

RECENTLY PATENTED INVENTIONS. Engineering.

STEAM BOILER.—Philip J. and Fred. W. Doll, La Salle, Ill. This is an upright tubular boiler, with tubes leading from the fire box in the lower part of the casing to a smoke box in the upper part below the water line.

FURNACE DOOR.—Charles W. Reneau, Meridian, Miss. The door opening, according to this invention, has a lining provided with transverse ribs on its sides, whereby air spaces are formed between the sides and the wall of the opening.

MOTOR.—Frank W. Clark, Mount Desert, Me. A vertical shaft connected with the machinery to be driven has a forked upper end supporting a plate engaged by a shaft provided with a weighted arm.

VALVE.—Thomas P. Ford, Brooklyn, N. Y. This is an improvement on a former patented invention of the same inventor, providing a valve of simple construction which works automatically to introduce a lubricant when the pump is running.

Electrical.

CONDUIT FOR BUILDINGS.—James J. Powers and Robert Van Buren, Brooklyn, N. Y. This is a conduit of baked clay forming an integral part of the wall, floor, or ceiling, and is of built-up sections, each having apertures to receive wires.

ELECTRIC BELT.—Adolf Stephenson and Jonas Backstrom, Stromsburg, Neb. This is a belt to be worn on the person for remedial purposes, and is formed of elastic webbing, with a lining of flannel.

Miscellaneous.

TREATING REFRACTORY ORES.—Charles J. Fauvel, London, England. This is a method of treating ores having precious and other metals, to oxidize and eliminate the associated sulphur, arsenic, antimony, and tellurium compounds.

MAKING SULPHURIC ACID.—Francis B. Hacker, Charleston, S. C., and Peter S. Gilchrist, Baltimore, Md. A sulphuric acid apparatus is provided by this invention with improved connections between the several lead chambers.

SHUTTER WORKER.—Thomas N. Lupton, Winchester, Va. This invention provides a simple and compact construction whereby the shutter may be opened or closed from within the room.

WOOD TILE FLOORING.—Antonio Salvatico, Garesio, Italy. The tile, according to this improvement, is preferably of wood, and may be of any desired shape or thickness.

CLOTHES POUNDER.—Samuel and Frederick G. Davis, Las Vegas, New Mexico. This is a device having a circular, apertured, bell-shaped body, not to be used as a pounder, but to be alternately pressed down upon and raised from the clothes.

OVEN DOOR.—Walter R. Webster and James Hamilton, Pine Grove, Cal. This is a door with a window, especially designed for stove and range ovens. It is so made that the edge of the glass will be kept comparatively cool.

REED PUFF FOR FURNITURE.—Charles Bush, Newburg, N. Y. A strong, durable, and inexpensive ornament for furniture is provided by this invention. It is a reed puff fabric made by clamping a series of reeds around a former.

HOLDER FOR CUFFS, ETC.—Richard Katzer, Brooklyn, N. Y. This is a compact case of durable construction more especially designed for the use of travelers, for conveniently holding cuffs, collars, scarfs, neckties, handkerchiefs, etc.

BICYCLE.—George F. Case, Medina, N. Y. A spring-cushioned connection between the frame of the machine and the driving wheel is provided by this invention, to render the riding more comfortable over a rough road.

NOTE.—Copies of any of the above patents will be furnished by Munn & Co., for 25 cents each.

SCIENTIFIC AMERICAN BUILDING EDITION.

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TABLE OF CONTENTS.

- 1. Elegant plate in colors, showing a residence at Greenwich, Conn., erected for Miss E. L. Kirtland. Floor plans and two perspective elevations.
- 2. Plate in colors showing the Queen Anne residence of W. H. McKnight, at Springfield, Mass., erected at a cost of \$11,500 complete.
- 3. A colonial dwelling erected at Rutherford, N. J. Perspective view and floor plans.

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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.

(5355) P. J. L. writes: I am making an instrument in which I wish to use a magnetic force of some distance attraction. It is desirable to have this attractive force as even draught as possible.

(5356) B. C. W. says: I have an amount of steel fittings that I have to braze with brass spelter, and I have great difficulty in cleaning the borax off afterward.

(5357) H. C. L. asks: I have heard that there is a new metal which expands more than any other. What is it called? How much would 36 inches expand to a degree of heat?

(5358) Deutsche Continental-Gas-Gesellschaft in Dessau write: Please tell us in Notes and Queries of your valuable paper the relation between the B. T. U. of heat and the calorie as being in general use in this country.

1'222. Then a cubic meter being 3531 cubic feet multiplied by 494.3 B. T. U. per cube foot = 14890133 = 12136

calories per cubic meter. The B. T. unit being 1 pound of water raised 1° Fah. The electrical units are identical for all countries.

(5359) W. S. W. asks (1) if there is such a thing as vegetable ivory. A. Vegetable ivory is part of a nut; the nuts are a regular article of importation.

(5361) B. & H. ask: Will you kindly inform us through the columns of the SCIENTIFIC AMERICAN how paper is made that the atmosphere will cause it to change color?

(5362) S. G. S. writes: 1. Please tell me what makes my well pump squeak and howl so. I am using an all-brass cylinder and only a stuffing box at top of connecting pipe.

What horse Power will I require to get a fair speed out of her, and what speed do you suppose I will get with the horse power recommended?

(5363) J. G. H. writes: I have a launch, hull 22 feet over all, 19 feet l. w. l., 4 feet 10 inches beam, and about 18 inches draught. I wish to fit her up for steam and would like to know the following:

Also would you recommend one of the boilers mentioned in SUPPLEMENT, No. 702, which one, and how much larger it would have to be made to get the horse power required?

(5364) Conductor, Galveston, writes: Will you kindly give a receipt for making a dip for renewing uniform brass buttons that have become tarnished?

(5365) W.-G. R. asks: What horse power boiler will be required to heat a house 45x38 and ell 18x30, two stories high, and two rooms in attic 14x18?

Also amount of steam pressure. How do you compute the above? Is there any way of maintaining a pressure on water pipes so as to have running water in second story without having a supply tank overhead?

to exposure and situation of rooms. This will make 500 square feet of pipe surface, and the boiler should have one-eighth of the radiating surface in its heating surface, or 62 square feet. It is safe to make it 75 square feet. Pressure in water pipe can only be maintained from an overhead tank or the continued action of a pump.

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INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

September 5, 1893,

AND EACH BEARING THAT DATE.

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

Table listing various inventions such as 'Advertising apparatus, S. Kuh', 'Alkaline phosphate, making, T. Meyer', 'Aluminum compounds, making, W. E. Case', etc., with corresponding page numbers.

Table listing various inventions such as 'Envelope opener, I. W. Heysinger', 'Extruder, See Cotton gin extruder', 'Fabrics, apparatus for steaming, aging, and drying, Mather & Smith', etc., with corresponding page numbers.

Table listing various inventions such as 'Rolling machine, D. J. Davidson', 'Rolling mill feed table, W. H. Maddock', 'Rolling mill feeding mechanism, W. H. Maddock', etc., with corresponding page numbers.

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