

TO CORRESPONDENTS.

"J. M. C., of N. Y."—Your diameter of pipe is 2 inches, and fall 20 feet: the weight of this column of water is 27.26 lbs.; allowing this weight to fall the 20 feet every second (near enough for all practical purposes) you have $27.26 \times 20 = 545.20 \times 60 = 32,712 \div 33,000$ which will make about 288-1000 less than one horse power, from which 30 per cent. should also be deducted for friction. This power would be of little value to drive your 8 inch saw. The power of water to produce mechanical effect is as the quantity and fall of the perpendicular height. A horse power is equal to 33,000 lbs. lifted one foot high per minute, or equal to that weight of water falling 1 foot per minute: you will, therefore, see the way to calculate water power. Water falls 16 feet in 1 second, 20 feet in 1.117 seconds.

"H. S., of Ill."—You can make the chain pump yourself; it consists of a number of round plates of thick leather secured on a chain or rope, passing over a roller at the top, and one at the foot in the water. This chain is endless, and comes up through a round wooden box or pipe, in which the discs of leather fit nearly tight. These discs carry up the water; place them about 6 inches apart.

"M. R., of Ohio."—The best cement you can use is plaster of paris and burnt alum, pounded fine and mixed up quickly, and then applied. Common hydraulic cement is the kind generally used, it can be bought ready to be made up.

"J. W., of Tenn."—We have been endeavoring to find such a machine as you want, in order to furnish the drawings. Hope to be successful.

"F. L., of Texas."—We have no later information than was published in No. 1. You had better communicate with Dr. Gorrie at Apalachicola.

"A. D. B., of Geo."—We have addressed a line to Mr. H. in regard to your business. As soon as we hear from him we shall write you.

"R. S. M., of Pa."—You will hear from us by letter in a few days.

"R. J. McC., of S. C."—Mr. F. is not in the city. We think he went to Europe about a year since which is the last we have heard of him.

"G. P., of Mo."—A mixture of glue and flour starch is used for the wadding; glue itself will answer. It is put on by rollers, the same as printers' rollers. See No. 31, our last volume, for an illustration.

"Tudo, of Ill."—Various acids dissolve various metals. Nitric and muriatic acids dissolve gold. It all depends on the strength of the acid whether water is mixed or not; no battery is used to dissolve metals in, except in electrotyping. If you get a good work on electrotyping it will give you all the desired information.

"A. V., of Ohio."—We do not know of any plan like yours in use: it is new to us, but we would not advise you to apply for a patent: weigh the matter well yourself; it will cost you \$60, at least. The first thing to be done is to make a neat small model of your improvement, as applied.

"D. McA., of Phila."—The value of a mechanic, which you speak of, is above our valuation, but the wages is from \$1.50 to \$2 per day. A good man was wanted last week, by Mr. Waterman at the Hudson River Railroad, 31st street, N. Y.

"D. M. of Ohio."—The lathe is just the thing you want for straight turning. One can be shipped by any regular line via Buffalo.

"J. H., of Ohio."—Your paper is sent every week from this office and ought to reach you regularly. The numbers lost have been sent forward.

"O. W. W., of N. Y."—We have no advices from your case as yet. You will hear from us without delay after the case is examined. \$6 received.

"L. & J., of S. C."—Your request will be attended to, and the volume sent by the next Charleston steamer.

"A. W. P., of Cin. Ohio."—Your plan for heating tyres is no doubt good and should be adopted by blacksmiths, as the same plan has long since been by engineers.

"A. S., of Mo."—We do not know where the cobalt occurs except at Mine, La Motte, in your own State, in the form of pyrites; the price we don't know. We are always happy and thankful to receive useful and practical articles on any subject. We never sell anything in the line you speak of, it would not do for us to be engaged in the business.

"S. A. W., of Vt."—We are sorry to say that the numbers you want cannot be supplied.

"R. B., of Ark."—Cannot supply you with the back Vols. except Vol. 5.

"A. W. D., of N. Y."—You can dissolve India rubber in turpentine—this is the common substance used. The best way to take the power from the breast wheel, is to have two rims on it, gearing into two pinions three feet in diameter on a parallel shaft, to transmit the power by other gear machinery. This mode will make all the machinery work steady, and prevent it from sudden jars.

"L. R., of —."—Your ink has had too much acid in it, for it has become illegible—it cannot now be read; so far as we can judge, your drawing is similar to the pendulum plummet in Vol. 1, Sci. Am.

"J. O. R., of Mass."—You can purchase good Cameras and materials of John Roach, optician, 82 Nassau street, this city.

Money received on account of Patent Office business, since Sept. 24, 1850:—

W. H. H., of Conn., \$50; A. W. P., of O., \$30; J. A., of N. Y., \$75; J. O., of Conn., \$30; B. D. S., of Va., \$50; B. N., of N. Y., \$30; T. F., of N. Y., \$30, and W. Van A., of N. Y., \$500.

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Those desiring Volume 5 of the Scientific American are informed that we are able to furnish a few complete volumes, bound, at \$2.75 each. Also, we can send by mail sets complete, minus No. 1 for \$2. Volume 4, incomplete sets, comprising about 35 Nos., will be forwarded by mail on receipt of \$1.

Patent Claims.

Persons desiring the claims of any invention which has been patented within fourteen years can obtain a copy by addressing a letter to this office; stating the name of the patentee, and the year the patent was granted (adding the month of the year when convenient), and enclosing one dollar as fees for copying.

Important Notice to us!

Whenever any of our friends order numbers they have missed—we shall always send them, if we have them on hand. We make this statement to save much time and trouble, to which we are subjected in replying, when the numbers called for cannot be supplied.

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DR. STEWART'S SAFETY FLUID LAMP.—Rights for any of the States, or for the whole United States, for this valuable Lamp, patented July, 1850, are now offered for sale on the most liberal terms. Land, or good trade, will be taken in part payment. Dr. FRANK STEWART, Swaim's Laboratory, Seventh st., below Chestnut, Phila. 3 4

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THOS. PROSSER & SON, Patentees, 29 Platt st., New York. October 1, 1850.

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TO INVENTORS.—The subscriber wishes to purchase the whole or part of some new, useful and patentable article adapted to the use of housekeepers. Some labor-saving machine that can be introduced into any and every family; a patented article would be preferred. As this article will be sold principally in the States of Ohio, Kentucky and Indiana, it will not interfere with any sales in any other States. Any person having anything new in the housekeeping line, they wish to sell, will please address WILLIAM BURNETT, No. 14 East Fourth st., Cincinnati, Ohio. No washing machines, churns or stoves, of any kind, wanted. No letters will be noticed unless the postage is paid. 2 2*

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PATENT METALIC OIL FOR MACHINERY.—Warranted not to gum. Manufactured under Cumberland Brothers patent (April 6th 1849), by C. E. de la Vergne & Co., Elizabethport, N. J. Transparent metallic, adapted to light bearings, spindles, &c., will last a quarter longer than pure sperm. For burning will be found superior. Fluid White Metallic, of the consistence of cream, to be used without wick and tube, adapted to the oiling of engines, shaftings, &c., will last twice as long as pure sperm oil. Hard White Metallic, to be used instead of tallow, will last three times as long; when used in cylinders, the packing must be renewed. Blue Metallic grease, prepared for greasing the inside of boilers when thoroughly cleaned, that the scale which afterwards collects may be removed with one third the usual time and expense. It is also adapted to the greasing of cog wheels; and for the axles of vehicles it has been found to last more than four times as long as any grease ever used for that purpose. KENNEDY & GELSTON, Sole Agents, 50 3m No. 8 Pine st. New York.

LATHROP'S PREMIUM BEE PALACE.—This Palace is no patent, and no humbug, but for cheapness, neatness, simplicity, durability and perfect adaptation to every want of the Bee, and the interest and convenience of the owner, it has no equal. It has been tested by hundreds of swarms, and proved completely successful, for three years. It has taken a premium at three Fairs; a gold medal has been awarded it by the Mechanics Institute, of Chicago, Ill. It requires no care nor skill in the use of it—all may use it with success. Millions of dollars may be saved annually in our country, which are now lost, by using this Palace for working that most profitable of all insects—the Honey Bee. Engravings, and a specification of this Palace, sufficient to enable any joiner to make it, will be sent by mail, free, to any one remitting \$1 to the inventor, at La Salle, La Salle Co., Ill. D. LATHROP, 1 3*

12 POWER PLANING MACHINES.—SCRANTON & PARSHLEY, New Haven, Conn., have now finishing off 12 power Planers that will plane 8 feet long, 27 inches wide and 24 inches high; these planers are of the first quality, are self-feeding every way; the table is worked by a rack and pinion; the bed is 12 feet long. With each planer there is a splining head and counter shaft, pulleys and hangers. They weigh about 4000 lbs.; the price, boxed and ready to ship, is \$625. Also 12 hand lathes, with back gear on iron shears, and legs 7 feet long, swing 20 inches, about 700 lbs. weight—\$75. These lathes are of the first quality. 1 1f

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