

## Examples for the Ladies.

Mrs. Mary B. Hamlin, of Troy, N. Y., earned with a Wheeler & Wilson Machine, in 1870, \$1,113.49, stitching shirts.

## The List of Local Newspapers

Published by Geo. P. Rowell & Co., Advertising Agents, No. 40 Park Row, New York, offer great advantages to those advertisers who wish to attract custom from the rural population among which the papers circulate. They are furnished free, to any address, on receipt of stamp.

## 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 paper that meets the eye of manufacturers throughout the United States—Boston Bulletin, \$1 00 a year. Advertisements 17c. a line.

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

Boilers.—Allen's patent will prevent scale from forming, and not injure the iron. In 3 gallon cans, price \$6. J. J. Allen, Philadelphia.

Wanted.—Assistance to get out Canal Propeller. Address Jos. Hough, Norristown, Pa., who has a double acting one now planned out.

Wanted.—Partner to build the Revolving Cylinder Steam Engine. Had a test of five years. W. H. Morton, Hamilton, Ohio.

The RAILROAD GAZETTE is read and preserved, and therefore it pays to advertise in its columns.

The "Ball & Fitts" Water Meter, warranted accurate and reliable, and acknowledged by those who have examined and tested them the best water meter ever used. Manufactured by Union Water Meter Co., Worcester, Mass.

Power Punching and Shearing Machines.

For car builders, smith shops, rail mills, boiler makers, etc. Greenleaf Machine Works, Indianapolis, Ind.

J. A. Whitman's Water Wheel Governor beats them all for bis. and price. Auburn, Me.

I have received, through the agency of Munn & Co., a patent on the best Summer Cook Stove in the market. The exclusive right, except for this State, for sale cheap. J. D. Kellogg, Jr., Northampton, Mass.

Electrical Instruments, Models, etc., made to order, and Gear Wheels and Pinions cut, by W. Hochhausen, 113 Nassau st., Room 10, N. Y.

Bliss & Williams, successors to Mays & Bliss, 118 to 122 Plymouth st., Brooklyn, manufacture Presses and Dies. Send for Catalogue.

Bright and industrious American, Scotch, English, German, or French boys, of 16 years or older, who desire to learn the machinist trade, in a first class establishment, will please address, for terms, P. O. Box 685, Hartford, Conn.

The Bucket-Plunger Steam Pump discharges at both strokes, with only two water valves. Valley Machine Co., Easthampton, Mass.

Wanted.—A machine to make galvanized iron eave cornice. Address T. J. Heizmann, Altoona, Pa.

Millstone Dressing Diamond Machine—Simple, effective, durable. For description of the above see Scientific American, Nov. 27th, 1869. Also, Glazier's Diamonds. John Dickinson, 64 Nassau st., N. Y.

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

Lord's Boiler Powder is only 15 cts. per pound by the bbl., and guaranteed to remove any scale that forms in steam boilers. Our Circular, with terms and references, will satisfy all. Geo. W. Lord, 107 W. Girard ave., Philadelphia, Pa.

Improved mode of Graining Wood, pat. July 5, '70, by J. J. Callow, Cleveland, O. See illustrated S. A., Dec. 17, '70. Send stamp for circular.

Ford's Portable Tobacco Press for Planters. Will sell Virginia, Maryland, Missouri. Address Ford's Tobacco Warehouse, Evansville, Ind.

Air Cylinder Graining Machine.—A perfect tool for House Painters and Manufacturers of all kinds of Decorated Ware. Complete Machine for \$50.00. Send stamp for Circular. The Heath & Smith Manufacturing Co., 41 Murray street New York.

For the most perfect Band Instruments in the world, send to Isaac Fiske, Worcester, Mass. Illustrated Catalogues free on application.

The Patent for the best Hydrant, or Fire Plug ever invented, for sale. For descriptions, terms, etc., address Lock Box 356, Lockport, N. Y.

Best Scales.—Fair Prices. Jones, Binghamton, N. Y.

Steam Watch Case Manufactory, J. C. Dueber, Cincinnati, Ohio. Every style of case on hand, and made to special order.

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

For Hydraulic Jacks, Punches, or Presses, write for circular to E. Lyon, 470 Grand st., New York.

Belting that is Belting.—Always send for the Best Philadelphia Oak-Tanned, to C. W. Arny, Manufacturer, 301 Cherry st., Phil'a.

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.

Ashcroft's Low Water Detector, \$15; thousands in use; can be applied for less than \$1. Names of corporations having thirty in use can be given. Send or circular. E. H. Ashcroft, Boston, Mass.

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

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

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.

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

Cold Rolled-Shafting, piston rods, pump rods, Collins pat. double compression couplings, manufactured by Jones & Laughlins, Pittsburgh, Pa.

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

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.

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.

## Answers to Correspondents.

**SPECIAL NOTE.**—This column is designed for the general interest and instruction of our readers, not for gratuitous replies to questions of a purely business or personal nature. We will publish such inquiries, however, when paid for as advertisements at 1 00 a line, under the head of "Business and Personal."

ALL reference to back numbers must be by volume and page.

**ROACHES.**—On page 394, current volume, query No. 3—"Is there any sure poison for roaches, that may be used without danger to children and domestic animals?" Being somewhat of an entomologist, I may be excused for stating that the *Blatta*, vulgarly called the cockroach, belongs to a genus of nocturnal orthopteran insects; these are prolific, laying masses of eggs, carefully wrapped all around. These hatch, and when the young scamps are no larger than ants, they will penetrate into boxes, chests, etc., through the smallest apertures, and enter upon their depredations. They speedily attain their full size, split on the back, and change their skin, but not their habits. Although they become winged, they seldom fly, trusting to their legs, which they use nimbly in their half adult condition. During the day they hide away in cracks or anything that will afford them shelter; so soon as darkness comes on, they sallie out in swarms. About a month ago, my attention was called to my kitchen and pantry. Going in with a light, I was astonished at the numbers scampering and swarming into the corners, up to the ceiling, and on the walls, a legion of dark kimps that hate the light. I thought I would accommodate the pestiferous creatures with a feast; I accordingly mixed up a quantity of freshly burned plaster of paris (gypsum, such as is used by dentists, etc., for making molds and ornaments), with wheat flour and a little sugar. This I distributed, on shallow plates and box boards, placed it in the corners of the kitchen and pantry, and left them to their glory in darkness. In the morning I found they had eaten quite freely. I fed them for three nights in succession. The plaster and flour, somehow, interferes with their intestinal canal, and gives them a costive habit, and spoils their appetite, I fancy. The short of the matter is, the roaches disappeared; whether they died outright, or left in disgust, I will not undertake to say. One thing I know, however, they are scarce and far between on my premises just now. The remedy is perfectly safe and simple. Try it.—J. S., of Pa.

**CHEAP BATTERY.**—There seems to be a great difference in the opinions of those that have given directions for constructing a cheap galvanic battery. I have made a great many experiments with, I guess, nearly all the forms of batteries, but I don't think that there is any cheaper, or one that will give as little trouble as Daniell's sulphate of copper battery. If the person that makes the inquiry will go to any telegraph office, he can see one and learn all he wants to know about it; and if he cannot get a porous cup, he can use a common flower crock, with the hole in the bottom stopped with melted beeswax. The connections should be made with copper wire, as any other kind is soon eaten off.—A. E. T., of Ohio.

**PLATING BRITANNIA METAL.**—J. F. (page 378) will succeed in plating Britannia and soft solder by first depositing a coat of copper on his soft metals, and then putting them in the cyanide solution.—D. G. P., of Ill.

**REFINING GOLD.**—J. E. H. can refine gold by dissolving it in aqua regia, and then pouring off the solution from the precipitate. Add to the solution a filtered solution of copperas as long as a precipitate is formed. Decant and wash thoroughly. Digest in dilute sulphuric acid, and wash again, and you have pure gold. Melt in a crucible lined with borax, under carbonate of potash.—D. G. P., of Ill.

**TURNING CONE PULLEYS.**—Finish on cone as desired, and then turn one pulley of the other (small) cone; take two pairs of callipers, and set them to the large pulley, on finished cone, and the small pulley (after it is turned to the desired size) on unfinished cone. Hook the jaws together, and mark their aggregate diameters on a rod with an awl or pencil. Now set one pair callipers to next smaller pulley on finished cone; hook them together as before, set the other pair to the mark, and turn the next pulley to the size of the latter.—G. L. B., of Pa.

**SPEEDING PULLEYS.**—Multiply the diameter of the pulley in inches by the speed that it runs, and divide by the pulley driven, and so on down. Or, if a given speed be required, multiply as above, and divide by the speed required, and the answer will be the size to give the pulley.—G. L. B., of Pa.

**CISTERN.**—The best answer to the question of E. E. H. is that nothing but pure water should ever be put into a cistern; and then, if properly constructed, it will remain "pure and fit to drink." If a cistern be merely an open vessel, especially of wood, and the accumulation of dirt on the roof is allowed to pass in with the water, no known substance thrown into the water will really "purify" it. This is a case where "an ounce of prevention is worth many pounds of cure."—A. B., of Mass.

**CHIMNEY.**—Every chimney will emit a "sooty odor," when in use, depending upon the character of the fuel; but it is aggravated if the chimney be foul. The most efficacious mode of cleaning out a flue, is to burn it out, which is always a safe operation if the chimney be properly constructed. Sweeping will help it, but is not as effective as burning, and beside costs something, while a flue can be burned out in a few minutes by putting an old newspaper or two into the bottom and applying a match.—A. B., of Mass.

**PREVENTING RUST.**—For the benefit of G. R., query No. 5, June 24, I would suggest a solution of carbonate of soda to prevent the rusting of polished metals. The solution can be applied with a brush, or the metal can be submerged in it. The latter is much better. As a coating for iron or tin, that will effectually resist atmospheric action, and also acids, I would recommend Pierce's "stone surfacing composition."—L. P. B., of Pa.

**FIXING LEAD PENCIL MARKS.**—If J. H. R. will breathe on his paper for a moment, after he has written with a lead pencil, he will find his lines will stay much longer, and be much darker.—W. E. D., of N. Y.

**POWER TO DRIVE SAW.**—E. A. M. will find a thin saw will run easier than a thick one. The more teeth there are in the saw, the smoother it will cut, but variations in the number will not add to nor diminish the power required.—S. H.

**BLACK COPYING INK—BEST EXTANT.**—Take two gallons of rain water, and put into it ¼ pound of gum arabic, ¼ pound brown sugar, ¼ pound clean copperas, ¼ pound powdered nut galls. Mix, and shake occasionally for ten days, and strain. If needed sooner, let it steep in an iron kettle until the strength is obtained.—E. G. A., of Minn.

**NOISY GEARS.**—I had in charge three pair of bevel gears, 30 inches diameter, running 120 revolutions per minute. The driver had wooden teeth, and at a distance of 40 feet could not be heard. I lubricated with tallow and black lead, with a little oil added, to keep it soft, twice a week, and they ran very well.—T. S., of Pa.

**N. & Co.**—We do not believe exhaust steam, in passing through a pipe surrounded by shavings, would be likely to ignite the shavings.

**W. F. W.** asks why is the bearing of a shaft or saw arbor called a journal? Because when it rotates, it is supposed to travel or go on a journey, and take notes thereof—hence journal.

**B. A. J., of Wis.**—If thills are pivoted to a wagon below the line of draft, the horse lifts the load to some extent, and thus does not draw quite so hard; but, as what he does not draw he carries, his work is just as hard, if not harder than it would be if the thills were pivoted higher.

**J. D. N., of Ca.**—A person acquainted with arithmetic can, if ordinarily intelligent, and willing to apply himself closely to study, make very fair progress in algebra without an instructor.

**R. H., of Vt.**—Like all other perpetual motion devices we have seen, yours has the trifling difficulty that it cannot be got to work on its own account. The reason is given in another column, in an article entitled "Mechanical Power and Specific Work."

**B. G. C., of Ala.**—The unpleasant odor of gas stoves, arises from the permeability of the tubing, and partly from the products of combustion. The latter does not render the food cooked unwholesome, but the air is rendered more or less unfit for breathing, and of course deleterious to health, unless good ventilation is secured.

**J. G., of —.** will find directions for building a cheap ice house on page 359, Vol. XXIII, of the SCIENTIFIC AMERICAN.

**W. J. B., of Dakota.**—The principal objection to the Belgian system of wire cable towing is the difficulty in dealing with the slack, and keeping the cable in the center of the canal in rounding curves.

**T. H., of Mo.**—If, as you say, you have been a reader of the SCIENTIFIC AMERICAN for six years, you ought to have learned from it by this time that there is no such substance as you inquire for. The old "sailor man" who tells you he can discover gold or silver, by attraction of divining rods or magnets, is either self-deluded or is trying to delude you.

**G. V., of Conn.**—Have received a large number of letters on the canal question, for publication, where the parties desired to put their inventions against a modest amount of capital. We have not room for yours.

**A., of N. Y.**—The information you seek will be partly found in Box's "Treatise on Heat." To find complete data, you will need to search through many different works relating to heat.

**W. B. W., of N. Y.**—The U. S. gold coins are alloyed with copper.

**J. E. W., of N. Y.**—Brass scraps are remelted and used. They sell readily as old brass. Leather scraps are also utilized by a process you will find in another column.

## NEW BOOKS AND PUBLICATIONS.

**HERMES MERCURIUS TRISMEGISTUS; his Divine Pymander Also, The Asiatic Mystery, The Smaragdine Table, and the Song of Brahm.** Edited by Paschal Beverly Randolph. 8vo, pp. 144. Boston: Rosicrucian Publishing Company. 1871.

We are told in the preface of this book that "the Divine Pymander, or Poemander, as it is now more commonly rendered, meaning 'shepherd of men,' comes from Egypt. It is not a child's book, nor a sectarian work, but it is a divine revelation." Further on it says: "In this book, though so very old, is contained more true knowledge of God and Nature than in all the books in the world, I except only Sacred Writ." The Rosicrucians who publish the book, say of themselves: "We claim to stand in the door of the dawn, within the cryptic portals of the luminous worlds, and that the lamp that lights us is Love Supreme! Unlike others, we do not recognize God as the Light—for this can be seen and known—but as the *Unfathomable Shadow*, the unsearchable Center, the impenetrable *Mystery*, the unimaginable *Majesty*—utterly past discovery—and who, as we approach, ever recedes, luring us through illimitable ages and epochs, up the steep mountain of *Achievement*—the whole end of man's being—in which opinion we of course differ from all philosophies in Christendom." Then, to show what they mean by "achievement," they express the following very high opinion of three well known modern characters—"Men, for instance, like James G. Bennett, James Fisk, Jr., and B. F. Butler, beyond all cavil the three ablest men on this continent, in their respective spheres, and whose superiors in absolute individuality of character cannot, today, be found on earth; born kings of will, and intensity of purpose"—in fact, we suppose they represent the *trismegistus*, or thrice great Hermes of modern times. We have not room for more extracts, and can only say that philologists have pretty much come to the conclusion that no such person as Hermes ever existed, and that the twenty thousand books attributed to him are quite as apocryphal as the author himself. The presumption also is that the Rosicrucians never had more actual existence than the Pickwick Club.

## GOOD SELECTIONS.

A paper covered 12mo, 165 pages. Containing selections in prose and poetry from our best authors. A capital book for students and lecturers. J. W. Schermerhorn & Co., publishers, 14 Bond street, New York.

## Recent American and Foreign Patents.

Under this heading we shall publish weekly notes of some of the more prominent home and foreign patents.

**OFFICE INDICATOR.**—Lewis Burger, of Chicago, assignor of three fourths his right to W. S. Gobble, of Scottsville, Ill.—A novel combination of parts whereby the necessary routine information will be given to parties inspecting it when the office is closed or open, has a tablet for orders, a small receptacle for business cards, a letter box, a clock dial, whose hands can be set to indicate the hour at which the office is opened or closed, disks which display through appropriate apertures the day of week, month, and name of month respectively, etc.

**MILKMEN'S SIGNALS.**—Elisha Belcher Blake, of Tarrytown, N. Y.—This invention has for its object to furnish an improved house or receptacle for the pitcher or other vessel in which the milk is received from the milkman, to protect said vessel from dust, dogs, cats, rain, etc., and obviate the necessity of watching for the milkman, and which shall be so constructed as to sound an alarm when the door is opened. If no other benefit should be derived from this invention than the suppression of the unearthly screech with which milkmen in New York and Brooklyn announce their arrival, the inventor must be hailed as a public benefactor.

**APPARATUS FOR STEAMING AND FILTERING.**—John Murdock, of South Carver, Mass.—The object of this invention is to provide convenient and simple means for performing various operations in and around the household, and it consists in a receptacle elevated on legs, with a funnel shaped bottom and flanged top, whereby it is adapted for steaming substances smoking meat, filtering water, etc. Upon this receptacle is placed a cask in steaming food for cattle or in smoking meats. Filtering materials placed in the funnel in cleansing water. One or more casks or vessels may be fitted to the stand, as seen in the drawing, and used as occasion may require. In filtering or leaching, the purified liquid or lye is discharged through a pipe at the bottom. Steam may be introduced through a pipe for cooking vegetables for feeding animals. A small stove may be connected with the funnel, in which sawdust or other combustible material may be slowly burned for smoking meat in a cask. All the operations referred to have to be performed on the farm, and great inconvenience has been experienced for the want of a suitable stand on which to support barrels or vessels for these purposes. By this stand the barrel is suitably elevated and supported and the processes named may be performed in a convenient manner.

**EYE BALSAM.**—William Klingbell, of Champaign City, Ill., has invented an eye balsam, composed of various substances found in the U. S. Dispensary, which, applied externally, in such proportions and at such intervals as will appear most adapted to the nature of each case, will, he claims, cure diseases and defects of the eye, especially those leading to or arising from short-sightedness.