

RECENTLY PATENTED INVENTIONS.

Engineering.

BLOWER.—Charles Rumley, Helena, Mont. This is a blower of durable and inexpensive construction, adapted to pump air into mines and other places, or for exhausting foul air and gases therefrom.

SHIP.—Alberte Foerste, Berlin, Germany. This inventor designs to give such shape to the hulls of vessels that great velocity can be obtained on a shallow draught, with the minimum of frictional resistance.

ROPE LAYING FOR LOG PULLING.—Edmund M. Ivens, New Orleans, La. This invention relates to another patented invention of the same inventor for an apparatus adapted to pull heavy cypress logs from swamp lands or brush.

Railway Appliances.

SWITCH OPERATING DEVICE.—Harry H. McKee, Brooklyn, N. Y. This is an improvement on a formerly patented invention of the same inventor, rendering the application of the device more positive and simplifying the construction.

REFRIGERATOR CAR.—Ferdinand E. Canda, New York City. This invention provides improved means for securing the insulating material in the walls of a car, to prevent it from becoming crumpled or being jarred from its fastenings.

CAR SEAL.—Benjamin J. Sturtevant, St. Paul, Minn. This invention consists of a tag made of breakable material, and formed with a recess into which opens a slot, a spring hook being adapted to be drawn into the recess and having at one end an extension to fill the slot.

Mechanical.

LIFTING MACHINE.—David Nelson, Reno, Nev. This is a machine which may be employed as a jack or otherwise, having great purchasing power, with simplicity and quickness of operation.

Agricultural.

DISK HARROW.—John C. Bauer and John P. Feyereisen, Remsen, Iowa. These inventors have made an improvement in machines employing gangs of rotary disks running on the ground and breaking up the clods.

PLANTER.—Caleb E. P. Hobart, Cherokee, Iowa. This is a machine especially adapted for planting corn, combining in one implement a planter and a drill.

PEACH SCREEN.—John P. Wilson, Hamburg, N. J. For sorting and screening peaches and accurately grading them in various sizes, this inventor has devised a cheap and simple apparatus, which may also be applied for other purposes.

Miscellaneous.

MEASURING FORCE OF PROJECTILES.—Heinrich Brunswig, Troisdorf, Germany. To accurately measure the penetrative force of projectiles this inventor provides an apparatus consisting of a tank holding water, with a head formed of a jelly or soft glutinous substance, to retain the water and at the same time permit the projectile to readily pass into the tank.

COAL, GRAVEL, AND ORE SCREEN.—George W. Cross, Pittston, Pa. This is an improvement on a formerly patented invention of the same inventor, and consists of a metal screen having an integral web portion with rectangular interstices.

PREVENTING CREASING OF FABRICS.—Albert Hox, Crefeld, Germany. To prevent creases in heavy plushes and velvets this inventor has devised a box in which the opposite sides have fabric-engaging cramps or arms.

SHOE FASTENING.—Chaskel C. Eisenberg, Stettin, Germany. This fastening consists of a draught band having a series of clips movable on suitable guides along the edges of the parts to be fastened.

LACE FASTENER.—Edwin A. Pumyea, Jersey City, N. J. This is a novel and simple attachment for a shoe or glove, to retain the end portions of lacing cords, and permit their quick and easy release.

NOTE.—Copies of any of the above patents will be furnished by Munn & Co., for 25 cents each. Please send name of the patentee, title of invention, and date of this paper.

SCIENTIFIC AMERICAN BUILDING EDITION.

AUGUST, 1894.—(No. 106.)

TABLE OF CONTENTS.

- 1. An elegant plate in colors showing a residence at Plainfield, N. J., recently erected for George H. Babcock, Esq. Perspective views and floor plans. A picturesque design. Mr. E. L. Hyde, architect, New York City.
- 2. A residence at Edgewater, Ill., recently erected for Mrs. Eva L. Prescott. Perspective elevations and plate in colors, together with floor plans. An excellent design. M. J. L. Silabee, architect, Chicago, Ill.
- 3. A residence recently completed for J. P. Clarendon, Esq., at Hackensack, N. J. Two perspective elevations and floor plans. Mr. J. E. Turhune, architect, Hackensack, N. J. An attractive design.
- 4. A dwelling at Erie, Pa., erected for William J. Sell, Esq., at a cost of \$4,500 complete. Two perspective elevations and floor plans. Mr. C. F. Dean, architect, Erie, Pa.
- 5. A beautiful residence recently erected at Belle Haven, Conn. Three perspective elevations, one interior view, together with floor and ground plans. Mr. C. P. H. Gilbert, architect, New York City. A model design.
- 6. The beautiful residence of E. Einstin, Esq., at Pompton, N. J. Perspective elevation and floor plans. Cost complete about \$20,000. Architect, Mr. Manly N. Cutter, New York City.
- 7. A conveniently and economically arranged suburban cottage recently erected for George W. Payne, Esq., at Carthage, Ill. An attractive and picturesque design. Perspective elevation and floor plans. Cost \$3,000 complete. Architects, Messrs. G. W. Payne & Son, Carthage, Ill.
- 8. Perspective elevation and floor plans of a well arranged dwelling, recently erected for A. N. O'Harra, Esq., at Carthage, Ill. A pleasing design. Cost complete, \$5,500. Architects, Messrs. G. W. Payne & Son, Carthage, Ill.
- 9. A stable at Belle Haven, Conn. Perspective view and ground plan. A unique design. Mr. C. P. H. Gilbert, architect, New York City.
- 10. The Club House of the Knickerbocker Field Club, recently erected at Flatbush, L. I., N. Y. Engravings and floor plans. Messrs. Parsett Bros., architects, Brooklyn, N. Y. A neat design in the Colonial style.
- 11. An elegant residence of A. B. Bigelow, Esq., at Cranford, N. J. Perspective elevation and floor plans. Estimated cost, \$6,000. Mr. Manly N. Cutter, architect, New York City.
- 12. Miscellaneous Contents: The Hayes metallic lathing, illustrated.—Nonsuch Palace.—The Joseph Dixon Crucible Co.—The slate business.—New and old styles of eaves troughs, illustrated.—The Weathered hot water heaters.—Design for mantel and fireplace, illustrated.—The "P. & B." sheathing and insulating papers.—An improved vise, illustrated.—What becomes of all the lumber.—Globe ventilator, illustrated.—An improved sadiron, illustrated.

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.

"U. S." metal polish. Indianapolis. Samples free.

Wood pulp machinery. Trevor Mfg. Co., Lockport, N. Y.

Screw machines, milling machines, and drill presses. The Garvin Mach. Co., Laicht and Canal Sts., New York.

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The Carter Pressure Water Filter and Purifier for hotels, factories, etc. See illustrated adv., page 47. Field Force Pump Co., Lockport, N. Y.

The best book for electricians and beginners in electricity is "Experimental Science," by Geo. M. Hopkins. By mail, \$4; Munn & Co., publishers, 361 Broadway, N. Y.

Patent Electric Vise. What is claimed, is time saving. No turning of handle to bring jaws to the work, simply one sliding movement. Capital Mach. Tool Co., Auburn, N. Y.

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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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Minerals sent for examination should be distinctly marked or labeled.

(6176) R. J. L. asks how to make peach ratafia. A Ratafia, for flavoring, is by no means difficult to make when the peach is in season. The following is a simple recipe: Blanch 2 ounces of peach or apricot kernels; bruise them well; put them into a bottle, and fill it nearly up with good brandy; dissolve in a cup of cold water 1/2 pound of white sugar candy, and add it to the brandy after it has stood for a month on the kernels; strain off the kernels before you add the sugar; then filter through paper, and bottle off in small bottles for use. Another rather more expensive method of making it is to take 50 bruised peach kernels, 1/4 pound of bitter almonds, 1 pound of white sugar candy, and mix thoroughly with 1 1/2 pint of 90 per cent alcohol, then add 3 quarts of water and 1 1/2 gallons of maltspirits.

(6177) W. B. W. says: I have a tent that is made from ordinary canvas that I wish to render waterproof; kindly inform me what preparation I shall use. A. The following is a simple and cheap process for coating canvas for wagon tops, tents, awnings, etc. It renders it impermeable to moisture, without making it stiff and likely to break. Soft soap is dissolved in hot water, and a solution of iron sulphate added. The sulphuric acid combines with the potash of the soap, and the iron oxide is precipitated with the fatty acid as insoluble iron soap. This is washed and dried, and mixed with linseed oil. The soap prevents the oil from getting hard and cracking, and at the same time water has no effect on it.

(6178) W. R. says: A man can walk 33 miles in a day and be very much fatigued at night. The same man, if he be an expert, can on a bicycle run 100 miles in same time. Where does the extra power come from which increases his speed three times? In the last case he carries his own weight and the additional weight of the bicycle. A. The ways and means of converting power into speed through mechanical devices do not show that extra power is developed through such contrivances. In fact, there is probably far greater muscular power expended in running a bicycle 100 miles in 10 hours than in walking 33 miles in the same time. The method of applying power for any special purpose is a form of conservation of force for the best results, and when applied for speed alone is wonderfully illustrated in the various ways of attaining it in animals designed for speed and in the flight of birds. Man was not built in nature for speed, but by his genius converts his strength into speed on the best mechanical principles.

(6179) F. E. L. asks how to make a good paste for mounting photographs.

- A. Best Bermuda arrowroot. 1 1/2 oz.
  - Sheet gelatine or best Russian glue. 80 grs.
  - Water. 15 oz.
  - Methylated spirit. 1 oz.
- Put the arrowroot into a small pan, add 1 ounce water and mix it thoroughly up with a spoon, or the ordinary mounting brush, until it is like thick cream, then add 14 ounces water and the gelatine broken into small fragments. Boil for four or five minutes, set it aside until partially cold, then add the methylated spirit and six

drops of pure carbonic acid. Be very particular to add the spirit in a gentle stream, stirring rapidly all the time. Keep it in a corked stock bottle and take out as much as may be required for the time and work it up nicely with the brush. A number of additional formulas will be found in "The Scientific American Cyclopaedia of Receipts, Notes and Queries," from which the above formula was taken.

(6180) C. E. W. says: 1. Will you please suggest some way to kill or stop the red and black ants from entering our pantry? A. Put borax around the cracks of the floors, shelves, etc. 2. Will you please give me the formula used by botanists to preserve the color of flowers to be mounted in an herbarium? A. Dust salicylic acid on the plants as they lie in the press, and remove it again with a brush when the flowers are dry. 3. A way to color a piece of hardened steel blue otherwise than by heat. A. Blue finish without heat.—Clean every part carefully, and apply nitric acid 1 part diluted with 10 parts of water until a blue film is produced on the surface. Then wash with warm water, dry, and wipe with linseed oil.

(6181) Reader says: Our village has a system of waterworks on the gravity system. It is a tank holding 1400 barrels, 14 feet high, staves, and built on posts 50 feet high. The tank is built on a hill 25 feet high, which gives an elevation altogether of 90 feet when the tank is full; 1000 feet from the tank at the bottom of the hill a water gauge shows a pressure of 45 pounds when the water is not running. Now, what we would like to know is this? How long will it take to empty the tank through a one inch nozzle 1,000 feet from the tank at the bottom of the hill, where the pressure is 45 pounds (still pressure)? A. In the absence of detailed statement as to size of pipe and its windings in the village distribution to any nozzle, which we assume to be fire nozzle of good form, we can only approximate the time of emptying the tank to be four and a half hours.

(6182) G. W. M. says: Will you please inform a reader of the SCIENTIFIC AMERICAN through query column of some of a substance to remove yellow stains from linen caused by iron rust? A. By adding 2 parts cream of tartar to 1 part oxalic acid ground fine and kept dry in a bottle you will find, by applying a little of the powder to rust stains while the article is wet, that the result is much quicker and better. Wash out in clear warm water to prevent injury to the goods.

TO INVENTORS.

An experience of forty-four years, and the preparation of more than one hundred thousand applications for patents at home and abroad, enable us to understand the laws and practice on both continents, and to possess unequalled facilities for procuring patents everywhere. A synopsis of the patent laws of the United States and all foreign countries may be had on application, and persons contemplating the securing of patents, either at home or abroad, are invited to write to this office for prices which are low, in accordance with the times and our extensive facilities for conducting the business. Address MUNN & Co., office SCIENTIFIC AMERICAN, 361 Broadway, New York.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted

July 31, 1894,

AND EACH BEARING THAT DATE.

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

Table listing various inventions and their patent numbers, including items like Accordion, zither, T. J. Muller; Air compressor, double-acting hydraulic, J. H. Champ; Ammonia, making, L. Sternberg; Arc rupturing device, G. T. Voorhees; Armature for dynamo-electric machines, H. F. Parshall; Armature for dynamo-electric machines, H. G. Reist; Awning, window, J. Jones; Baling press, M. C. Nixon; Bar fixture, M. Bensinger; Battery, See Galvanic battery; Battery plates, making secondary, W. L. Silvey; Battery plates, making stiffened connectors for secondary, W. L. Silvey; Beam straightening apparatus, J. F. Lannahl; Bed, folding, Shelton & Gentry; Bell, W. R. Mackay; Bell, door, B. S. Cowles; Belt, sword, S. N. Bickerstaff; Beverage vessel, J. M. Van Fleet; Beverages, apparatus for charging and drawing carbonated, E. Stahl; Bicycle, F. H. Beck; Bicycle seat post, A. Perkins; Bicycle supporting attachment, H. W. Woodward; Bicycle wheel, G. H. Chinnock; Bicycles, etc., driving mechanism for, W. F. Jencks; Bit and mouth opener, combined, R. N. Harris; Block, See Insulating block; Blower, centrifugal, W. H. Harrison; Boiler, See Coffee boiler. Hot water boiler. Stand boiler; Boiler, J. J. Long; Boiler furnace, W. W. Dean; Boiler furnace, Z. E. Moon; Boiler furnace, steam, White & Forestell; Boiler furnace, steam, H. Wilms; Boiler tube cleaner, R. T. Brooke; Boilers, water circulating, feeding, and discharging apparatus for, F. W. Morison; Bone cutting machine, F. W. Mann; Bottle, H. A. Berley; Bottle neck, Pells & Steiner; Bottle packing case, W. P. Lowrie et al.; Bottle siphon, J. Merseaux; Bottle stopper, F. W. Palmer; Box, See Sheet metal box; Brake, See Car brake; Bread in ovens, means for deodorizing and sweetening, M. Zoeller; Bricks, tiles, etc., machine for pressing, J. Leonard; Caterpillar trap, T. D. Noone; Chain, drive, B. A. Baldwin; Chair, L. C. Gifford; Chlorides, making liquid, A. Sommer; Chuck, emery wheel, J. T. Giblin; Chute for loading vessels, cars, etc., J. M. Dodge; Cigar piercer, C. Horn; Circuit closer, automatic, J. W. White; Clothes line, C. A. Foster; Clutch, friction, T. A. Webster; Coffee boiler, J. W. Carpenter; Comb, J. W. Howlett.

Table listing items such as 'Comp for fiber feeding machines, revolving, J. C. Potter', 'Commutator for dynamo-electric machines, J. Hoffman', 'Compositing of matter and making same, A. P. McKean', etc., with corresponding page numbers.

Table listing items such as 'Railway signal, electric, C. A. Hammond', 'Railway trains, electric signaling apparatus for, W. H. Baker', 'Range finding, method of and apparatus for, B. A. Fisk', etc., with corresponding page numbers.

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