

RECENTLY PATENTED INVENTIONS.

Engineering.

SAFETY VALVE.—William C. Walda, Fort Wayne, Ind. The valve body of this device has a central valve seat and line pipe openings leading through the side walls of the seat, with a gravity valve held open by the pressure and fitting in the seat, extending past and closing both openings, the valve being simple and durable and designed to automatically close a pipe when the pressure within ceases.

REGISTER FOR ENGINES, ETC.—Rudolph Ruhlman, Trenton, N. J. This is a mechanism which has its counting or numbering wheels actuated by direct mechanical movement without the use or aid of springs, for registering the revolutions of steam engines or other machinery, and is designed to be very simple, durable and effective.

FLUE DUST COLLECTOR.—Bernhard Rosing, Friedrichshutte, near Tarnowitz, Prussia, Germany. This invention covers a system of separate depending wires suspended in the customary flue dust chambers, in line with the current of the fumes, to collect the solid particles of the smoke or fumes of silver, lead, copper, or other metallurgical furnaces, in distinction from the gaseous constituents of the smoke or fumes.

DOUBLE ACTING PUMP.—Joseph M. Clark, Colfax, Washington. This is a pump in which as one plunger moves downward the other moves upward, so that a continuous stream of water is forced through the outlet pipe, the plungers working in the upright parts of a U-shaped barrel which can be readily take apart to get at the valves and clean the barrel.

Railway Appliances.

CAR COUPLING.—William Yates, New York City. This coupler has a spring-actuated drawbar provided on its forward edge with a locking shoulder and on its rear edge with a boss, in line with which extends a crank with a forwardly projecting arm, a slotted rod connecting this arm with the drawbar, the device being designed to be thoroughly automatic in coupling, and to be operated from the top and sides of the car.

CAR COUPLING.—Milford B. Harriss, Greensborough, Ala. This invention consists of a counterbalanced lever fulcrumed in the drawhead, which has a slot in its bottom, and adapted to support the link in or about in a horizontal position, the invention also covering novel details and combinations of parts, designed to afford a simple, durable, and very effective construction.

Mechanical.

SAW MILL FEED.—Harvey Segur, Decatur, Ind. In connection with the carriage is employed a cable and drum with operating mechanism, the drum having a gear wheel with which meshes a gear on the shaft of a friction pulley, the friction pulley being rotated in one or the opposite direction by means of two friction drive pulleys which are rotated in opposite directions, and so supported that either one may be moved into engagement with the friction wheel.

MACHINE FOR FORMING AND ROLLING SEAMLESS TUBES.—Lyman White, Waterbury, Conn. Two patents have been issued to this inventor, one providing a roll which will simultaneously lengthen, feed, and properly shape a seamless tube from a cylindrical casting, with a simple, compact and durable machine adapted for use in connection with the rolls, while the other provides a machine with a series of rolls adapted for attachment thereto for reducing and lengthening the castings to produce a perfect tube, the invention consisting in the combination and construction of the several parts of the machine adapted to carry the rolls.

Agricultural.

FRUIT GATHERER.—George W. Blackburn, Sarasota, Fla. In connection with the cutter and conducting tube, a novel form of garment is to be worn by the operator, adapted to form receptacles for the fruit, whereby the fruit may be assorted as picked and carried conveniently on the person, the stem being cut close to the body of the fruit without injury from the cutter.

COTTON HARVESTER.—John H. Masters, Stockton, Cal. This invention provides a machine that is designed, when driven over the rows of plants, to blow the cotton from the bushes, the blast carrying the cotton through a suitable nozzle and into a bag or other receptacle, frictional contact aiding the blast in the case of tall plants.

Miscellaneous.

PRINTING TELEGRAPH.—William W. Taylor, Mansfield, Mass. This invention provides for an arrangement of keys similar to those of a typewriter, and so constructed that a single tap upon one of the keys will transmit the whole letter or character in dots and dashes and in print, these keys being connected with a typewriter at each end of the line in such a manner that when the keys are operated the typewriters will be operated also.

FORMING RINGS.—Joseph B. Bowden and Hermann V. Bernhardt, Brooklyn, N. Y. This invention covers a method of first forming a ring with a decreasing thickness from the inside to the outside, and then subjecting it to the action of a series of graduated swages, to insure uniform density and prevent detrimental undue compression and expansion during the several operations.

MAKING BOTTLES.—John B. and Robert Johns, Findlay, Ohio. To cheaply make bottles, this invention provides a method of forming a ring near the upper end of the bottle neck at the time the bottle body is blown, at the same time producing recesses in the peripheral face of the neck just below the ring, and finally applying the bottle head, making a bottle to which the lever of a stopper ball can be quickly and easily secured.

CALCULATOR FOR PERCENTAGES.—Edwin B. Dennis, Excelsior, Mich. Combined with an open top box having its back extended below the bottom, and with a series of numbered recesses, is a peg adapted to fit in the recesses, a series of sliding bars in the box, and a series of slips removably secured to the bars, designed to be a simple and durable device for rapidly and accurately calculating the percentage on a certain sum.

FLUE PROTECTOR.—Joseph H. Gilbert, Philadelphia, Pa. Combined with a masonry chimney is a rectangular surrounding band projecting above and below the floor line, with a box around the band of about the same height as the floor joists, whereby sparks from the interior of the chimney cannot pass through interstices between the bricks into the space between the ceiling and the floor, or behind the base boards.

HOSE REEL.—Reuben D. Wirt, Independence, Mo. This is an improvement on a former patented invention of the same inventor, in which a foot rest and a handle made of gas pipe and united by couplings were used to give lightness and strength, the present device being cheaper, and having running wheels or rollers independent of the reel proper, in which an ordinary cross arm reel may be used.

HEATING AND SETTLING BRINE, ETC.—Powhatan P. Truehart and Milton S. Kimball, Sterling, Kansas. This invention relates to apparatus for separating the impurities from salt brine, sugar cane juice, and other liquids, to utilize the waste heat from under the evaporating pan for heating and settling the brine, separating the impurities, so that the brine shall flow into the evaporating pan hot and pure, whereby the settling and heating will be economically effected and the quantity of brine evaporated in a given time greatly increased.

SHOE LAST.—Bernhard Thorne, Leipzig, Saxony, Germany. This is a boot and shoe last designed to admit of the stretching of a boot or shoe upper in all desired directions by the use of the same last, which is divided vertically and horizontally into four parts, the two lower parts being hinged at their heel ends to swing horizontally apart at the toes, and the upper parts or instep members being hinged at their forward ends to the lower members to swing vertically, with an operating mechanism.

BRICK PROTECTOR.—Nils Olson, Superior, Wis. This invention provides supporting standards carrying caps with wings hinged thereto, and a means of raising the wings, the protectors being arranged in sets or series, for protecting moulded but unbaked brick in case of a sudden storm, where boards and portable sheds have been heretofore employed.

PETROLEUM STOVE.—Olivier Proust, Paris, France. Combined with a metal fount having a central tube projecting through its bottom, is a surrounding casing of non-conducting material forming an air space, and having openings near its bottom, with other novel features, designed to utilize the fuel to the best advantage and insure absolute safety.

ALBUM.—Christian Jaeger, New York City. Two patents have been granted this inventor, one being an improvement on his own former patented invention, and combining a stand provided with a foot piece and back with a book having a bottom hinged to the foot piece and backs connected to the book bottom or cover, with leaves alternately connected to the backs and arranged to interlock, while the other provides a book pivoted by one of its covers to the stand, with a simple and durable construction to permit of opening the leaves of the book and inserting the pictures without injury to the book or stand, as is frequently the case with easel albums as now constructed.

HARNESS FOR OXEN OR OTHER CATTLE.—Otto R. Gottwald, Sayville, N. Y. This harness consists essentially of a head piece with straps for attachment to the horns, a saddle with a belly girth and with loops upon its side, with traces attached to the ends of the head piece and extending through the loops, making a simple and easy harness, readily applied, that will not restrict the movement of the animal, and enable a much greater load to be drawn than can be done with the devices ordinarily in use.

ANIMAL SHEARS.—Chester M. Palmer, Lamartine, Wis. This is a device for sheep shearing, horse clipping, etc., adapted to be operated by an electrical motor, the arms or supports consisting of an electrical horse shoe magnet, an operating shaft being journaled between the arms of the magnet and carrying an armature at one end, its opposite end being connected to the cutter bars in such manner that the revolving motion of the shaft will impart a reciprocating motion to the cutters.

ANIMAL CLIPPER.—This is another patented invention of the same inventor for an improved construction and combination of parts of a similar tool, whereby, from a source of electrical supply, an arm is caused to vibrate rapidly and properly operate the reciprocating cutter bar, the device to be grasped by the hand, the wires extending along the arm and to a belt around the waist, thence to a spring hanger on the ceiling and to the battery.

WHETSTONE FOR ANIMAL CLIPPERS.—This is a multiple whetstone patented by the same inventor for sharpening the V-shaped edges of the knives of clippers, the arrangement being as a series of parallel bars in which the body of the stones have an inclination to one side of a vertical line and the whole bed is mounted pivotally so as to be reversed to reverse the inclination of the stones.

UPHOLSTERER'S WEB STRETCHER.—William E. Morton, Flushing, N. Y. This is an implement with two members pivoted to swing laterally, with circular racks on the contacting faces of their pivoted ends, and a locking device, and adapted to be employed to advantage in securing strips of webbing at each side of a line drawn through the center of a chain seat or other frame of circular or semicircular contour.

DOOR CHECK.—Myron W. Wiard, Concordia, Kansas. This is a combined door stop and

holder, simple in construction and very durable, being formed only of a strong spiral spring and two ordinary screws, and designed to stop the door gently and without noise, and also to hold it open, being applicable also to swinging doors.

POOL TABLE.—William H. Violett, Grand Junction, Col. Combined with the pockets are inclined stationary carriers terminating in a single pipe, with racks arranged for one to each player, and a movable tube or carrier adapted to connect the single pipe with any one of the racks, and various other novel features, including a device for reception of balls and noting of count from "scratch" shots.

BUBBLE PIPE.—Alonzo Lewis, Baltimore, Md. This pipe has a reservoir in connection with a rubber outlet pipe having a clamp or compress engaging it transversely to close its bore by compression, means for releasing the clamp, and a blowpipe communicating with the rubber tube below its clamp, the device holding the water so it will not be spilled.

SHOULDER BRACE CORSET.—Andrew J. Bobbe, Cincinnati, Ohio. This invention covers corset braces with a broad, stiff back piece and elastic arm loops, with a waist belt at the bottom, suspender straps being attached to the sides of the back piece behind the arms, and passing obliquely along the loins for connection with the trousers on each side near the front, whereby the strain is brought on the back piece near the middle.

PERFUME HOLDER.—Herman Tappan, New York City. This is a device designed to prevent breakage of the bottle or flask, while being highly ornamental, and comprises a base supporting the bottle and provided with a neck holding a collar, bent rods being hooked on the base and the collar forming a guard for the bottle, while a cap is held on the bottle and engages the collar.

DETERGENT.—Peter K. Post, Jr., New York City. This is a new article of manufacture for toilet and laundry purposes and other uses, and is compounded of borax with spirits, to make a paste, prepared and used in the manner specified. It is also designed for cleaning glass, silver, crockery, etc.

SCIENTIFIC AMERICAN

BUILDING EDITION.

JULY NUMBER.—(No. 57.)

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1. Elegant colored photographic plate of the residence of Henry R. Towne, at Stamford, Conn. H. H. Holly, of New York, architect. Perspective elevation, floor plans, sheet of details, etc. Cost \$20,000.
2. Plate in colors of a dwelling at Tremont, N. Y. Floor plans, perspective elevation, sheet of details, etc. Cost \$6,000.
3. Perspective elevation and floor plans of a residence at Monclair, N. J. J. C. Cady, of New York, architect. Cost complete \$10,000.
4. Photographic view and floor plans of a residence at West Brooklyn, N. Y. Cost \$4,500.
5. A cottage at Dunwoodie, N. Y. Floor plans and perspective elevations. Cost \$5,000 complete.
6. A dwelling at Holyoke, Mass. Perspective and floor plans. Cost complete \$5,500.
7. Sketch of a residence at Surbiton.
8. Design for a one story house to cost about \$1,000.
9. Engravings representing the exterior and plan of a large piggery.
10. A dwelling erected for Mr. C. D. Danforth, Yonkers, N. Y. Floor plans and perspective. Cost \$9,000 complete.
11. Photographic perspective view and floor plans of a neat and desirable cottage recently erected at Griswold, Iowa, from plans and perspective published in the SCIENTIFIC AMERICAN. Cost \$1,075.
12. A handsome residence at Springfield, Mass., erected for Mr. E. W. Shattuck. Perspective and floor plans. Cost \$15,000.
13. Floor plans and photographic perspective of several cottages erected for the late Hon. Chas. Crary, at Chester Hill, Mount Vernon, N. Y. Cost \$4,000 each complete. Mr. J. C. Brown, of Mount Vernon, architect.
14. Sketch of a chapel and village hall. Estimated cost \$20,000.
15. Page engraving of the Ripon Cathedral, Yorkshire, England.
16. Miscellaneous contents: Steam and hot water heating.—The garden.—European health resorts.—Fireproof paint.—Testing well water for sewage.—The carpenter.—Fire clay in Montana.—The Spence hot water heater, illustrated.—Improved sliding blinds, illustrated.—Prepared building paper.—An improved separator and trap for steam boilers, illustrated.—Lyle's storm and screen door, illustrated.—A sheet copper statue thirty-five feet high, illustrated.—A boiler for greenhouses, dwellings, etc., illustrated.—An efficient ventilating fan, illustrated.—An improved door hanger, illustrated.—Taste in selecting paint.

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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. 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.

(2356) A Subscriber writes: Will you please state whether steam is visible? A. Steam is invisible. The white cloud seen escaping from steam pipes, kettles, etc., is not steam, but is water in a finely divided state.

(2357) H. H. H. asks (1) if in making wood alcohol and acetic acid they are made from the same product, or if only one of these can be made from the same extractor? A. They are made in the same extraction by distillation of wood. 2. Is turpentine made in any other way in this country than from the exuded sap of the pines? A. In Knight's Mechanical Dictionary you will find described under the article turpentine still an apparatus for direct manufacture of turpentine. Comparatively little is thus produced. 3. Is there any place in this country where acetic acid, turpentine and wood alcohol are all gotten from the same extraction of wood, that is, given say 2 gallons of wood tar, is there any manufactory that will take from this 2 gallons the turpentine, the alcohol and acid? A. Wood tar is not generally thus treated, as it would be very poor economy to first distill the wood destructively and then recover from the tar the other products. We cannot undertake to supply the statistics asked for.

(2358) J. P. L. asks the object in mixing sea coal with sand, thus making what they call a facing for patterns? A. To prevent the sand from fusing into the iron and forming a hard scale.

(2359) C. F. M. asks the composition of a good liquid cement. A. Soak gelatine in water, melt at a low heat and add strong vinegar or acetic acid until it remains liquid when cold.

(2360) L. G. E. writes: I want some formulas for brilliant color for drug store show bottles. A. For violet use sulphate of iron with salicylic acid, for yellow chromate of potash, for dark green chromium sulphate, for red sesquichloride of iron with sulphocyanide of ammonium, for blue sulphate of copper and ammonia.