

Business and Personal.

The charge for insertion under this head is One Dollar a line for each insertion: about eight words to a line. Advertisements must be received at publication office as early as Thursday morning to appear in the following week's issue.

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The celebrated "Hornsby-Akroyd" Patent Safety Oil Engine is built by the De La Vergne Refrigerating Machine Company. Foot of East 138th Street, New York.

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Notes & Queries

HINTS TO CORRESPONDENTS.

Names and Address must accompany all letters or no attention will be paid thereto. This is for our information and not for publication. References to former articles or answers should give date of paper and page or number of question. Inquiries not answered in reasonable time should be repeated; correspondents will bear in mind that some answers require not a little research, and, though we endeavor to reply to all either by letter or in this department, each must take his turn. Buyers wishing to purchase any article not advertised in our columns will be furnished with addresses of houses manufacturing or carrying the same. Special Written Information on matters of personal rather than general interest cannot be expected without remuneration. Scientific American Supplements referred to may be had at the office. Price 10 cents each. Books referred to promptly supplied on receipt of price. Minerals sent for examination should be distinctly marked or labeled.

(6879) C. L. says: Can you give me the formula and method of preparation of the so-called fire extinguishers in powder form? If not, can you advise materials to experiment with? A. 1. Fire Extinguishing Powder.—Eight parts common salt, 6 parts sodium bicarbonate, 2 parts Glauber's salt, 2 parts calcium chloride, 2 parts sodium silicate. 2. Common salt, 60 per cent; sal ammoniac, 60 per cent; sodium bicarbonate, 80 per cent. 3. Sal ammoniac, 100 per cent; sodium sulphate, 60 per cent; sodium bicarbonate, 40 per cent.

(6880) A. B. C. writes: I have built a dynamo on lines one-half size of 8 light dynamo, using No. 14 wire on field and 19 on the armature. The machine works nicely and will quickly melt a piece of fine iron wire, but when connected to an ordinary Edison lamp it will not even make a spark. The lamp is one used on alternating circuit. Can you tell me what is the cause of failure? A. The voltage of the lamp is probably too high. Try a lamp whose voltage is adapted to your machine—say twenty volts or perhaps even less. 2. How much wire and of what size will be required to make an induction coil to give a 1/4 inch spark? A. In our SUPPLEMENT we describe a coil which will at its best give a larger spark than the one you specify. One of about three-quarters the lineal dimensions of this one should answer your purposes.

(6881) J. R. T. asks: What number of heat units are given off by the combustion of one pound of ordinary kerosene oil when burned by a wick, as in an ordinary kerosene stove? What number of heat units are given off if the pound of kerosene is converted into a gas and burned as in an ordinary gas jet? And what number are given off if the gas, instead of being burned in an ordinary gas jet, be mixed with the necessary quantity of air and burned as in an ordinary Bunsen burner? A. The same quantity of heat is produced irrespective of conditions of burning, provided perfect combustion is produced. Allow 27,000 heat units per pound. The units will vary for different oils.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted June 9, 1896, AND EACH BEARING THAT DATE.

[See note at end of list about copies of these patents.]

Air brake, T. Lindsey 561,596 Air brake, H. S. Park 561,811 Alarm. See Bicycle alarm.

Table listing various inventions and their corresponding page numbers, including items like Amalgamating apparatus, Axle brake, Baby jumper and chair, and many others.

Table listing various inventions and their corresponding page numbers, including items like Fuel, etc., compound for producing artificial, Fuel injector, universal, Bryce & Kennedy, Furnace, W. L. Ross, and many others.

Table listing various inventions and their corresponding page numbers, including items like Scale pan, weighing, G. S. Forscher, Screen, See Multicolored screen, Revolving screen, and many others.

DESIGNS.

Table listing various designs and their corresponding page numbers, including items like Bicycle bag, L. Dennies, Bicycle package carrier frame, T. Hoermann, and many others.

TRADE MARKS.

Table listing various trade marks and their corresponding page numbers, including items like Beer, lager G. Ebert, Bicycles, tools and appliances for mending, F. C. Durant, and many others.

LABELS.

"Chicago Yeast Powder," Chapman & Smith Company 6,546 A printed copy of the specification and drawing of any patent in the foregoing list, or any patent in print issued since 1883, will be furnished from this office for 25 cents. In ordering please state the name and number of the patent desired, and remit to Munn & Co., 361 Broadway, New York.