

are prominently displayed, whether the book is closed or open.

TRUNK.—William S. Foster, Dallas, Wis. The shell of this trunk is cylindrical, and has rims, so that the closed trunk may be conveniently rolled about on the floor or ground.

BAG.—William H. Field, Port Chester, N. Y. A strong and very cheap bag is made by this inventor, for carrying coal, etc., by forming the bag with a double bottom and relatively light sides, flat handles on the sides at the top connecting with the double bottom in such way that the bag will withstand the strain and may be easily carried.

DISPENSING LIQUORS, ETC.—James Tomlinson, Granby, Canada. This is an apparatus for registering the amount sold, and consists of reservoirs in a case, each having a discharge pipe terminating in a faucet provided with a filter, induction pipes being graduated to show the level of the liquor in the reservoir.

BOTTLING MACHINE.—August Werner, Brooklyn, N. Y. Connected with the storage cask are a liquid supply pipe and a gas supply pipe, while a bottling valve of especial construction is connected with the bottle, the liquid supply pipe, and the gas supply pipe, in such manner that on first opening the valve plug the gas passes into the bottle to drive out the air, and on further opening the valve the air escape is cut off and the bottle filled with the liquid, the gas in the bottle receding to the storage cask.

ICE SHAVER AND PICK.—William M. Seaman, Goldman Landing, La. This shaver comprises a casing having a slotted bottom, a cutter projecting an adjusted distance through the slot, and a hinged cover having on its pivot end an extension within the casing, to push the accumulated ice forward on opening the lid.

ICE CREAM FREEZER.—Edward L. Weston, Washington, D. C. Two or more kinds of cream can be frozen at once in this freezer, with no greater labor than that of freezing one kind in an ordinary freezer.

GARMENT FITTING PATTERN.—Simon Christiansen, New York City. Two patents have been granted this inventor under this title, both showing improvements upon a former patented invention of the same inventor.

SLEEVE PATTERN.—This is a further patent of the same inventor for an improvement facilitating the taking of the proper measure of the arm and the convenient cutting of the material into upper and under sleeve parts.

UNDER COAT SLEEVE HOLDER.—James Hoffman, New York City. This is a device for holding a coat sleeve close to the cuff while an overcoat is being put on, preventing the sleeve of the under coat from slipping upward.

ANIMAL TRAP.—John Ross, Halifax, Canada. This is practically a double trap, and has provision for holding animals at each end.

ANIMAL TRAP.—Charles A. Snow, Lime Springs, Iowa. This trap when sprung actuates a knife which kills the animal, the trap afterward resetting itself.

front and slotted to allow for the swing or revolution of a knife, spring actuated, but held normally stationary by a trigger, below which is a tilting platform adapted to be depressed by the weight of the animal.

GAME APPARATUS.—William A. Barnes, New York City. This is an apparatus for use in connection with billiard, pool, or bagatelle tables. The balls are set up on the table in substantially circular arrangement, and then inclosed by a ring of tissue paper or similar material and covered by a piece of cardboard, or other substance, that the numbers on the different balls may not be seen.

DOLL.—Frederick B. Schultz, New York City. This is an improvement in jointed dolls previously patented by the same inventor, the present invention providing a doll in which the articulated members can be readily turned without danger of breaking or dislocating the jointed parts.

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. OCTOBER, 1894.—(No. 108.)

TABLE OF CONTENTS.

- 1. Elegant plate in colors showing a Colonial residence at Plainfield, N. J., recently erected for B. A. Hegeman, Jr. Two perspective elevations and floor plans, also an interior view. Cost \$8,000. A picturesque design. Mr. Frank W. Beall, architect, New York City.
2. Plate in colors showing a very attractive stone dwelling recently erected for H. J. Peet, Esq., at Buena Park, Ill. Two perspective elevations and floor plans. A pleasing design. Mr. J. L. Silsby, architect, Chicago, Ill.
3. A dwelling at Bridgeport, Conn., recently erected for Frank Fowler, Esq. Two perspective elevations and floor plans. Cost complete \$5,600. Mr. A. H. Beers, architect, Bridgeport, Conn.
4. A cottage at Stratford, Conn., recently completed for Robert Wheeler, Esq. Perspective elevation and floor plan. A unique design presenting pleasing elevations and a well arranged plan. Cost \$6,200 complete. Mr. Edgar Osborne, builder, Stratford, Conn.
5. The residence at Belle Haven, Conn., recently completed for J. E. Kent, Esq. An attractive design in the modern Colonial style. Two perspective elevations and floor plans. Cost \$6,850 complete. Messrs. Rossiter & Wright, architects, New York City.
6. A Colonial double house recently completed at Bayonne City, N. J. Perspective elevation and floor plans. Cost \$4,800. Mr. Arthur C. Longyear, architect, New York City.
7. A dwelling at Bensonhurst, L. I., recently erected for John P. Jenson, Esq. An excellent example for a suburban home. Two perspective elevations and floor plans. Cost \$5,620 complete, ready for occupancy. Mr. William H. Mersereau, architect, New York City.
8. A dwelling at Flatbush, L. I., recently completed for Richard Ficken, Esq. A design in the Colonial style. Two perspective elevations and floor plans. Messrs. J. C. Cady & Co., architects, New York City.
9. A small Colonial cottage at Bayonne City, N. J. Perspective elevation and floor plan. Cost complete, \$2,800. Mr. Arthur C. Longyear, architect, New York City.
10. A residence at Pompton, N. J., built for Wm. F. Hall, Esq. Cost, \$7,500. A good example of an all-the-year-round residence.
11. The new Protestant Cathedral at Berlin, Germany, costing \$2,400,000. Designed by Prof. Julius Raschdoff.
12. Roman remains at Bath, England.
13. The Temple of Neptune at Paestum.
14. Miscellaneous Contents: Mahogany pavement.—Proportion in architecture.—The architect who never exceeded estimates.—Some difference between the English and American plumbers.—Decay of stone.—Wood water main.—Artificial marble.—Art mouldings, illustrated.—Snow guards for roofs, etc., illustrated.—Double tenoning by machinery.—Transparent bricks for hothouses.—The Capital heater, illustrated.—The Popper patent improved weight sliding blinds, illustrated.—The new decoration in the apex of St. Paul's.—Preparing walls for papering.—An improved carpenter's clamp, illustrated.—An improved sanitary appliance, illustrated.—Hughes' improved drawing table, illustrated.—Helping the deaf to hear, illustrated.
The Scientific American Architects and Builders Edition is issued monthly. \$2.50 a year. Single copies, 25 cents. Forty large quarto pages, equal to about two hundred ordinary book pages; forming, practically, a large and splendid MAGAZINE OF ARCHITECTURE, richly adorned with elegant plates in colors and with fine engravings, illustrating the most interesting examples of Modern Architectural Construction and allied subjects.
The Fullness, Richness, Cheapness, and Convenience of this work have won for it the LARGEST CIRCULATION of any Architectural Publication in the world. Sold by all newsdealers. MUNN & CO., PUBLISHERS, 361 Broadway, New York.

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. Ill. catalog tools, 15c. Frasse, 19 Warren St., N. Y. For stonequarry engines. J. S. Mundy, Newark, N. J. Best Handle Mach'y. Trevor Mfg. Co., Lockport, N. Y. We make absolutely a perfect loose pulley roller. Kridler Mfg. Co., Grand Rapids, Mich. Send for circular.

Screw machines, milling machines, and drill presses. The Garvii Mach. Co., Light and Canal Sts., New York.

Centrifugal Pumps. Capacity, 100 to 40,000 gals. per minute. All sizes in stock. Irvin Van Wie, Syracuse, N. Y.

Guild & Garrison, Brooklyn, N. Y., manufacture steam pumps, vacuum pumps, vacuum apparatus, air pumps, acid blowers, filter press pumps, etc.

Emerson, Smith & Co., Ltd., saw manufacturers, Beaver Falls, Pa., will send Sawyers' Hand Book on Circulars and Band Saws free to any address in the world.

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.

For the original Bogardus Universal Eccentric Mill, Foot and Power Presses, Drills, Shears, etc., address J. S. & G. F. Simpson, 26 to 36 Rodney St., Brooklyn, N. Y.

Competent persons who desire agencies for a new popular book of ready sale, with handsome profit, may apply to Munn & Co., Scientific American office, 361 Broadway, New York.

Send for new and complete catalogue of Scientific and other Books for sale by Munn & Co., 361 Broadway, New York. Free on application.



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.

(6263) J. D. F. says: Please tell me how to color old gun barrels where the color has worn off. Want blue and brown. A bluing barrel.—The bluing of gun barrels is effected by heating evenly in a muffle until the desired blue color is raised, the barrel being first made clean and bright with emery cloth, leaving no marks of grease or dirt upon the metal when the bluing takes place, and then allow to cool in the air. It requires considerable experience to obtain an even clear blue. Browning guns.—The following recipe for browning is from the United States Ordnance Manual: Spirits of wine, 1 1/2 ounce; tincture of iron, 1 1/2 ounce; corrosive sublimate, 1 1/2 ounce; sweet spirits of niter, 1 1/2 ounce; blue vitriol, 1 ounce; nitric acid, 3/4 ounce. Mix and dissolve in 1 quart of warm water and keep in a glass jar. Clean the barrel well with caustic soda water to remove grease or oil. Then clean the surface of all stains and marks by emery paper or cloth, so as to produce an even bright surface for the acid to act upon, and one without finger marks. Stop the bore and vent with wooden plugs. Then apply the mixture to every part with a sponge or rag, and expose to the air for twenty-four hours, when the loose rust should be rubbed off with a steel scratch brush. Use the mixture and the scratch brush twice, and more if necessary, and finally wash in boiling water, dry quickly, and wipe with linseed oil or varnish with shellac.

(6264) E. R. asks: 1. Upon our ranch we have a hydraulic ram which forces water for domestic purposes into a tank 80 feet high. The ram is fed from an artesian well and the water has a fall of 24 inches to it. Every six or seven months, the air chamber becomes so filled with water that it scarcely operates until the chamber is removed and water allowed to escape. When the chamber is in that condition, the valve in operating pounds very hard, as though it was striking something solid. What causes the chamber to fill with water? A. The air in the air chamber is absorbed by the water under pressure, when the water having no air cushion and being non-elastic produces a sharp concussion of the valve as observed. The air chamber should have an air cock at the bottom to let out the water and allow air to draw in when the air in the chamber has been absorbed. 2. Can I make an earth battery in the following manner. First dig a deep trench in moist earth, then stand a copper plate 4x4 feet upright in one end of the trench, then a zinc plate, same size, a short distance from the copper, and so on, copper and zinc alternately, indefinitely; the space between the plates to be filled with moist earth? Would the current become stronger if salt deposits were made between the sheets of metals? A. This will make an earth battery if you connect all your zincs together and all your copper plates together. No zinc and copper must touch. The battery will be very feeble, and will if used soon polarize. No reliable calculation of its power in watts can be given. Salt water poured on the surface would increase the power.

(6265) J. M. S. asks if there is any way of prolonging the life of a fish 20 or 24 hours in a small quantity of water sufficient to cover them in a bucket. If the matter consumed by them to retain life could be artificially supplied, and if so how? A. Fish

may live for several days in a very small quantity of water if it is aerated sufficiently to keep up the supply of air drawn from the water by the fish. A small tube reaching to the bottom of the pail and air blown into the water by a bellows for a few minutes, every few hours is all that is necessary. A very little food only is required, so as not to contaminate the water by the dissolved food.

TO INVENTORS.

An experience of nearly fifty 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

October 2, 1894,

AND EACH BEARING THAT DATE.

(See note at end of list about copies of these patents.)

Table listing inventions and their patent numbers. Includes items like Advertising apparatus, Aerator, Aerial vehicle propeller, Alarm operating mechanism, etc.