RECENTLY PATENTED INVENTIONS.

Apparatus for Special Purposes.

APPARATUS FOR IMPREGNATING WOOD.—W. L. SMITH, New York, N. Y. This apparatus provides means for treating wood rapidly and under high pressure to make the same fireproof. Means are provided in the apparatus for regulating the pressure. An auxiliary testing cylinder is employed in which comparatively small strips of wood may be placed and subjected to the same treatment as the timbers in the main cylinder, so that the treatment may at times be observed without the expense of drawing off the large amount of solution in the main cylinder and removing the wood therefrom.

APPARATUS FOR GENERATING MOTIVE POWER.—L. D. COPELAND, Los Angeles, Cal. Motive power with this invention is generated by bringing water in contact with molten or hot furnace slag. The molten slag is fed into the generator casing and brought into direct contact with water contained therein. Heat contained in the slag is quickly absorbed by the water, owing to the granulation of slag.

APPARATUS FOR STEAMING CLOTH.—W. HEBDON, Brooklyn, N. Y. Mr. Hebdon provides in this invention an apparatus for shrinking and finishing woolen cloth of all kinds. An improved device is provided for steaming the cloth during the shrinking and finishing process, which insures a thorough and even setting of the fibers to give a firm and permanent finish to the cloth.

SLAG STEAM-GENERATOR.—L. D. COPELAND, Los Angeles, Cal. Two patents have been granted to Mr. Copeland under this title. The steam generator which is simple and durable in construction is arranged to permit control of the operating parts by the workmen to prevent escape of the steam when recharging with molten slag and to insure complete utilization of the units of heat in the slag for converting the water into steam.

The second invention provides an improved device for feeding the slag into the receiving receptacle contained in the closed generator. Means are also provided for readily emptying the contents of this receptacle and breaking up or dividing the slag to insure utilization of all the units of heat contained therein.

Hardware.

SASH-FASTENER.—E. A. SACKETT, J. C. ANDERSON and G. P. BETTS, Denver, Colo. This invention is an improvement in that class of window-sash fasteners in which the body of the device is secured to the sash or casing, and a slidable member is connected therewith in such a manner that it locks the sash in one position when engaged with a socket formed in the adjacent casing, or if the device be attached to the casing then the engagement of the sliding member is with the sash.

SCRAPER FOR PANS, KETTLES, ETC.—J. W. CRAWFORD, Appleton, Wis. Mr. Crawford's invention is an improved device for scraping and cleaning pans, pots, kettles, kitchen utensils, etc. The device consists of a straight bar and a curved bar, having beveled side edges and ends and provided with a handle which extends between the two bars and serves also as a brace. Any surfaces whether flat or curved may be conveniently scraped and cleaned with this implement.

COMBINATION-LOCK.—J. W. GONCE, Kinderhook, Ala. Mr. Gonce has invented certain improvements in keyless combination-locks which have for their object to simplify the construction and reduce the cost of manufacture, also to prevent liability of disarrangement or breakage of the parts.

DETACHABLE SAW HANDLE.—C. W. STITES, New York, N. Y. In a previous invention Mr. Stites produced a saw handle which could be conveniently detached from the saw blade. His present invention provides certain improvements on the original handle whereby it is rendered more simple and practicable and the cost of manufacture is reduced.

SPRING COUPLING PIN.—E. DODD, Adelaide, South Australia. The spring coupling is designed for securing together two parts, such as connecting the poles and shafts to a vehicle, or as in a D-shackle forming the coupling between two chains, rods, or parts of machinery. It is adapted to take the place in many instances of a bolt and nut, and consists of a pin with a spring extension and a detaining catch, all formed in one piece and capable of being inserted and withdrawn without the use of tools.

Miscellaneous Inventions.

HANDLE-BOLT.—A. W. TERRILL, Salem, W. Va. This hand bolt is designed for use more especially on sectional wooden rims of bull-wheels employed in gas and oil well drilling machines. The bolts are arranged to securely fasten the rim sections together and provide convenient handles for turning the wheel.

MAIL-BOX.—P. P. I. FYFE, Concord, N. C. An improved mail box for use in delivering and collecting mail has been invented by Mr. Fyfe. It comprises a structure adapted to be set in the wall of a building, one side of the structure being located at the outside of the building, and other at the inside, so that the postman may deliver or collect mail from the outside of the wall and the occupant of the building may post or receive mail from the inside thereof.

BOILER-CLEANER.—J. W. CONE, Barnesboro, Pa. A simple and efficient boiler cleaner is hereby provided which is adapted to blow off impurities at the surface of the water in the boiler, and to discharge sediment at different portions along the length of the boiler at the bottom thereof.

SCREW CONVEYER.—J. A. MITCHELL, Brooklyn, N. Y. If an ordinary screw is placed in a conveyer trough and material fed to it along its entire length, the mass of material gathered by the screw is rolled entirely around and the screw discharges no more in a given period of revolutions than would be discharged in the same period were the material fed merely for a distance along the screw equal to its pitch. By means of this invention, however, the screw may be fed along its entire length and owing to its peculiar form will discharge—say, for example, in one revolution—an amount of material equal to that received by it during such revolution.

SNOW-PLOW.—W. W. FOSS, Goodhart, Mich. This improved snow plow is arranged for attachment to a road machine and is adapted to open a road covered with snow. The plow has a very simple and durable construction and will move the snow sidewise without requiring much power to move the plow forward through the snow.

OIL-BURNER.—C. W. SIEVERT, Los Angeles, Cal. Mr. Sievert is the inventor of an improved device for burning oils, particularly the heavy oils, such as crude petroleum. The device comprises certain novel features which co-operate to effectively gasify the oil and mix it with air, so as to obtain thorough combustion.

PUMP.—G. E. GREEN, Greencastle, Mo. This pump belongs to the class commonly known as "doubleacting"—that is, pumps having means for causing a continuous flow of water from the egress-tubes. Certain improved details of construction are provided by the invention.

MOLD.—O. NOLAN, Minneapolis, Minn. Mr. Nolan is the inventor of an improved mold for forming artificial building stone. The principal object of the invention is to provide a mold of simple construction in which the stone may be quickly and uniformly made.

AUTOMATIC STOVEPIPE DAMPER.—R. G. SMITH and J. H. MATHIS, Forrest City, Ark. These inventors provide the branch pipe of a furnace, range or heating stove with a novel, simple appliance which is operated by the expansion and contraction of the draft pipe due to changes in its temperature, so as to correspondingly adjust the damper in the pipe, and thus automatically control draft therethrough. The damper is applicable to both vertical and horizontal pipes or ducts.

ACETYLENE-GAS GENERATOR.—W. J. LOYER, San Marcos, Tex. This generator belongs to that class in which the carbid receptacle or holder is arranged on the top of the gasometer or bell placed in a water tank. An improved automatic valve mechanism is provided for effecting the discharge of the carbide into the water-receptacle, as may be required to increase the supply of gas. The operation of this mechanism is effected by the descent of the gasometer below a predetermined point.

NON-INTERFERING HORSESHOE.—J. T. BROACH, Churchland, Va. The shoe embodying this invention overcomes the necessity for the use of boots and leg protectors, allows the shoe to be equipped with toe or side weights or the weights may be dispensed with, and the horse cannot cut the quarters of one leg by the shoe on the other hoof. The article when worn has a tendency to make the horse naturally throw the hoof in an outward direction.

Designs.

DESIGN FOR A HANDLE FOR SPOONS OR SIMILAR ARTICLES.—N. H. ANDRUS, Nebraska City, Neb. The design includes the representation of a trunk of a tree with root branches extending along the opposite edges of the upper portion of the bowl of a spoon. The trunk extends upwardly upon the face of the spoon handle, and has diverging branches extending toward the middle of the same. Foliage is presented alongside the trunk upon the face of the handle, extending at the upper end around the opposite sides of a panel. On the rear of the handle is produced the representation of the trunk with branches extending along the upper edges of the bowl of the spoon and with foliage along the edges of the handle. A tree is produced on the back of the handle near its upper end.

DESIGN FOR SHADE CLOTH.—J. H. WRIGHT, New York, N. Y. The design consists of rows of shell-like figures, the figures spaced apart in one row being above the spaces between the figures of an adjoining row. Each figure consists of a number of segmental nested lines of varying thickness.

NOTE.—Copies of any of these patents will be furnished by Munn & Co. for ten cents each. Please state the name of the patentee, title of the invention, and date of this paper.

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READ THIS COLUMN CAREFULLY.—You will find inquiries for certain classes of articles numbered in consecutive order. If you manufacture these goods write us at once and we will send you the name and address of the party desiring the information. **In every case it is necessary to give the number of the inquiry.** MUNN & CO.

Marine Iron Works. Chicago. Catalogue free.

Inquiry No. 3311.—For dealers in wood used by pattern makers.

AUTOS.—Duryea Power Co., Reading, Pa.

Inquiry No. 3312.—For manufacturers of automobile parts.

For hoisting engines. J. S. Mundy, Newark, N. J.

Inquiry No. 3313.—For makers of fire alarm whistles.

"C. S." Metal Polish. Indianapolis. Samples free.

Inquiry No. 3314.—For a small air pump to be run by an electric motor.

Dies, tools, models. Am. Hardware Co., Ottawa, Ill.

Inquiry No. 3315.—For the makers of the "Naphey" acetylene gas burner.

Handle & Spoke Mchy. Ober Mfg. Co., 10 Bell St., Chagrin Falls, O.

Inquiry No. 3316.—For the makers of the Duplex motor.

Sawmill machinery and outfits manufactured by the Lane Mfg. Co., Box 13, Montpelier, Vt.

Inquiry No. 3317.—For manufacturers of vending machines.

FOR SALE.—Patent on reversing mechanism for launches, etc. S. N., 193 Amity Street, Brooklyn.

Inquiry No. 3318.—For parties to make small steel or malleable iron castings.

Machinery designed and constructed. Gear cutting. The Garvin Machine Co., 149 Varick, cor. Spring Sts., N. Y.

Inquiry No. 3319.—For manufacturers of dynamos operated by windmill power.

Manufacturers of patent articles, dies, stamping tools, light machinery. Quadriga Manufacturing Company, 18 South Canal Street, Chicago.

Inquiry No. 3320.—For manufacturers of sorghum mills, with attachment for cutting the bagasse as it leaves the mill.

ONYX.—Highest grade, domestic stock, unlimited supply, low freight rates. Very attractive proposition. Address "Onyx," P. O. Box 773, New York.

Inquiry No. 3321.—For planting machines for setting and watering in one operation.

Clippings of everything printed on any subject in the American and foreign press. United States Press Clipping Bureau. 153 Lasalle Street, Chicago, Ill.

Inquiry No. 3322.—For a patented box or crate which can be taken apart and returned to consigner.

The largest manufacturer in the world of merry-go-rounds, shooting galleries and band organs. For prices and terms write to C. W. Parker, Abilene, Kan.

Inquiry No. 3323.—For a machine for preparing cotton for felt mattresses.

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.

Inquiry No. 3324.—For makers of brick-making machinery.

Patent for Electric Call as explained in this paper October 4. For sale outright or State rights. J. Salmon, 240 West 23d Street.

Inquiry No. 3325.—For makers of light gasoline or other motors.

Practical Novelty Co., 450 Walnut St., Philadelphia, Pa., issue a 52 p. book in colors, describing their method of keeping the clothing in perfect shape. Free on request.

Inquiry No. 3326.—For parties dealing in rhodium.

WANTED.—First-class machinery draughtsman. One with gas engine experience preferred. Address giving references, to Holland Torpedo Boat Company, New Suffolk, Long Island, N. Y.

Inquiry No. 3327.—For an outfit for making half-tones.

To Ambitious Persons.

A prominent business man of New York City writes that he would like to come in touch immediately with a few well-recommended persons who are desirous of a higher education. This party has at his disposal a limited number of Free Tuition Contracts in the following courses: Electrical Engineering (including Interior Wiring and Lighting, Electric Railways and Telephone and Telegraph Engineering), Practical Electricity, Illustrating, Caricature, Ad-writing, Journalism, Proof-reading, Bookkeeping and Stenography. There is absolutely no expense for tuition, if you are awarded one of these contracts, the only cost to you being postage, etc., and you can pay these during the first four months. We would strongly recommend that you write to this gentleman, if you are ambitious to get ahead. Address W. L. B., Box 3737, New York City, and enclose your references, and be sure and mention Scientific American.

Inquiry No. 3328.—For machinery for compressing refuse, sawdust or other light material into special blocks or forms, for use as fuel

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Inquiry No. 3329.—For manufacturers of revolving brushes similar to those in carpet sweepers.

Inquiry No. 3330.—For manufacturers of laundry machinery.

Inquiry No. 3331.—For manufacturers of stamped goods of German silver, or some white metal less expensive than aluminum.

Inquiry No. 3332.—For manufacturers of sixpenny sticks of weldaminium, patented by Power & Webster, said to be manufactured by W. W. Armstrong.

Inquiry No. 3333.—For manufacturers of heads and handles for feather dusters.

Inquiry No. 3334.—For manufacturers of a machine for assorting bristle hair.

Inquiry No. 3335.—For manufacturers of a machine for separating natural gas from water.

Inquiry No. 3336.—For manufacturers of chuck awls.

Inquiry No. 3337.—For manufacturers of light, portable printing presses.

Inquiry No. 3338.—For manufacturers of track velocipedes for railroad inspection.

Inquiry No. 3339.—For a machine for darning stockings.

Inquiry No. 3340.—For manufacturers of acetylene gas engines.

Notes and 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.

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Books referred to promptly supplied on receipt of price.

Minerals sent for examination should be distinctly marked or labeled

(8728) C. K. B. asks how to reduce old platinum for a toning solution for aristo platinum paper. A. Scrap platinum can only be dissolved in aqua regia. Aqua regia is a mixture of 3 parts of strong hydrochloric acid and 1 part strong nitric acid. After dissolving, evaporate off excess of acid and let the platinum chloride crystallize out.

(8729) E. N. asks: 1. Would you kindly inform me if paper could be made a conductor of galvanic electricity, and if so, how? A. Paper cannot be rendered a conductor, except by wetting it with some liquid which is an electrolyte, such as water to which acid or some salt of a metal has been added. 2. Is there any metal which has a white polish to it like silver? A. Tin and nickel will receive a polish like silver and will retain it longer in the air, since they do not oxidize as readily.

(8730) H. S. asks: Is banana oil made from fats and the above name given to it, or is there an oil extracted from bananas? To what uses can it be put? Also, is there a formula for its manufacture artificially? A. Banana oil is the name given to amyl acetate on account of its similarity in odor to bananas. It is manufactured commercially from fusel oil. Its chief use is for varnish solvent. Has a limited use as an artificial fruit flavor. Methods for making it can be found by consulting an organic chemistry.

(8731) E. G. asks: 1. Is there any definite point or degree of heat at which water turns into steam? A. Water turns into steam at the temperature of 212 deg. Fah. at mean atmospheric pressure. 2. Does this vary much or little under different pressures? A. Yes. Varies at a decreasing ratio from 3 deg. per pound at low pressure to 1.7 deg. at 50 pounds and 0.6 deg. at 100 pounds' pressure per square inch. 3. Is there any rule given on this subject, and if so where can it be obtained? A. Rules and formulæ for the properties of steam are given in Haswell's "Engineer's Pocket-Book." 4. Can steam at atmospheric pressure be colder than boiling water under high pressure without being condensed into water again? A. The temperature of steam is the same as that of the water, when confined with the water in a boiler at all pressures. Steam when released from pressure instantly expands, by which its temperature falls, and becomes colder than the water from which it was liberated. 5. Can water be made hotter than 212 deg. Fah. without turning into steam under high pressure? A. Water can be heated to any required temperature under the pressure due to the temperature, but not to a higher temperature than 212 deg. Fah. under atmospheric pressure.

(8732) E. L. C. asks: 1. What causes the sound made by placing the receiver over the transmitter, more noticeably on short lines, and does same injure the 'phone? A. The sound in the receiver when it is brought over the transmitter is due to induction. It cannot injure the receiver in any way so far as we can see. 2. A recipe for recharging old dry batteries which have given out? A. Dry cells are not really worth recharging. The small amount of zinc in a cell is probably mostly used up in the first life of the cell. If the metal of the outside of a dry cell is punched quite full of holes with a pointed tool, the cell may be put into a glass jar containing saturated solution of salammoniac and used as a wet cell for a while. 3. How many volts does the average medical induction coil give with one new dry cell, regulator out, giving the strongest current? A. We do not know the voltage of a medical coil under the circumstances you describe. No two would probably have the same voltage. The only way to determine the voltage would be to measure it, in the special case. 4. How much does it cost to recharge the improved Fuller battery, and how long will same last; the battery working about one-fourth the time? A. The parts of a Fuller bichromate cell can be purchased from manufacturers of electrical supplies. 5. How many C. P. does the No. 1 burner of a coal oil lamp give? A. The candle-power of a burner cannot be given except by measuring it.