935
Paper machines, dandy roll for, J. Randall 249,992
Paper, process of and apparatus for bronzing, T. Henry 249,835
Peanut and coffee polisher, B. F. Walters (r) 9,943
Pedal, A. S. Nichols 249,974
Pencil holder, lead, E. Weissenborn 250,023
Pencils and pen holders, finger rest for, J. S. Bulkeley 249,893
Pipe coupling, E. F. Osborne 249,977
Pipe cutting implement, F. I. Maule 249,966
Pipe wrench, T. D. Mernan 249,968
Pitchfork, A. Cox 250,039
Plane, bench, G. F. Sawyer 250,007
Planing machine, wood, A. W. Stossmeister 249,805
Platform. See Stove platform.
Plow attachment, G. Browne 249,740
Plow, planting, T. Pates 249,790
Plow, sulky, G. Applegate 249,869
Plow, sulky, L. Brown 249,890
Pneumatic machinery, J. Richards 249,996
Pocket knife, E. D. Chamberlain 249,896
Poisons, safety cabinet for, H. P. Smith 249,800
Post. See Fence post.
Press. See Baling press. Brick press. Cider press. Printing press. Shoe press.
Printing press, P. Miller 249,969
Printing press, E. Prouty 249,989
Printing presses, feeding attachment for, S. A. Grant 249,755
Puller. See Flax puller. Stump puller.
Pulley, belt, S. J. Cilley 249,897
Pulley cord guard, sash, C. J. Scheelky 249,799
Pulverizer, rotary, T. B. & T. R. Jordan 249,770
Pump, J. H. & B. Branson 249,885
Purifier. See Middlings purifier.
Railway signal, D. C. Baughman 249,873
Railway signal, electric, W. W. Gary 250,042
Railways, safety device for, C. Rutulini 250,005
Rake. See Hand rake. Hay rake.
Refrigerating apparatus, J. Tiffany 250,016
Refrigerator, J. T. Gurney 249,758
Refrigerator, J. Hammerl 249,929
Register. See Fare register.
Regulator. See Electric light regulator.
Ring. See Metal ring. Suspending ring.
Rivet, tubular, M. Bray 249,886
Roller. See Field roller.
Rolling billets for plow beams, roll for, C. P. Buckingham 249,742
Roof bracket, S. F. Black 249,737
Rotary motor, hot air, O. Güldner 249,832
Roving, machinery for the manufacture of, E. W. Kelley 250,043
Rubber from rubber waste, recovering, N. C. Mitchell 249,970
Saw guard, circular, R. W. Tayler 249,806
Saw mill head block, G. H. Zschech 250,034
Scaffold, G. W. Green 249,757
Scale, platform, W. W. Reynolds 249,994
Screw plate, L. W. Stockwell 249,860
Seeding machine, H. Ogborn (r) 9,938
Separator. See Grain separator.
Sewing machine attachment, W. A. Alrich 249,733
Sewing machine attachment, Johnson & Reynolds 249,768
Sewing machine embroidery attachment, G. W. Baker 250,037
Sewing machine table, J. E. Donovan (r) 9,937
Sewing machines, edge forming attachment for, J. Benjamin 249,875
Shears. See Animal shears. Lamp trimming shears.
Sheller. See Corn sheller.
Shoe, D. B. Felter 249,916
Shoe fastening, F. J. Lippitt 249,961
Shoe press, A. S. Rogers 250,001
Signal. See Railway signal. Switch signal.
Skates, ankle support for, E. G. Macomber 249,964
Square, combination, S. H. Bellows 249,821
Stamp, hand, W. D. Wesson 249,863
Stamp, perforating, H. H. Norrington 249,975
Stand. See Furnace and pot stand.
Staple or tag fastener, G. W. McGill 249,851
Steam engine, J. Wheelock 249,864
Steam generator, F. Shriver 250,008
Steel, tempering united lengths of band, T. Donahue 249,909
Stone, artificial, J. Irion 249,839
Stool, piano, G. A. Ramseyer 249,991
Stopper. See Tube stopper.
Store service system, J. C. White 250,025
Stove attachment, vapor burning, Klein & Woodard 249,842
Stove for burning petroleum, H. Kock 249,952
Stove, heating, J. A. Milliken 249,854
Stove platform, H. L. Palmer 249,797
Street, underground, N. Jacobsohn 249,945
Stump puller, J. Dunn 249,747
Suspending ring, G. W. McGill 249,849
Switch signal, R. B. Ireland 249,944
Table. See Sewing machine table.
Table leaf support, D. D. Brockway 249,888
Tablet, writing, F. S. Hasbrouck 249,932
Tank. See Oil tank.
Telegraph receiving apparatus, J. W. Fuller 249,920
Tellurian, J. A. Bowyer 249,739
Tethering device, J. C. Covert 249,904
Thrasher and seperator, grain, E. Reese 249,858
Timber, railway ties, etc., apparatus for treating, H. E. Kreuter 249,953
Tobacco cutter, S. C. Gault 249,831
Tongs, pipe, D. Worden 250,029
Tongue support, wagon, J. W. Wetmore 249,812
Toy puzzle, C. H. Loomis 249,963
Trap. See Ant trap. Insect trap.
Trap valve, C. Birkery 249,878
Tree. See Boot tree.
Treenail turning machine, F. Lightbody 249,960
Trimmer. See Wick trimmer.
Tube stopper, leaky, D. J. Morgan 249,783
Tuyere, Edwards & Smith 249,912
Type writing machine, J. B. Hammond 249,930
Umbrella, H. A. Davis 249,907
Vaginal irrigator and urinal, E. J. Holcombe 249,937
Valve. See Basin valve. Trap valve.
Varnish, M. Connelly 249,902
Vehicle circle plate, I. V. Hicks 249,765
Vehicle running gear, E. Whitmore 249,814
Velocipede, N. Merrill 249,853
Velocipede, railway, Campbell & Prindle 249,895
Washing machine, H. Rousseau 250,004
Water closet, W. S. Cooper 249,903
Water closet, E. S. Hutchinson 249,767
Water race, G. Land 249,954
Wheel. See Buffing wheel. Current wheel.
Whip, H. Mullen 249,855
Wick trimmer, P. G. Beckley 249,820
Window screen attachment, B. T. Herold 249,764
Wire barbing machine, G. C. Baker 249,735
Wood, preserving, S. R. Percy 249,856
Wrench. See Pipe wrench.

DESIGNS.

Dinner ware, E. Chetwynd 12,576
Finger ring, C. Krauss 12,577
Gem setting, W. L. Reynolds 12,579
Monument, miniature, E. C. Bruen 12,575
Rosette and slide for door spindle locks, W. Whitney 12,581
Stove bracket, W. S. Shipe 12,580
Stove, oil, J. M. Reddy 12,578

TRADE MARKS.

Cotton piece goods, Naumkeag Steam Cotton Company 8,870
Food, infants and invalids', T. Metcalf & Co 8,869
Medical compound, R. V. Pierce 8,873
Medical compound, certain, R. V. Pierce ..... 8,871 to 8,875
Perfumeries, cosmetics, tooth powders, and toilet soaps, Barclay & Co 8,867
Sewing cotton and thread, J. Brook & Bros 8,868
Wine made of malt, hops, and other materials, H. L. Becker & Co 8,876

English Patents Issued to Americans.

From November 11 to November 15, 1881, inclusive.

Cloth fastener, G. W. McGill, New York city.
Compositors' rule, L. K. Johnson, Brooklyn, N. Y.
Eggs, preserving, K. H. Loomis, New York city.
Moulded metallic bodies, W. H. Mallory, Bridgeport, Ct.
Propelling vessels, W. H. Mallory, Bridgeport, Conn.
Railway signaling apparatus, J. B. Johnson, Boston, Mass.
Slide valve, W. B. Turman, Waldron, Ark.
Torpedoes, W. H. Mallory, Bridgeport, Conn.