

Correspondents

F. N. B., of Wis.—Copper is superior to iron wire as an electric conductor, because it offers less resistance to the passage of the force.

S. H. J., of Md.—In making surveys, you should do so upon a meridian established by your own observations; but in making reports of your labors you should state this clearly, so that the difference between your results and the map, where it is established authority, may be made known.

J. W. C., of N. Y.—We have received your sketch and description of a propeller to be operated by a reciprocating motion, and to open and close like a duck's foot.

F. H. H., of N. Y.—The plan you propose to launch the "Leviathan" is simply a dry dock. It would have been more to the credit of her designer and builder had they built such a dock before commencing her construction; but that is out of the question now.

F. A. L., of N. Y.—As a substitute for coal tar to paint wooden posts and sills, where these enter the ground, use a paint composed of boiled linseed oil, asphaltum, and red lead.

II. H., of Pa.—The sample of mineral you sent us for examination appears to us to be a slaty shale; we do not think there is much, if any, carbon in it.

E. D. T., of Ky.—Good concrete wall is made with common mortar and small stones. We cannot recommend such a wall for building purposes; it answers every well for some situations underground, in which cases hydraulic cement is employed for an outside coating.

J. R., of N. Y.—An engine of 12-inch bore, 16-inch stroke, and making 130 revolutions per minute, will require more steam than one of 10-inch bore, and 24-inch stroke, making 80 revolutions per minute, but it will give out more power.

J. McM., of Ky.—A current of electricity does not produce an explosion when passing through free space, or on a good conductor. An explosion by electricity is caused by the passage of a current through a resisting medium.

J. P., of Ala.—Any overshot wheel made of wood will soon go to wreck if the stream that drives it becomes dry during a part of each year.

J. H. W., of Iowa.—The cheapest and best ice-house which you can erect is simply a frame building, well boarded up inside and outside, in roof and sides, so as to leave a space between the boards, which should be stuffed with a good non-conductor, such as charcoal dust, dry sawdust, or if you cannot obtain these, use straw.

E. R. B., of Conn.—In general a patent for a new article of manufacture covers the thing made as the specification describes. For example, a patent as a new article of manufacture for a pen-holder composed of gutta percha, would cover the making of pen-holders of the gum named.

H., of N. Y.—There is no special rule for coloring mechanical drawings, as nearly every draughtsman employs some method of his own. All drawings should contain more or less color, and the idea is not peculiarly French.

T. W. B., of Ohio.—We do not consider it profitable to encumber our columns with abstruse mathematical questions which should be learned at school. Our objects are rather to eliminate the results of the sciences as applied to arts in general, without undertaking to instruct in the more elementary principles.

jects are rather to eliminate the results of the sciences as applied to arts in general, without undertaking to instruct in the more elementary principles. It is an error to suppose that "the books" do not contain the information you seek to promulgate.

A. M. G., of Phila.—Many tinsmiths make their own spelter, by using half lead and half block tin. Melt the lead first in an iron vessel, then add the tin.

J. W., of N. Y.—There is a boring tool which would answer your purpose, but we can only give you an idea of it by drawings.

A., of R. I.—Nearly every sculptor uses a different clay for his modeling; but we cannot recommend you to a better than to take fine powdered clay, mix with it a little whiting, and work to any consistency you wish.

F. D., of N. J.—We cannot give you the inventor's name, nor tell you how the article referred to is prepared.

Money received at the Scientific American Office on account of Patent Office business, for the week ending Saturday, January 9, 1858.—

- J. L., of Tenn., \$25; C. M., of Iowa, \$35; L. B. S., of Conn., \$25; W. H., of N. Y., \$30; I. H., of N. Y., \$30; G. S. C., of Ill., \$30; I. R., of Ind., \$30; A. L., of Conn., \$30; C. V. W., of Mass., \$30; H. & J. S. B. N., of Maine, \$30; H. P., of Pa., \$55; J. K. B., of N. Y., \$25; C. H. E., of Wis., \$10; J. A. & F. D., of N. Y., \$30; W. & C. of Conn., \$30; T. R. of Pa., \$55; O. L. C. of Ill., \$115; M. V. A., of N. Y., \$50; C. & Q., of Mass., \$25; H. A. W., of N. Y., \$30; J. H., of Ill., \$25; A. C. R., of Conn., \$25; G. D., of Pa., \$25; J. S., of Ind., \$35.

Specifications and drawings belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, January 9, 1858.—

- L. S. C., of N. Y.; J. C., of Mass.; C. C., of Pa.; J. J. A., of N. C.; J. L., of Tenn.; E. L. E., of R. I.; W. L. C., of Va.; R. H., of N. J.; C. J. R., of Md.; M. W., of N. Y.

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RECENTS.—When money is paid at the office for subscriptions, a receipt for it will always be given; but when subscribers remit their money by mail, they may consider the arrival of the first paper a bona fide acknowledgment of the receipt of their funds.

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