## Scientific American.



W. S., of Ohio.-For information relative to bows and arrows see "Boy's Book of Amusements," and kindred works. Subscription received.

D. D. C., of Mass.-You are advised to communicate your invention to some reliable individual having means and sense, and arrange with him to test and bring out your improvement. You will never be able to save six-sevenths of the cost of fuel now required.

C. L. P., of Va .-- We think there is nothing patenta ble in your separator device.

E. S., of La:-Your plan might partially ventilate but would not disinfect the steamer Susquehanna.

A. R., of Pa.—Un-wang, is the name applied to the roots of certain plants of the hellebore tribe in China; but which is the precise root that the Chinese employ to drive away musquitos, we cannot say.

A Subscriber, of Ind.—No tool-makers keep on hand tools to tighten boiler tubes. You must have a conical mandrel to fit the tubes of your boiler, and tighten them yourself.

A. W. C. and G. P. D., of Mo .- You can make a beautiful oil for lubricating watches and clocks by agitating the best sperm oil with about 25 per cent of its weight of absolute alcohol. This should be done in a glass bottle for about one hour, then allow the matter to settle, in order to obtain the clear oil. The alcohol removes the water, some of the fatty acid, and the bitu-men from the oil. Any oil so treated is greatly improved for lubricating purposes.

J. A. M., of Mass.—Grind up some glass or fine white sand to powder, and boil it in a strong caustic lve, and you will obtain soluble glass. It is not sold in this city.
P. M. McN., of Mich.—You can obtain any kind of

colored glass from William Gib'on, glass stainer and decorator, 374 Broadway, this city.

R. M., of Va.—There are no steam boilers in use in which the furnace is not placed in contact with the boiler; but in some iron works the waste heat from the smeltingfurnaceis used to generate steam in boilers. Wood is the best fuel to employ, if you design to use a furnace separate from the boiler, as the flame extends a long distance into the flue. The horse-power of your boiler will be inproportion to the heating surface. You should all ow nine square feet for each horse-power.

J. M. H., of Miss.-Catechu is employed for tanning skind, and it is a good base upon which to apply logwood and a little sulphate of iron in solution, in order to color such skins black. It will also color skins brown, but no other colors, so far as we know. Sewing machines ought to be sold cheaper than they now are. Competition does not seem to affect the price.

J. J. M., of Tenn.-Dana's Mineralogy will give you the information desired in regard to American ores. Address Appleton & Co., this city.

G. W., of N. Y .- The Babbitt patent is generally considered to be invalid in this city, as Mr. Ayres has published affidavits to the effect that he had lined iron journal boxes with a soft metal in the Staten Island dye works prior to the issuing of the patent.

S. Y., of Mass.—The best cement you can use for an aquarium is common pitch; it will not affect the water, because it is not soluble in it.

. Wm. F., of Pa .- If you wish us to publish the facts set forth in your letter in regard to the sale of alumi-num, you will please embody them in an advertisement, and remit the amount for its publication as per terms -25 cents per line of eight words.

T. W., of Ill.—You have not read the article carefully on page 278, relating to the filling of teeth with tin. You assert that we stated that "tin is a non-conductor." Read the article again, and you will find it states that tin is a "superior non-conductor to gold"—not that it is a non-conductor. The conducting power of that it is a non-conductor. The conducting power of gold is 200; tin, 64. Always be sure you are right before you attempt to criticise. You are correct in your opinions regarding the efficiency of lightning rods. The solid section is the grand object; the thicker the rod the better the conductor.

H. T., of Ohio.-We advise you to get a good lift pump for your salt well, and use strong wooden pipes through which to raise the water. The salt will corrode all iron, more or less; but it does not act upon cast so readily as upon wrought iron. You should also use an engine of sufficient power to keep the water low enough to repair the pump if it should get out of order, because no work of man can be relied upon implicitly. would prefer to use a pump with two, rather than one lift. This is commonly done in deep mines.

H. M. S., of N. Y .- Where there are no ears (the auditory nerve being absent) there can be no sound. The appreciation of vibrations by the sense of hearing is sound, just as the appreciation of objects by the sense of seeing is sight. Bodies wou dvibrate if there were ears, and light would shine if there were no eyes but sound and sight would be unknown.

A W Wadaworth \_Places to inform us in what State your Avon is located. There are nine towns of this name in the Post-office Directory, and to make sure of reaching you we should be obliged to write nine letters. Save us this dire necessity, by sending the information we need.

H. B., of Ind.—In 1856, R. D. Nesmith, of Lake Village, N. H., took out a patent for a machine for dressing mill stones. Our opinion of it, formed from an examination of a model, is favorable. Hughes' American Miller is a tolerable work on milling. It can be obtained from H. C. Baird, Philadelphia, Pa.

A. S., of N. H .- We cannot supply the missing numbers of our paper that you want, and do not think you can get them. We are always willing to answer such requests, and to supply missing numbers whenever we have them. But such requests are very numerous, and we have repeatedly said in our columns that we should always attend to them if possible, thus hoping to save ourselves the necessity of replying in every case.

There are but three primary colors, namely, red, blue, and yellow. A green colored body reflects the blue and yellow rays which form green, while the red ray of light is absorbed. A purple colored object reflects the red and blue rays—the yellow is absorbed; and it is the same with all the other colors. You are mistaken in

supposing that there are seven primary colors.

B. S., of Pa.—It is very difficult to dissolve old vulcanized india rubber in turpentine. It should first be steeped in warm oil or grease, then boiled in a lye of caustic alkali, made with potash or soda, after which it should be cut into thin slices, and placed in the turpentine. The turpentine should be kept warm in a close vessel. Naphtha is superior to turpentine as a solvent, but both require the aid of heat.

N. E. H., of Wis.—Common red ink is made with a strong decoction of red Brazil wood, or hypernic, to which is added a little alum and gum arabic. The best red ink is made with carmine, which is a preparation of cochineal. It is dear, and not in common use.

A Prussian gentleman wishes information in regard to a good machine for pegging boots and shoes. Address C. Crupadien, care Messrs. Munn & Co., New York

City.

Who can supply machinery for making lime barrels? Information is also wanted in regard to the construc-tion of a lime kiln for stone lime. Address C. H. S., Box 773, New York City.

Money received at the Scientific American Office on account of Patent Office business, for the week ending Saturday, May 29, 1858 :-

J. J. P., of Ohio, \$55; D. B. T., of Ohio, \$25; H. R. W., of Ky., \$30; W. P., of Mo., \$10; I. H. Q., of Mich., \$31; I. G., of N. Y., \$60; J. F. T., of S. C., \$25; T. F., of Mo., \$30; G. M., of Mass., \$30; J. I., of N. Y., \$25; J. C. R., of N. Y., \$55; S. R. B., of N. Y., \$30; D. & M., of Ill., \$20; J. S. B., of S. C., \$25; D. C., Jr., of Ala., \$30; D. B., of N. Y., \$30; G. H., of N. Y., \$30; Ala., 530; D. B., Of N. I., \$30; G. H., Of N. I., \$50; G. H. S., of Iowa, \$30; F. K., of Mass., \$15; H. K., of Ind., \$30; J. H. S., of Ind., \$55; J. R. P., of N. Y., \$250; T. W. L., of N. Y., \$25; J. D. T., of Ohio, \$30; J. D., of Ohio, \$30; S. G., of N. Y., \$30; W. H. Van G., of N. J., \$30; J. H. I., of Ill., \$10; J. P. K., of L. I., \$30; N. C. P. S., of N. Y., \$30; H. & W., of Mich., \$25; B. R., of Mass., \$27; B. A. R., of Conn., \$25; H. C. W., of Mass., \$30; A. S., of Ohio, \$20; A. F., of N. Y., \$25; A. D. S., of Vt., \$35; J. H., of Mass., \$30; J. T., of Ohio, \$30.

Specifications and drawings belonging to parties with the followi g initials have been forwarded to the Patent Office during the week ending Saturday, May

D. & M., of Ill.; H. R. W., of Ky.; J. J. P., of O.; E. T. B., of Ga.: G. H., of Mass.; J. L., of N. Y.; D. B. T., of Ohio; J. F. T., of S. C.; J. H. P., of N. J.; J. S. B., of S. C.; K. & B., of N. Y.; A. F., of N. Y.; B. R., of Mass.; T. W. L., of N. Y.; J. C. R., of N. Y.; H. & W., of Mich., McC. & B., of Mo.; B. A. R. of Conn.; A. S., of Ohio, (2 cases): A. D. S., of Vt.

## TO OUR SUBSCRIBERS.

BACK NUMBERS-Complete sets of the present volume of the Scientific American can yet be furnished at the subscription price.

PATENT CLAIMS-Persons desiring the claim of any invention which has been patented within fourteen years, can obtain a copy by addressing a letter lo this office, stating the name of the patentee, and date of patent when known, and enclosing \$1 as fee for copy-

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IMPORTANT TO INVENTORS.

A MERICAN AND FORRIGN PATENT TO SOLICITORS.—Mesers MUNN & CO., Proprietors of the Scientific American, continue to procure patents for inventors in the United States and all foreign countries on the most liberal terms. Our experience is of twelve years' standing, and our facilities are unequaled by any other agency in the world. The long experience we have had in preparing specifications and drawings has rendered us perfectly conversant with the mode of doing business at the United States Patent Office, and with most of the inventions which have been patented. Information concerning the patentability of inventions is freely given, without charge, on sending a model or drawing and description to this office.

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The annexed letter from the late Commissioner of Patents we commend to the perusal of all persons in-terested in obtaining patents:—

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Yours, very truly, CHAS. MASON.

MOWING AND REAPING KNIVES OF every description manufactured by C. H. LAME, No. 407 Che-rry st., Philadelphia, Pa. First premium awarded by the United States Agricultural Society for mowing and reaping knives.

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TO OWNERS OF FOREIGN PATENTS-An American, having an extensive acquaintance among capitalists in London and Paris, intends returning thither in a few weeks, and would like to undertake the introduction and sale of any valuable patent. Address, with full particulars, Box 755 Post-office, New York.

FIRST-RATE TENON MACHINES FOR SALE LOW-Medal awarded by the American Institute, New York. C. P. S WARDWELL, Lake Village, N. H.

MACHINISTS' TOOLS FOR SAILE AT HALF PRICE.—I will sell the remainder of the tools belonging to the estate of John Parshley at half price, it called for soon. Said tools are new, and in good order. They consist in part as follows:—One 16 foot planer. 10 hand lathes, 2 spliner drills, 13 No. 1 drills, 1 bolt header, 1 shaft straightener, plane centers and jaws. chucks, all sizes; also 8 of Foster's building block machines. and jaws. Chucks, an o.c., block machines. N. D. SPERRY, Trustee, New Haven, Conn.

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Paper Manufacturing Co., Niagara Falls, April 20,
1858. United States Gutta Fercha Co.: We duly received the Gutta Fercha Belting ordered from you, and after giving it a thorough test the past winter, on our heaviest engines, constantly exposed to water, ice and oil, and making 140 to 160 revolutions per minute; and again on two of our largest "Gwynne Pumps," making from 690 to 700 revolutions per minute, they have given us entire satisfaction, and we think it decidedly the best belting we ever used, and you may look for our future orders as required.

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