

Correspondents

G. B. of Mich.—The plan you suggest for preventing accidents to locomotives and steam vessels is of no value whatever. The re-acting force of steam on the object from which it escapes in the manner you indicate would be so slight as scarcely to effect the momentum of a locomotive.

J. B. C. of Ohio.—Address E. G. Hyde, No. 15 Maiden lane. This city, regarding auricles for the deaf. A. S. of N. H.—Silver precipitated from a chloride solution by cyanide of potassium becomes the cyanide of silver, the common electro-plating solution. From this you can precipitate the silver, by feeding in "feather zinc;" the silver will fall to the bottom of the vessel, as the zinc dissolves. You must then wash the precipitate, dry it, and smelt it in a crucible, and you will thus recover the pure silver.

S. W. of Miss.—The design for running both stones of a grist mill in the manner described by you has been frequently tried and abandoned. No actual benefit can be effected by such a course.

J. W. P. of Ga.—The tides are produced by lunar attraction alone. Centrifugal force has nothing to do with them.

N. B. R. of C. W.—Clock and similar springs are generally tempered in oil, or various mixtures of oil and tallow, which give a more equitable degree of hardness and elasticity than is given by water. Their perfection, however, in this respect, depends greatly upon the skill and judgment of the operator.

M. M. H. of Mich.—On page 147, Vol. VI., Sci. Am., you will find a "hygroscope" illustrated and described. It resembles the cheap barometer to which you refer, excepting that it has a cloth steeped in a hygrometric salt attached to it in place of an air chamber. Your instrument, composed of an arm of dry wood and a piece of lead attached to it as a substitute for an air chamber, is a barometer, when it indicates the approach of a storm. A hygroscope only measures the amount of moisture in the atmosphere.

H. W. D. of N. C.—You state that you put half a gallon of flaxseed into your sixteen horse power boiler, and have ever since been troubled with priming. You must blow off at the upper and second cocks to remove some of the mucilage, as you have used far too great a quantity. One evil connected with the employment of all mucilaginous substances in steam boilers is their tendency to cause the water to prime and pass over into the cylinder. For this reason we have generally recommended the use of soft water for feed where it could be obtained. Mucilage in the water of a steam boiler seems to cause water to adhere to the atoms of steam as they escape, thus causing the "priming."

A. P. B. of Ohio.—As no water wheel gives out, by 20 per cent at least, as much power as that of the water employed to drive it, of course it is impossible to make a perpetual power of the same water by pumping it back and using it over again. But although the wheel did give out the whole power of the water, it would certainly be absurd to employ it to work itself, as you propose.

H. B. of Mass.—Warming buildings, by arranging the steam or other pipes from which the heat is derived, immediately beneath the floors of their apartments, has long since been done in the precise manner suggested by you.

H. F. of Mich.—Producing undulations on the surface of liquids, in order to expose a greater extent of their surface to the hot or cold air above, has already been done. Distributing water in steam boilers for the purpose of heating the same in the way you indicate, is substantially the same as Dutton's mode of distributing water to produce ice.

J. L. of Pratt's Hill.—The placing of the steam chambers of boilers below the water level, or, in other words, submerging them, is not new. The only advantage that can possibly result from dispensing with the crank would be greater uniformity of motion. Every substitute yet invented has, however, been liable to other very serious objections, and we think the crank will continue to hold its own.

G. W. C. of Mich.—Mr. Piesse is correct when he refers to water as an exception to the law of expansion, by heat only under certain conditions. At a temperature of 42° Fahr., water attains to its greatest density; when cooled to 32° Fahr., it expands, forming ice, which floats on the warmer water below. He means nothing more than this in the article to which you refer.

J. McC. of Ill.—Naphtha, or what you term "oil of coal tar," has been successfully employed for preserving timber. Grant's patent fuel has never been employed in this country, so far as we know.

S. M. of Mo.—The idea of placing a screw in the bow of a boat for the double purpose of drawing her and displacing in a certain degree the resisting water in front, is not new. The first application of a screw propeller for such a purpose was made by D. Fitzgerald, of this city, eleven or twelve years ago.

W. W. H. of Ohio.—Bar magnets weighing more than two pounds rarely support more than ten times their own weight. Small magnets are proportionably stronger than large ones; one weighing sixty grains has supported sixty times its own weight.

W. R. M. of N. J.—There are only two kinds of barometers in use known to us, viz., the column of mercury thirty inches high confined in a glass tube, and the "aneroid," which indicates the relative pressures of the atmosphere by the swelling and contracting of the vacuum chamber. Some of the latter have thermometers attached to them.

Money received at the Scientific American Office on account of Patent Office business, for the week ending Saturday, April 10, 1858:—

G. & G., of Pa., \$30; C. L. S., of Ky., \$30; H. C., of R. I., \$50; M. W., of Ohio, \$50; J. B., of Ind., \$25; F. & W., of N. Y., \$27; G. R., of L. I., \$30; N. S., of

La., \$25; J. M. C., of Wis., \$30; G. K. & Co., of Ill., \$55; J. M. H., of Pa., \$55; T. W., of N. Y., \$55; A. M. P., of N. Y., \$30; J. J. P., of Ohio, \$55; A. W. W., of Conn., \$30; L. L. C., of Conn., \$37; N. H., of Pa., \$30; R. C., of Ohio, \$32; W. W. L., of Ohio, \$70; M. K., of N. J., \$30; G. W. D., of Iowa, \$20; N. P. A., of N. Y., \$30; J. B., of N. Y., \$20; G. B. B., of Conn., \$20; S. T., of Mich., \$30; A. S. S., of Mass., \$30; C. C., of R. I., \$25; J. C. S., of Mass., \$100; W. G. B., of N. Y., \$30; G. W. C., of Mich., \$30; F. & Co., of Conn., \$30; W. H. M., of Iowa, \$20; M. G., of Pa., \$30; J. H. F., of Vt., \$35; J. D., of Mass., \$30; W. M., of Ill., \$32; H. G. B., of Mich., \$30; A. O. D., of Canada, \$25; W. A. J., of La., \$55; W. C., of Mass., \$130; A. A. H., of Ohio, \$35; H. O. A., of La., \$55; O. L. C., of Ill., \$35; F. & L. A. C., of N. Y., \$35; A. S., of Ohio, \$50; J. P. S., of N. Y., \$30; B. F. J., of Mass., \$25; G. & D., of N. Y., \$30; S. W. W., of L. I., \$25; G. H. K., of L. I., \$35; W. M. L., of Conn., \$35; L. F., of N. J., \$25; G. G., of Ill., \$30.

Specifications and drawings belonging to parties with the following initials, have been forwarded to the Patent Office during the week ending Saturday, April 10, 1858:—

H. & A., of Miss.; L. L. C., of Conn.; T. D. L., of S. C.; S. W. W., of N. Y.; N. S., of La.; J. B., of N. Y.; O. T. W., of Pa.; G. & G., of Pa.; L. E., of Mich., (2 cases); J. B. McC., of Mo.; J. H. F., of Vt.; W. H. M., of Iowa; N. P. A., of N. Y.; G. H. K., of L. I.; G. W. D., of Iowa; C. C., of R. I.; J. O., of N. Y.; L. R., of Mass.; W. W. W., of Conn.; W. M., of Ill.; H. G. B., of Mich.; B. A. B., of N. Y.; A. O. D., of Canada; O. L. C., of Ill.; J. F. B., of Conn.; F. & L. A. C., of N. Y.; T. W., of N. Y.; L. F., of N. J.; L. T., of N. Y.; G. & D., of N. Y.; B. F. J., of Mass.

IMPORTANT TO INVENTORS.

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