# Scientific American.

#### TO CORRESPONDENTS

J. D., of N. Y.-It is almost unnecessary to say that we do not like to receive letters written with a pencil.

T. S. P., of Pa.-Get Bourne's Catechism of the Steam Engine, as an elementary work on the subject. Its price is only 75 cents. There is great danger in allowing the water of a boiler to fall below the fire line; an explosion takes place soon after the water is let in.

J. H., of Geo.-The holes in your sketch cannot weaken the walls seriously, but we would prefer common ven tilators in the walls.

C. H. T., of L. I.—Beech boiled in oil will make excelent rollers and bearings.

A. H. K., of Vt.—The work you refer to is not authori-

ty; we refer you to the author of the articles on Water Wheels, which are now publishing in our columns. If you pay attention to the articles, you will obtain the de

sired information.
G. J., of N. Y.—The pump you have is as good as any

other you can get; this is our opinion.

J. M., of Ill.—It will give us pleasure to examine your astronomical clock when it is constructed.

A. G., of Maine-There are many oscillating cylinders in this city, which open and close the steam ports with out the use of any slide or puppet valve, but not by the same plan as you have presented.

A, Y, of Phila .- If you get the Encyclopedia of Chem istry, published by H. C. Baird, corner of Market and Fifth streets, your city, you will find an excellent article on magnets, and tables on the expansion of metals.

J. M., of New York-Do not inhale air through any mixture of lime or charcoal, it would be dangerous for you to do so; our advice to you is breathe the air full and free; bathe your spine and chest every morning and evening, and rub dry, and you will find your health im

T. McK., of Phila.-You could secure the design by patent, but not by caveat. The Committee could not use the design if you had it secured-otherwise they could: but we believe the design would not effect a complete preventive of alteration.

C. G. M., of Ohio-We published two tables on log and board measuring in our last volume and Stoddard's "Rea dy Reckoner" contains a number of tables.

W. T. W., of S. C.—You paid for the whistle in buying your soap receipt. Cut down some good brown soap and dissolve in water containing a little soda dissolved in it; add some scented oil, mould it, and letit dry thoroughly before using. Our softest bar soap becomes very hard when well dried.

C. D., of N. J.-The Grain Drier to which we referred may now be in use, for aught we know to the contrary. We saw the model in 1848: the inventor had it in our office for some days. Steam heat, which must be applied in a case cannot be patented, as its use is old and well known, and the revolving cylinder to dry vegeta-bles, &c., is also well known; we are doubtful of a patent being obtained.

C. A., of N. Y.-A fire of anthracite coal burns out a boiler sooner than wood, because the heat is more concentrated. Steam has been employed in furnaces, but we advise you not to try it if you wish to economise fuel.

J. S. H., of Pa,-We can furnish you with a receiptfor making the stearine candles from tallow, but it requires some capital to engage in the business. The best way to make the common dip candles is to dip them as warm as possible.

R. D. T., of N. Y.-The boiler that exploded at Hartford was a cylindrical one, with flues carried high at the sides. Although frequently solicited to say more about the "Ericsson," we do not deem it proper to do so at present,

U. B. V., of Pa.—We have carefully examined the sketch and description of your alleged improvement in constructing boats, and we are of the opinion that it does not possess no velty, neith ( r do we regard it as have ing any advantage over the present mode of building

J. W., of Ohio-We do not know the name of the ma kers of the ear instrument, any jeweller can make one from the engraving as we published it.

R. E., of Conn.—A cement was patented in 1852, composed of one half bushel of pulverized slacked lime, one fifth of a bushel of powdered rosin mixed with watersufficent to make the whole into a stiff mortar for a waterproof cement.

A. G., of Ohio.—We do not think very highly of your plan for propelling baloons. You might try it, this is the best and only way to determine its practical value. B. F. D., of Phila.-We would prefer to use a larger

single cylinder and cut off at one-third the stroke. You are right respecting the benefits to be obtained from a hot jacket surrounding the cylinder, all engines should have a jacket, but this is not new; locomotives have been constructed with their cylinders placed in the smoke box.

C. A. R., of Iowa.—It is common to find runners for sleighs made with hubs so as to adapt them to wagon We have frequently seen them in this city and elsewhere.

A, J. C., of Pa.—An invention formaking enamel free from lead and tin was patented in 1852. The invention consists in the use of glass one part; lime or salt oneeighth. This combination is thoroughly pulverized and ground together with sufficient water to make it into a cream consistence, and then paint it on the ware with a brush, and afterwards expose it to the heat in the enameler's oven or furnace in the usual way.

A. W. A., of --.-Communications not accompanied must know with whom we are doing business.

D. P., of N. Y -We do not think there is any patentable feature in your improved tubular rail. We have sketches of the same kind of a rail in our possession.

C. R. B., of Pa.-There does not appear to be the slightest novelty in your alleged improvement in substitute for the crank. We look upon it as a useless contrivance for the purpose.

H. W., of Md.—You may depend upon it that if all the fans are constructed precisely alike they will blowalike E.F. B, of Phila.-You would see our comments in our

last number. We are happy to hear of your useful improvements. The pencil you speak of has one defect which we could point out. We shall be happy to receive D. B., of N. J.-Your plan would indeed be very ex-

pensive, but some such plan ought to receive a fair trial. J. S., of Va.—In tempering axes you must be very careful and not heat them too high. It is not so much in the water or liquid in which you dip them, as the proper temperature to which you raise them.

Money received on account of Patent Office business for the week ending Saturday, March 25 :-

P. S. of N. Y., \$10; S. M. J. S., of N. Y., \$25; D. H., of Ala., \$35; W. E. D., of N. J., \$30; R. A., of Tenn., \$25; H. B. P., of N. Y., \$10; W. D. T., of N. Y., \$300; J. J. W., of N. J., \$41; W. & W., of N. Y., \$650; E. L. S. & Co., of Ga., \$30; S. M., of N. Y., \$4,75; L. W. C., of N. Y., \$30; C. A. N., of Mass., \$20; J. U., of O., \$30; J. P., of Ky., \$50; T. M. P., of Md., \$25; T. P., of N. Y., \$50; T. G. W. of N. Y., \$30; W. S., of N. H., \$20; S. H. D., of Mich. \$22; A. N. N., of Ind., \$30: J. S. C. T., of N. Y., \$32; W J., of N. Y., \$30; A. B. G., of Mass., \$30; H. L. T., of N. Y., \$5: W. J. C., of N. Y., \$27; W. T., of Ct., \$25.

Specifications and drawings belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, March 25:-

W. J. C., of N. Y.; J. H, W., of Ga.; J. J, W., of N. J. T. M. P., of Md.; H. L. T., of N. Y.; W. T., of Ct.; S. H. D., of Mich.; G. S., of N. Y.

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HALLENGE TO TEST BRIDGES—Believing myself to have discovered the strongest possible form of a support for a bridge, that is the best possible arrangement of the materials in a bridge, so that the same amount of materials cannot be placed in any other form to have the same strength, and knowing that many others believe the samething of their own inventions, and as it is a matter of much importance to the public, and can be definitely and satisfactorily settled by actual experiment. I propose to test a model of my bridge against any that may offer, for \$1000, said sum to be put up by each competitor; the trial to take place in the city of New York, as soon as practicable. Models to be of wood or iron; to be of equal length, hight, and weight. Particulars to be agreed upon. Address DUD-LEY BLANCHARD, Troy, N. Y.

PORTABLE FORGES AND BELLOWS—(Queen's patent). The best forge in market for Blacksmiths work, i Boiler Makers, Mining, Quarrying, Shipping, Clantations, Contractors on Railroads and Public Works, Coppersmiths, Gas Fitters, &c., Also an improved Portable Melting Furnace for Jewellers, Dentits, Chemists, &c., both of which are constructed with sliding doors to protect the fire from wind and rain when used out doors, and for perfects afety and free escape of smoke when used indoors. They are compact for Shipping. Circulars with particlars and prices will be forwarded upon application. Cast from Columns, for building constantly on hand. Jobbing, Plano, and all kind of work promptly executed. FREDERICK P. FLAGLER, 25 10\* Sole Manufasturer, 210 Water street, N. Y.

Washington City, after the 20th of March instant where notices of opposition to my petition for the extension of my patent must be directed. Papers that were authorized by the Commissioner of Patents to publish hinotice of my petition will please give the above three in sertions, and send their bills to me at Poughkeepsie, atter the 224 of May next.

Sam' L. F. B. MORSE.
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TEARNS & CO.'s Mammoth Catalogue, contain-ming a list of 2,000 Books and Prints, will be sent by mail gratis, to all who may order it. Address, 17 Ann st., N. Y... STEARNS& CO., Publishers. 23 4

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23 tf

VANTED—The situation of Foreman in a Railroad or other machine shop, by one who has had much experience in designing and constructing machinery, sepecially locomotive and stationary engines. F. GARDNER, Boston, Mass.

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pig iron—The subscriber has always on hand[a stock of the best brands of American and Scotch Pig Iron, for sale at the lowest market price. G. O. ROBERTSON, 135 Water st, cor. Pinc, N. Y. 13 14eow

United States Patent Office,

Washington, March 14, 1854.

ON THE PETITION of Willard Dalrymple, executor of Samuel Sawyer, late of Boston, Massachusetts, deceased, praying for the extension of a patent granted to the said Samuel Sawyer on the 10th of June, 1859, for an improvement in machine for cutting corks, for seven years from the expiration of said patent, which takes place on the tenth day of June, eighteen hundred and fitty-four, (1854).

which takes place on the tenth day of June, eighteen hundred and fifty-four, (1854)—
It is ordered that the said petition be heard at the flatent Olike on Monday, the 28th of May next, at 12 o'clock, m.; and all persons are notified to appear and show cause, if any they have, why said petition ought not to be granted.

Persons opposing the extension are required to file in the Fatent Office their objections, specially set forth in writing, at least twenty days before the day of hearing. All testimony filed by either party, to be used at the said hearing, must be taken and transmitted in accordance with the rules of the office, which will be furnished on application.

The testimony in the case will be closed on the 19th

cortance with the rules of the office, which will be clurnished on application.

The testimony in the case will be closed on the 19th of May; depositions and other papers relied upon as testimony, must be flied in the office on or before the morning of the 20th May; the argument, if any, within tendays thereafter.

Ordered, also, that this notice be published in the Union, Intelligencer, and Evening Star, Washington, D. C; Evening Argus, Philadelphia, Pa; Scientific American, New York; Post, Boston, Mass; and Inquirer, Cincinnati, Ohio, once a week for three successive weeks previous to the 29th day of May next, the day of hearing.

CHARLES MASON, Commissioner of Patents.

P. S.—Editors of the above papers will please copy, and send their bills to the Patent Office, with a paper containing this notice.

United States Patent Office. Washington, Feb. 16, 1854.

Washington, Feb. 16, 1894.

N THE PENTION of Samuel F. B. Morse, of Poughkeepsie, New York, praying for the extension of a patent granted to him on the 20th of June, 1849, for an improvement in the mode of communicating information by signals, by the application of electro-magnetism, for seven years from the expiration of said patent, which takes place on the 20th day of June, 1854—It is ordered that the said petition be heard at the Fatent Office, on Monday, 22nd day of May next, at 12 o'clock, M.; and all persons are notified to appear and show cause, if any they have, why said petition ought not to be granted.

Persons opposing the extension are required to 21-

now cause, it any they have, why said petition ought not to be granted.

Persons opposing the extension are required to file in the Patent Office their objections, specially set forth in writing, at least twenty days before the day of hearing. All testimony filed by either party, to be used at the said hearing, must be taken and transmitted in acordance with the rules of the office, which will be furnished on application.

The testimony in the case will be closed on the 12th of May; depositions, and other papers relied upon as testimony must be filed in the Gince on or before the morning of the 13th May: the arguments, if any, within ten days thereafter.

ing of the 13th May: the arguments, if any, within ten days thereafter.
Ordered, also, that this notice be published in the Union, Intelligencer and Evening Star, Washington, D. C., Pensylvanian, Philadelphia. Pa.; Scientific American, New York; and Inquirer, Cincinnati, Ohio, once a week for three successive weeks previous to the 22d of April next, the day of hearing.

Charles MASON,
Commissioner of Patents.
P. S.—Editors of the above papers will please copy, and send their bills to the Patent Office, with a paper containing this notice.

UNITED STATES PATENT OFFICE. Washington, February 13 1854

ON THE PETITION of Samuel Blatchford, admin Y., praying for the extension of a patent granted to the said Orlando Jones, doeseased, of Aubur n, N for an improvement in the manufacture of Starch, for seven years from the expiration of said patent, which takes place on the 30th day of April, eighteen hundred and fity-four—

It is ordered that the said petition be heard at the Patent Office on Monday, the 24th day of April next, at o'clock. M.; and ail persons are notified to appear and show cause, if any they have, why said petition ought not be granted.

Persons opposing the extension are required to file in the Patent Office their objections, specially set forth in writing, at least twenty days before the day of hearing; all testimony filed by either party to be used at the said hearing must be taken and transmitted in accordance with the rules of the office, which will be furnished on application.

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with the rules of the omce, which which the rules of the omce, which was prication.

Chaered, also, that this notice be published in the Union, Intelligencer, and Evening Star, Washington, D. C.; Pennsylvanian, Philadelphia, Pa.; Scientific American, New York; Post, Boston, Massachusetts and Enquirer, Cincinnati, Ohio, once a week for three successive weeks previous to the 24th day of April next, the day of hearing.

CHARLES MASON,

CHARLES MASON, Commissioner of Patents. CHARLES MASON, Commissioner of Patents.

P. S.—Editors of the above papers will please copy a send their bills to the Patent Office, with a paper of taining this notice.

THE HAND BOOK FOR THE ARTISAN, MECHANIC AND ENGINEER—By the well-known Mechanical author, OLIVER BYRNE, is this day published by T. K. Collins, Jr., No. 8 North Sixth street, Philadelphia, Pa. It will maintain its place among among the other numerous and justly valued works of this author. The work contains the arts of Polishing, Lackering, Grinding, Japanning, Staining, and Burnishing, as well as the arts of perfecting engine works and mechanical designs; the ornamenting of wood, stone, marble, glass, diamonds, iron, steel, and works in all sorts of metals and alloys, and the various abrasive processes that effect what cannot be done by cutting tools. To which is added a dictionary of apparatus, materials, and processes employed in the mechanical and useful arts, for Grinding, Polishing, and Ornamenting. This work contains 483 pages 8vo., eleven large plates, and 185 wood engravings. Price \$5. It will be sent by mailfree of postage on receipt of \$5.

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these Machines throughout every portion of the United
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B. ELY, Counsellor at Law, 52 Washington street, Boston, will give particular attention to Patent Cases. Refers to Messre Munn & Oo, Scientific American. 16 1y\*

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Thu ALLISTER & BROTHER.—Opticians and realers in mathematical and optical instruments, No. 48 Chesnut st., Philadelphia, Pa.—at the old stand established in 1786 by John McAllister, Senr., Mathematical instruments separate and in cases, Tape Measures, Spectacles, Spy Glasses, Microscopes, Thermometers, Salometers, Hydrometers, Magic Lanterns, &c., &c. Our illustrated and prices catalogue are furnish, ed. on application, and will be sent by mail free of charge.