Notes & Queries.

J. C. W., of Ill.—There are no obstacles to steam engines taking the place of horses for hauling on common roads, except the greater cost for machinery and expense in working. It is held as an opinion by several who have investigated the subject, that on almost any road which will pay for the expense and operation of a steam engine, a greater gain will ultimately be secured by laying down a track of rails. On any road well-paved with smooth blocks, we believe that a hauling steam engine could be operated with success.

P. A. W., of La.—Silver which is deposited on copper by the galvanic current simply adheres by the force of electrical affinity to the surface, and does not enter the pores of the metal like fire-plated silver. In soldering electro-plated copper or tin plates, the silver is liable to blister, because its heat-conducting power is different from the metal on which it is deposited. There is no way known to us for preventing this. If you should discover some method of cold soldering, you would secure the desired result.

J. O. G., of Mo.—The best black paint which you can use for engines is composed of boiled linseed oil and lampblack. After a coat of it has become perfectly dry on the metal, then put a coat of black asphalt varnish on the top of it, and a fine glossy surface will be obtained.

J. M., of Ill.—The best paint which you can use for a brick house, to prevent damp from striking through, is some mineral pigment of the color most suitable to your taste, mixed with good linseed oil. It is the oil, and not the pigment, which forms the protective coating. We have never seen a whitewash that would not ultimately come off with rain; but if you mix some skim or sweet milk, salt and a small quantity of molasses with lime whitewash (when cold), it will be rendered more durable than when used in the common manner.

J. P. L., of Va.—In Belgian coal mines, and some mines in England, as well as one or two in Pennsylvania, fans are employed for ventilating. You will find an article containing the description of a fan in an English mine on page 235, Vol. XII. (old series), SCIENTIFIC AMERICAN. Also, the description of a fan employed in a coal mine at Phœnixville, Pa., on page 267 of the same volume.

F. J. L., of Conn.—The statement to which you refer, regarding deodorized alcohol, was made at the meeting of the Polytechnic Association, and so reported in our columns. All crude alcoholic liquors may be purified by filtration through charcoal.

W. D. W., of Iowa.—Cast steel will stand a greater pressure than wrought iron, when made into a gun-barrel. We have heard of a rifle doing good execution at 1,100 yards. The leaves of the rhubarb plant are not poisonous, so far as we know.

A. P. C., of N. Y.—There is no power lost by the crank in a steam engine. You will find this subject illustrated and described on page 285, Vol. XIV. (old series), SCIENTIFIC AMERICAN. Also, on page 29 of the same volume.

E. T. A., of Ohio.—The shining yellow particles which you send us are mica, which may be known by its splitting into very thin scales.

C. T. M., of S. C.—The strings of your guitar, though called "catgut," are really made from the intestines of sheep. It is said that the "purring pussy" makes all her music before she dies. Why this article should have been called "catgut" has puzzled antiquarians to find out.

F. B., of N. Y.—"All the points in the perimeter of a wagon wheel rolling over a plane" do not "move with the same rapidity, at the same time."

R. C. B., of Ill.—Your article is received and will soon appear.

G. H., of Miss.—Your beer seed is being examined.

J. M. L., of Ind.—The substance which you send us is sand, composed of the ingredients of granite—mica, quartz and feldspar.

W. & S., of Va.—Various opinions are expressed in regard to the extent of surface which a lightning rod will protect. The rule has been laid down that it is a circle, the radius of which is equal to the square of the hight of the rod. We have never seen any account of experiments proving the correctness of this statement, and we have no idea that it has ever been determined. Probably it would vary with circumstances. We should venture the opinion, though not very confidently, that in the case which you cite there are points enough.

B. F. H., of Ohio.—Several plans are in use for consuming the smoke of furnaces, and, in England, there is a penalty attached to the escape of smoke from all manufactories, so that it must be consumed in all the furnaces of that country. By consuming the smoke of furnaces, a nuisance is abated and a considerable saving of fuel is effected. The common plan of burning, is to pass it over a highly-heated surface, and to provide a sufficient quantity of warm air for the perfect combustion of the carbon.

H. K., of Minn.—The velocity of a body falling one foot, near the surface of the earth, is at the rate of 8 feet per second; but the velocity of water passing through a notch, under one foot of head, is only 5.1 feet per second. As the velocities of falling bodies are as the square roots of the hights, multiply the square root of the hight of your fall by 5.1, and you will obtain the velocity of the water. Multiply this by the area of the opening, in square inches, and you will obtain the number of cubic inches of water which pass through in a second. As your weir-board is 2 inches deep and 48 inches wide, only 96 cubic inches will flow over it per second. We cannot recommend any wheel for your 2-inch fall.

C. C., of Texas.—You had better write to some scale-maker in this city for what you want. This is the best course for you to adopt. Address F. E. Howe, Jr.; he can furnish you with a good scale.

J. C. H., of Cal.—We have no recent information to communicate in regard to Dr. Collyer's straw paper.

G. W. T., of Mass.—It will be very easy for you to find out whether large and small shot, in quantity, and bulk for bulk, are the heavier. Take a pint of each and weigh them.

W. D., of Pa.—Your article is received, and is under examination.

J. A. J., of N. Y.—Oiled silk is manufactured by coating it with some quick-drying boiled oil, and drying it in a warm room. Two or three successive coats are sometimes put on, each being perfectly dried in succession.

J. P. S., of Ky.—You can get a copy of the drawing of Whitney's old gin from the Patent Office, we believe. It was patented in October, 1793.

S. S. R., of Tenn.—All the barrels of the best quality of double shot guns that we have examined were made in Birmingham, England. You can obtain a copy of Dr. Maynard's patent from the Patent Office; this is the only sure way of getting at the information which you want. Percussion caps and powder are made with fulminating mercury; also with chlorate of potash. Copal varnish for the caps is made by dissolving roasted gum copal in boiling linseed oil. The fulminate of mercury is generally mixed with some niter and sulphur for percussion caps. Ericsson engines of 10 horse-power have been constructed; they are about as heavy as a steam engine, boiler and all, of the same power. We do not know where you can obtain the teeth or springs used in music boxes.

MONEY RECEIVED

At the Scientific American Office on account of Patent Office business, for the week ending Saturday, June 2, 1860:—

J. N. J., of Mass., $25; H. B., of Ill., $25; T. C. H., of Ga., $20; J. M., of N. Y., $90; W. J. C., of Ga., $35; J. S. L., of La., $25; J. L., of N. Y., $30; W. H. P., of Wis., $30; J. R. L. of N. Y., $100; W. H. D., of N. Y., $30; E. D. C., of Conn., $30; Z. D., of Ga., $30; R. S. W., of Ga., $35; J. S., of Ga., $10; E. B. & T. S. P., of N. Y., $30; C. A. B., of Vt., $25; H. P. C., of Mich., $40; E. R., of N. H., $55; T. F., of N. Y., $250; J. H. B., of N. Y., $30; E. K. H., of N. Y., $25; A. P. T., of Ga., $20; J. M. D., of Ill., $35; A. De W., of N. Y., $38; D. & M., of Va., $25; S. B., of Ga., $23; G. W. H., of Ill., $30; J. B. F., of Ohio, $30; E. S. C., of Mass., $30; H. C. F., of Va., $30; F. J., of Ill., $75; J. H. H., of Pa., $30; H. & F., of Pa., $30; H. B. N., of N. Y., $25; A. & L., of Conn., $25; E. A. L., of N. Y., $30; D. F. E., of Mass., $25; W. R., Jr., of Pa., $30; H. A. R., of Ohio, $33; C. T. P., of L. I., $55; S. H., of Ind., $25; E. G. P., of N. Y., $30; C. G., of Md., $25; A. J., of N. H., $30; E. R., of N. H., $55; W. S., of Mass., $25; L. J., of N. Y., $25; G. J., of Ohio, $15; J. D., of Mass., $30; T. H. Q., of N. Y., $35; W. D., of Pa., $25; D. & E., of Ill., $40; D. F. S. W., of Md., $30; L. S. W., of Vt., $25; R. & B., of Pa., $30; H. G. N., of N. Y., $25; F. N., of N. Y., $30, W. L., of Mass., $35; H. & P., of N. J., $30; O. & L., of N. Y., $30; P. N. B., of N. Y., $75; J. W. H., of Ill., $30; W. G. S., of Ga., $25; J. R. S., of Fla., $30; J. R. McD., of Mo., $30; J. B. L., of Conn., $35; S. P., of Canada, $37; S. M., of Ohio, $25; J. O. C., of Conn., $30; H. L. N., of N. Y., $30; R. T., of Iowa, $10; S. D. & B., of Ill., $30; McC. & B., of Mo., $55; A. S., of N. Y., $30; L. B. D., of R. I., $35; E. D. L., of N. Y., $25; and $30, by Adams' express, from Belfield, Va.—name of sender unknown.

Specifications, drawings and models belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, June 2, 1860:—

M. H., of Conn.; S. B., of Ga., H. G. N., of N. Y.; W. H. P., of Wis.; W. L., of Mass.; W. G. S., of Ga.; G. J., of Ohio; S. H., of Ind.; T. & C., of Ky.; T. H. Q., of N. Y.; H. B., of Ill.; W. C. D., of Pa.; L. S. W., of Vt.; E. D. C., of Conn.; C. A. B., of Vt.; H. P. N., of N. Y.; S. D. & B., of Ill.; A. De W., of N. Y.; S. M., of Ind.; N. U., of Conn.; J. N. J., of Mass.; J. A. F., of Ala.; E. K. H., of N. Y.; R. H. & L., of Pa.; D. P., of N. Y.; D. F. E., of Mass.; D. D. A., of Mass.; J. W. H., of Ill.; L. I., of N. Y.; D. & M., of Va.; J. G., of Md.; J. M. D., of Ill.; L. B. D., of R. I.; E. D. L., of N. Y.

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