

SELF FEEDING BATTERY.

A good many persons have tried this, but with doubtful success. The apparatus on exhibition, called the "Himmer battery," employs sulphate of copper, by putting it into an inverted bottle, so arranged as to be self feeding. It would be difficult to regulate the quantity in this way, and that is an objection to the contrivance. We have read of a recent German battery where this difficulty has been overcome.

HORSFORD'S BREAD POWDERS.

This is a first class chemical discovery, and we were glad to see so many persons acquiring information how to use the phosphates instead of the saleratus powders, which are the bane of American kitchens. No family that has ever used Professor Horsford's baking powders would be willing to go without them. There are few things more useful than the phosphates, and nothing, short of poison, more dangerous than saleratus.

THE ZINC WHITE PATENT DECISION.

The recent decision in the United States Court, referred to elsewhere, and for which we are indebted to the Philadelphia *Inquirer*, is a matter of great interest to all owners of and applicants for patents. Though directly aimed at the New Jersey Zinc Company, it pecuniarily concerns all the manufacturers of zinc oxide in this country, as it is only in the United States that this pigment is made direct from the ores. The Lehigh Company, however, have some arrangement with the patentee. This industry is now becoming one of great importance, and it is well that the modes and process of carrying it on should be upon a firm basis, and that those to whom the credit is due for its origin should receive their just reward. It is one of those many instances constantly occurring which show the importance of having the application for a patent properly prepared, so that, however infringed upon by wealth or power, justice will in the end be done to the right inventor.

The damages involved are said to amount to about \$1,800,000, as Wetherill claims that the difference between making zinc oxide by his process and the pretended process of Burrows is two cents per pound. The product of the New Jersey Zinc Company has been often as high as 5,000 tons per year; hence if there be such difference, the "savings and gains" on that amount must evidently be very large. Injunctions have been served on all the other zinc making companies. From the length of time this case has been before Judge McKennan, the care in collecting evidence by both parties, the great wealth and influence of the defendants, it is probable that the decision is given only upon the most mature thought and thorough examination of the whole matter, and will be sustained, even should it be carried to the Supreme Court.

English Telegraph Message Blank.—Postal Card.

The *Home Journal*, in a recent number, described the message blank of the British postal telegraph system. A copy of the form lies before us. It is so arranged that the message appears in lines of five words each, the charge for the message being printed at the ends of each line. It is a simple and convenient device, calculated to save the time of both the sender and operator, and prevents overcharge. We are indebted to Mr. Morris Phillips, of the *Home Journal*, for this specimen, and also for a specimen of a postal card so much in use in England at the present time. The card is about three by five inches in size, and tinted with a tasteful color, one side having a halfpenny postage stamp imprinted on the right hand upper corner, the whole surrounded with a neat border, and bearing the British coat of arms. This side is for the address, and the reverse side is for the written message or note. No envelope is used, the card serving as note sheet, envelope, and postal stamp, and is delivered anywhere within the United Kingdom of Great Britain, Ireland, and the Channel Islands for half a penny—one cent. The report of the first six months' sale has just appeared, which shows that 58,485,960 cards were sold in that time by the government; total value, nearly £122,000.

TO MAKE CARBOLIC ACID PAPER.—Carbolic acid paper, which is now much used for packing fresh meats, for the purpose of preserving them against spoiling, is made by melting five parts of stearine at a gentle heat, and then stirring in thoroughly two parts of carbolic acid; after which five parts of melted paraffin are to be added. The whole is to be well stirred together until it cools; after which it is melted and applied with a brush to the paper, in quires, in the same way as in preparing the waxed paper so much used in Europe for wrapping various articles.

THE ALABAMA AGRICULTURAL AND MECHANICAL ASSOCIATION announces its annual fair, to be held in Pickett Springs Park, Montgomery, on October 31st, and four following days. A list of premiums, amounting in all to \$20,000, is offered for successful operation in all branches of agriculture and mechanical trades, as well as of domestic industry and the fine arts. Mr. M. L. Woods is the secretary of the association; and our readers will find detailed information in our advertising columns.

A COTEMPORARY has the following rather severe hit on the San Francisco Academy of Science: "The bone work of a whale recently stranded on the beach at San Francisco, is being wired together for exhibition. The owners secured the services of the Academy of Science to get the bones into their proper places, but at the end of the first day the members were paid off and discharged. It has since transpired that they got the creature's head on the wrong end, and had rejected several sections of the backbone, claiming that the animal had more vertebrae than the books allowed him.

SHARP WORK.—A merchant in Manchester, England, recently wanted 1,500 pieces of printed calico, of a particular pattern, for shipment to America. At 5 o'clock one evening he went to Harpeney, three miles from Manchester, to see a cotton printer, who undertook to print the 1,500 pieces in three colors, and to have them packed in cases ready for shipment by noon on the following day. This was done, and at 3 o'clock the goods were at Liverpool, and at 5 o'clock they were on board a steamer, going down the Mersey on her way to New York.

THE splitting machine, for shoe pegs, which are now manufactured so extensively in this country, and exported to Europe, was invented thirty years ago by S. K. Baldwin, of Laconia, N. H. A pointing machine for the manufacture of the same article was invented twenty years ago by A. H. Baldwin, of the same place. It is said that neither of the Baldwin machines have been improved upon since they were first introduced to the public.

Examples for the Ladies.

Mrs. J. S. Bingley, Poughkeepsie, N. Y., has used her Wheeler & Wilson Machine over 15 years; brought up and educated her family by stitching shirt-bosoms, the bindings on to leathers cap-fronts, and making coats, vests, pantalons, and doing all kinds of family sewing; averaging sometimes \$5 and \$6 per day.

The Human Hair.—Burnett's Cocaine, for healthful purity and excellence, is unsurpassed.

Queries.

[We present herewith a series of inquiries embracing a variety of topics of greater or less general interest. The questions are simple, it is true, but we prefer to elicit practical answers from our readers.]

1.—HEATING SURFACE OF BOILERS.—Will some one give us, through your paper, a simple rule for finding the heating surface on tubular and locomotive boilers?—C. and H. A.

2.—PENCIL LEAD.—Will some of your readers please inform me how pencil lead is prepared, and what the ingredients are?—H. J.

3.—SKELETON LEAVES.—How can the tissues of leaves be removed without injuring the skeletons?—J. V. M.

4.—SOLDERING FOR GALVANIZED IRON.—Do any of your readers know a good solder for soldering galvanized iron, that will not break easily like the ordinary tinman's solder, that is, half tin and half lead?—A. B.

5.—CRYSTALLIZATION OF STEEL.—Do you think that the steel in band saws has a tendency to crystallize on account of the change from a curved to a straight line that takes place in running around pulleys?—J. L. G.

6.—BLUING PISTOL BARRELS.—Will some one be so kind as to inform me of the process or composition to give pistol barrels that beautiful blue that they give in the factories to new ones?—M. M.

7.—COKE FROM BITUMINOUS COAL.—I wish to know if there is a successful way of burning bituminous slack coal into coke in the open air on the ground?—A. M. S.

8.—UNDERGROUND SURVEY.—How can I survey an underground level or horizontal entry where there is an iron track, without the needle being affected by the track?—A. M. S.

9.—PRIME COAT OF PAINT FOR WOOD WORK.—In repainting an old house (outside), should I first apply a good coating of petroleum or other cheap oil to be absorbed by the boards? Would such an application save paint, or make the paint less liable to crack or peel off? If so, what sort of oil would be preferable? Would a like application to a new picket fence make it more durable, or would it make paint hold better on it? Is coal tar, as a preservative of fence posts, applied hot to the end that goes in the ground?—L. G.

10.—FRENCH POLISH.—Will some one please inform me how to make French polish for polishing veneered work?—W. B. W.

11.—CLOTHES WRINGER.—How can I keep a common clothes wringer (I mean the rollers) from cracking?—W. D. F.

12.—MANUFACTURE OF ZINC PAINT.—I have on hand a ton of sulphuret of zinc which I wish to convert into paint. Can any one inform me of the best mode of doing it?—E. M.

13.—GLUE.—Will some one inform me of the manufacture of glue—how it is boiled, how it is tested, and the stock used for the different grades? I want a good practical answer.—T. C.

14.—BLEACHING.—I wish to know the manner of using antichlorine—hyposulphate of soda—as a means of destroying the chlorine left in cotton and linen goods after bleaching.—J. W. G.

15.—COMPOSITION FOR TEMPERING STEEL.—I wish to inquire if there is anything in use that is better than water or oil for tempering cast steel. If any reader knows of such a composition, I would like to be informed of it.—J. T. B.

16.—LIQUID GLUE.—In the SCIENTIFIC AMERICAN, Vol. XXIV., page 408, "Answers to Correspondents," under the heading "Liquid Glues," F. L. J., of Ark., says that the best liquid glue he knows of is made as follows: Take of gum shellac three parts, caoutchouc (India rubber), one part (by weight), dissolve the caoutchouc and shellac in separate vessels, in ether free from alcohol, applying a gentle heat; when thoroughly dissolved, mix the two solutions, and keep in a bottle tightly stopped. Now I have been trying for two months to do as he says, but after dissolving the caoutchouc and shellac in separate vessels, when I put them together, the compound immediately forms into a solid ball, and remains so. Will F. L. J. please inform me what is wrong, as I have consulted a very good chemist without being able to learn?—H. W. M.

17.—CLEANING BRASS.—I want to know if there is not something that can be used to clean and polish brass work, on steam engines etc., that does not require so much elbow grease. The following is the *modus operandi* I go through to have the desired effect: I first spread thinly over the hot brass what is known among railroad men as sperm (large thick candles that are used to light coaches). I then saturate a rag or piece of waste with coal oil, and wash off the sperm and wipe dry. I then take another piece of waste and saturate with lard oil, then sprinkle on flour of emery or rotten stone, and scour all the brass, hot and cold, with this. I then wipe all nice and dry, and polish with lamp black or rotten stone. I feel satisfied that there are other preparations for cleaning brass than these that will do it quicker and better. I once saw a preparation sold on the streets of Cincinnati for cleaning brass and silver ware. It was a red looking stuff like brick dust; it would make brass look as white as silver. There is also a preparation for putting on brass to keep it from tarnishing, called "lacker" I believe. I do not care so much for this as I do for the cleaning process. I will be many times obliged to any of your readers who can furnish the desired information. I will pay a reasonable price for any recipe that will do the work satisfactorily.—G. N. K.

Business and Personal.

The Charge for Insertion under this head is One Dollar a Line. If the Notices exceed Four Lines: One Dollar and a Half per Line will be charged.

The Oil used on all the Machinery at the A. I. Fair is from Chard & Howe, 134 Maiden Lane, New York. Ask them how it works.

Grindstones—1000 Tons to select from—Mitchell—Phila.

Grindstones—"How to use them"—Sent free—Mitchell—Phila.

Machinists' Grindstones—J. E. Mitchell, York Ave.—Phila.

Sign Factory—The largest Metal Sign Factory in the world. Orders solicited. Rates low, and work executed with despatch. R. A. Adams, 132 South 5th Avenue, New York.

Wanted—A first class Miller for White Lead Works. Address, with references, &c., White Lead Company, New Britain, Conn.

A Chemist, a practical man, wishes a position; capable of taking charge of some department. Address Chemist, P. O., Box 63, N. Y.

Wanted—The best Shoe Peg Machine made,—also, 2d hand Ward Spoke Lathe. Send description & price to HURD & BRO., Urbana, O.

See Advertisement of Havens' Circular Saw Tables.

Patent Steel Measuring Tapes, manufactured by W. H. Paine, 116 Freeman St., Greenpoint, N. Y. Send for Circular.

Walrus Leather, for Polishing Steel, Brass, and Plated Ware. Greene, Tweed & Co., 18 Park Place, New York.

Repertory of Arts.—For sale, a complete set of the Repertory of Arts, handsomely bound, half calf, uniform size, with general indices comprising five series and 113 volumes. Perfect in every respect. Embracing Inventions, Discoveries, and Improvements in Arts, Manufactures and Agriculture, with Engravings—from 1795 down to 1856. Apply to MUNN & Co., office of the SCIENTIFIC AMERICAN.

Turkey Boxwood pieces for Sale, suitable for engravers and fancy turners' use. Address Stephens & Co., Riverton, Conn.

Manufacturers of Steam Pumps will please send Descriptive Circulars and Price Lists to Joseph Capps & Sons, Jacksonville, Ill.

Patent Felt Floor Carpeting. C. J. Fay, Camden, N. J.

All kinds of Presses and Dies. Bliss & Williams, successors to Mays & Bliss, 119 to 122 Plymouth St. Brooklyn. Send for Catalogue.

The best lubricating oil in the world is Winterpressed Sperm. Sold in bottles, cans, and barrels, by Wm. F. Nye, New Bedford, Mass.

Gear Wheel Moulding Machines—Paget's Blocks and Gipsy Winches (English Patent). Hamilton E. Towle, 176 Broadway, New York.

Improved Mode of Graining Wood, pat. July 5, '70, by J. J. Calton, of Cleveland, O., enabling inexperienced grainers ("without the long required study and practice of heretofore") to produce the most beautiful and Natural Graining with unequalled speed and facility. Send stamp for circular.

The paper that meets the eye of manufacturers throughout the United States—Boston Bulletin, \$4 00 a year. Advertisements 17c. a line.

Wanted—A man who thoroughly understands making malleable iron, and can superintend a foundry. Address M. I. F., Worcester, Mass.

Upright Drills—The best in the world are built by the Hawes Machine Co., Fall River, Mass. Send for circular.

Consolidation—"American Manufacturer and Trade of the West." Pittsburgh. Finest and best paper of its class in the world. Everybody takes it.

Presses, Dies, and all Can Tools—Ferracute Works, Bridgeton, N. J.

Vinegar—how made—of Cider, Wine, or Sorgo, in 10 hours F. Sage, Cromwell, Conn.

Best Oak Tanned Leather and Vulcanized Rubber Belting. Greene, Tweed & Co., 18 Park Place, New York.

To Cotton Presses, Storage Men, and Freighters.—35-horse Engine and Boiler, with two Hydraulic Cotton Presses, each capable of pressing 35 oales an hour. Machinery first class. Price extremely low. Wq. D. Andrews & Bro., 414 Water st. New York.

L. & J. W. Feuchtwanger, Chemists, 55 Cedar st., New York, manufacturers of Silicates of Soda and Potash, and Soluble Glass.

Send your address to Howard & Co., No. 865 Broadway, New York, and by return mail you will receive their Descriptive Price List of Waltham Watches. All prices reduced since February 1st.

Self-testing Steam Gauge.—The accuracy of this gauge can be tested without removing it from its connection with the boiler. Send circular. E. H. Ashcroft, Boston, Mass.

Ashcroft's Low Water Detector. Thousands in use. Price, \$15. Can be applied for less than \$1. Send for Circular. E. H. Ashcroft, Boston, Mass.

Brown's Coalyard Quarry & Contractors' Apparatus for hoisting and conveying material by iron cable. W. D. Andrews & Bro., 414 Water st., N. Y.

Presses, Dies, and Tinners' Tools. Conor & Mays, late Mays & Bliss, 4 to 8 Water st., opposite Fulton Ferry, Brooklyn, N. Y.

Over 1,000 Tanners, Paper-makers, Contractors, &c., use the Pumps of Heald, Sisco & Co. See advertisement.

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

Mining, Wrecking, Pumping, Drainage, or Irrigating Machinery, for sale or rent. See advertisement, Andrew's Patent, inside page.

Superior Belting—The best Philadelphia Oak Tanned Leather Belting is manufactured by C. W. Army, 301 Cherry Street, Philadelphia.

Improved Foot Lathes, Hand Planers, etc. Many a reader of this paper has one of them. Selling in all parts of the country, Canada, Europe, etc. Catalogue free. N. H. Baldwin, Laconia, N. H.

Blake's Belt Studs. The cheapest and best fastening for Rubber and Leather Belting. Greene, Tweed & Co., 18 Park Place, N. Y.

Bailey's Star Hydrant, best and cheapest in the world. All plumbers send for a circular to G. C. Bailey & Co., Pittsburgh, Pa.

Patent for sale, or Partner wanted with capital to introduce the same. Please address Philip Marquard, 468 Swan st., Buffalo, N. Y.

To Ascertain where there will be a demand for new machinery or manufacturers' supplies read Boston Commercial Bulletin's Manufacturing News of the United States. Terms \$4 00 a year.

Diamond Carbon, of all sizes and shapes furnished for drilling rock, sawing and turning stone, conglomerates, or other hard substances; also Glazier's Diamonds, by John Dickinson, 64 Nassau st., New York.

Glynn's Anti-Incrustator for Steam Boilers.—The only reliable preventive. No foaming, and does not attack metals of boilers. Price 25 cents per lb. C. D. Fredricks, 587 Broadway, New York.

The Greenleaf Grate Bar saves fuel, and lasts much longer than the ordinary bar. Address Greenleaf Machine Works, Indianapolis, Ind.

Peck's Patent Drop Press. Milo Peck & Co., New Haven, Ct.