

### RECENTLY PATENTED INVENTIONS.

#### Engineering.

##### POINT FOR WELL SINKING MACHINES.

—A new point, adapted for well sinking or prospecting machines, has been patented by Messrs. Joseph R. & Wm. B. Coffin, of Bliss, Nebraska. This point is constructed so as to permit a free downward flow of water while the well is being sunk and a free upward flow of water when the well is completed. It consists of a perforated tube, carrying at one end a drilling tube containing a pipe provided at the top and bottom with valves.

**AUTOMATIC CUT-OFF.**—Henry Beddoe, Rolla, Mo. This invention covers a spring-pressed wheel mounted to oscillate and connected with the cut-off valve, but controlled from the main valve, being simple and durable in construction, and adapted for reversing or non-reversing engines, to cut off the supply of steam to the cylinder in proportion to the work required at a given speed.

**ORE ROASTING FURNACE.**—Simon B. Dexter, Glendale, Montana. This furnace has a vertical roasting chamber with an outlet on top for waste gases and products of combustion, side fire chambers near its lower end, with updraught flues from below the fire chambers discharging into the top outlet, with other novel features, for treating ore dust by passing it through the furnace in the direction of the draught of the fire, thereby insuring a thorough treatment of the ore without appreciable waste.

#### Railway Appliances.

**CAR COUPLING.**—William H. Harris, Newberry, S. C. This is an automatic coupler in which each drawhead is made with a rigid and a movable jaw, the movable jaw being articulated about a vertical axis and having locking devices for holding it in position, the coupling being designed to be simple and inexpensive, and to effect the coupling and uncoupling in a certain, safe, and convenient manner.

**SNOW PLOW.**—John H. Pielert, Triumph, Md. This is a machine arranged to be fitted to a locomotive, as a double ender of powerful capacity, to cut out and throw away the snow to either or both sides of the track, and is provided with means whereby so much of the snow as may be required can be led to the water tank of the locomotive to supply water for boiler use.

#### Electrical.

**ELECTRO OSTROTOME.**—Dr. M. J. Roberts, New York City, has recently patented an improved electrical apparatus for conducting operations in bone surgery. The various implements used are operated rapidly, smoothly and positively by means of a small electric motor arranged in the handle or carrier of the instrument. By means of this improvement the operator's attention and strength may be directed solely to guiding and controlling the instruments.

#### Mechanical.

**WHEEL OR PULLEY.**—David C. Frazer and William J. Davis, New Market, N. J. In this wheel or pulley mechanism, combined with a supporting frame is a bored hub having a loose interior axle, an endless chain of rollers between the axle and the wall of the bore, end plates for the hub secured to the frame, and bolts adapted to the hub and end plates, whereby the strain of working is not taken at one place along the bore, but at opposite sides or all around it.

**WRENCH.**—David V. Cash, Johnson City, Tenn. The handle of this wrench turns upon a socketed hub, there being a pair of ratchet disks having their teeth arranged in reversed directions between the handle and hub, and a rotatably reversible pawl pivoted to the handle and having oppositely disposed prongs adapted to engage their respective ratchet disks, the tool being designed to be simple, durable and safe.

**PACKING RINGS.**—Charles L. Eastman, Brooklyn, N. Y. This invention relates to cylinder packing rings, and making them as expansible rings designed to fit accurately in place as well as if each were made from a single piece, the ring being formed with radial slots crossed by transverse slots, filling the slots with melted metal, and after cooling cutting the ring into segments.

**CALCINING GYPSUM.**—James Sickler, Salina, Kansas. This invention covers an improved process, which effects the retarding of the setting of plaster of Paris by incorporating a retarding agent in the plaster prior to the complete calcining, and whereby the retarding agent is uniformly and homogeneously mixed with the finished plaster without deterioration to its final setting qualities, and giving the workman more time to apply and fasten it into the desired forms.

**WIRE DRAWING DRUM.**—William W. Shearer, Port Angeles, Washington. By means of this invention the wire is seized at the die by automatic pinchers attached to a chain or wire rope secured to the sheave within the drum, the sheave revolving independently of the drum and drawing the chain and pinchers holding the wire entirely within the drum through an opening in its side, thus drawing the wire from the die and attaching it to the drum with one continuous motion.

#### Agricultural.

**CORN PLANTER AND FERTILIZER DISTRIBUTER.**—Jacob W. and William C. Duryea, Blawenburg, N. J. This is a machine adapted to operate one or two seed-dropping mechanisms and corresponding fertilizer distributors, located at suitable distances apart according to the space between the rows of corn to be planted, and, while simple and durable in construction, is designed to permit an accurate check planting of the seed and marking of the hills.

**CHURN POWER.**—John S. Dickey, Blanket, Texas. This invention relates particularly to

a vertical single-dasher reciprocating churn, providing a construction therefor which is designed to be simple and durable and give a maximum length of stroke, while always keeping the dasher elevated where not in operation.

**MEASURING BUTTER IN MILK.**—John T. Riley, West Union, Iowa. This is a device for determining the butter value of milk or cream of different qualities, providing an inclined guide with a scale carrier at its lower end, a lever pivoted at the upper end of the guide, and a sample tube carrier adapted to slide along the guide.

**VINE SECURING DEVICE.**—John Stanzl, Harlem, Mo. This is an improvement on a former patented invention of the same inventor, providing a slotted hoop or band with a spring projecting through the slots in such a manner that the vine will be held between the spring and the hoop or band, to hold vines upon a trellis in such a manner that the tendrils will not indiscriminately clasp the support, and the vine may be readily removed at the approach of winter.

**BEE SWARMER.**—Francis D. Lacy, Nirvana, Mich. This is a device designed for use in connection with any kind of hive, and provides means whereby an empty and an occupied hive may be so connected when the bees show inclination to swarm that they will be forced to take possession of the empty hive without incurring any loss in numbers and with safety to the operator.

**PEANUT CLEANING MACHINE.**—James M. Williams, Petersburg, Va. This invention relates to a machine having a revolving cylinder in which the good nuts are separated from the dirt, which is positively drawn from the cylinder, so that the nuts will polish each other, with simple means for separating the pops and shells from the good nuts and produce a finer quality thereof, with a minimum degree of waste.

**CALF WEANER.**—Ernst H. Geisler, Deshler, Neb. This is a device formed of a number of rods bent to constitute a halter-like frame and united at a point near their forward ends, and form prongs, in connection with a re-enforcing plate which holds the prongs from spreading or becoming loosened.

#### Miscellaneous.

**TYPE WRITING MACHINE.**—Henry R. Kennedy, New York City. This machine has 29 keys, 26 of them bearing alphabetical and other characters, while three central keys are specially marked, one to be depressed when a capital letter is to be made, another when a figure or special character is wanted, and another being the spacing key, the machine being designed to be light, compact, inexpensive and efficient.

**PRINTING ADDRESSERS.**—Hugo Lewinsohn, Bromberg, Germany. This invention is for a printing press adapted to print addresses or other matter upon envelopes, wrappers and parcels, etc., the invention covering a novel construction, combination and arrangement of parts.

**REED ORGAN.**—Jarvis Peloubet, Bloomfield, N. J. The wind chest of this organ is provided with two resonating chambers located one above the other and provided with a flexible top and bottom, these chambers being located below and above the key board, and being more resonating than the remaining parts of the wind chests.

**FRAME BARS FOR GLAZED STRUCTURES.**—Willard F. Mills, Kalamazoo, Mich. This invention covers an improved metallic setting or glass supporting bar especially adapted to retain stained glass of different contours used in the production of ornamental artistic designs in windows or similar works of art, the object being to make a light, strong and handsome bar out of sheet brass or other metal, and one which will be economical.

**ROTARY MEASURE.**—William C. Wells, Chicago, Ill. A casing with vertical sides has a graduated wheel journaled therein operating an indicator disk by means of a cam, disk, lever, and pawl, whereby straight, curved or compound lines and distances of all descriptions may be measured, such as the inside measure of boxes, rooms, etc.

**BALING PRESS.**—Henry Kile, Marshall, Ill. This invention is intended to provide an improved press, simple and durable in construction and very effective, specially designed for pressing broom corn, hay, cotton, etc., into compact bales for storing and shipping.

**ASH LIFTER.**—Henry D. Wendt, 29 Union Square, New York City. This is a machine for lifting ashes, etc., from the holds of vessels, and similar uses, working in a vertical position with adjustable chutes or spouts by means of endless chains, the machine requiring but little space and being designed to work very economically; it is also applicable for conveying coal from barges into ships and ore out of mines.

**FLOATING BREAKWATER.**—John M. White, Long Branch, N. J. This invention consists of a series of pontoons pivotally connected with each other, and each composed of longitudinal and transverse hollow cylindrical tubes and projections extending upwardly therefrom, for the protection of coasts from the action of heavy waves.

**CAMERA SHUTTER.**—Henry W. Hales, Ridgewood, N. J. This invention covers an attached arm and spring made capable of swinging to actuate the shutter from opposite ends in either direction, whereby the shutter is always self-setting, as regards its closure of the lens aperture, to admit of the withdrawal of the plate holder of the camera, without risk of exposure of the plate till the shutter is shot.

**BEER COOLING APPARATUS.**—Joseph Peter, Bucyrus, Ohio. A refrigerating chamber through which water constantly circulates and through which pass the beer pipes is provided, a cabinet containing the refrigerating chamber, with storage compartment for bottled liquors and a water cooler, all communicating with each other and cooled by the circulating water.

**MECHANICAL FOG HORN.**—Frank E. Dyer, Mount Desert, Me. Connected with the horn proper is an air pump, with flexible tube leading therefrom to a receiver provided with shoulder straps, the receiver being connected by another flexible tube with the mouthpiece of the horn, making a device which can be readily carried about and sounded with full blasts.

**COUNTER GUARD.**—George C. Peck, Pawtucket, R. I. A series of perforated brackets are secured on the edge of the counter and bent to extend over it, while wires are strung through the perforations and secured therein at spaced intervals, to protect goods exposed for display on counters and shelves, the appearance being neat and the cost moderate.

**TRICYCLE ATTACHMENT.**—Daniel Dennett, Brookhaven, Miss. This is a chair attachment to especially adapt velocipedes, tricycles, etc., for occupancy by babies or small children, the chair being conveniently and safely secured to or suspended from the rear axle of the vehicle.

**KNOCKDOWN TRUNK.**—Monroe Green, Brooklyn, N. Y. This invention provides a trunk designed to be quickly and easily taken apart to be packed in small compass, while it may be as quickly put together, and will be as strong as if the parts were permanently fastened in the usual way.

**GAS STOVE.**—James Gibbons, Jersey City, N. J. Combined with a stove body which has an interior fire and mixing chamber, closed at the front by a transparent outer wall, are upper and lower partitions, a superheating chamber for air supplied for combustion, and other novel features, making an inexpensive and efficient stove designed to present a cheerful appearance and insure a maximum radiation of heat with a minimum supply of fuel.

**CARVER'S FRAME.**—James M. H. Frederick, Akron, Ohio. This is an adjustable supporting frame for poultry or other cooked meats, to hold them in position upon a platter, whereby the operation of carving will be facilitated, the frame being of metal, and having supporting standards to engage the article to be carved and hold it in position.

**WATER CLOSET INDICATOR.**—John Dierberg, Visalia, Cal. This is a device of prominent and permanent character, to be attached to the outside of the closet door, and controlled by a cord or string from the interior, to signify when the closet is occupied.

**FLY FRONT GARMENT.**—Charles Dusenberry, Jr., Tuckahoe, N. Y. Combined with the front fabric and attached fly facing is a cord re-enforce held to the fabric and facing, and crossed at places between or adjacent to the button holes of the fly, the improvement being adapted to all classes of fly front coats or garments, but especially to rubber goods.

## SCIENTIFIC AMERICAN BUILDING EDITION.

OCTOBER NUMBER.—(No. 60.)

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3. Engraving of a Pompeian house, as reproduced at Saratoga Springs, N. Y.
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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. Miscellaneous sent for examination should be distinctly marked or labeled.

(2479) S. B. writes: 1. What is the name of the best gas to sustain human life in a submerged boat? A. Air; the oxygen of the air is the sustaining agent, and its proper dilution with nitrogen is essential. 2. What quantity of said gas would be ample to sustain 10 adults for 24 hours? Length of boat inside 95 feet, width 12 feet, depth 15 feet, tapering from the center to both ends. A. The same air will last a long time if properly treated. Caustic soda or freshly slaked lime should be used to absorb the carbonic acid gas, and a strong solution of permanganate of potash should be used to destroy organic emanations. These agents must have a good surface exposed to the air, and should be occasionally agitated or stirred. The motion of the boat should do this. Then for each person 15 to 20 cubic feet of oxygen should be added to the air during the 24 hours.

(2480) G. F. D. asks: 1. Is the skull of the negro formed of the same number of bones as the skull of the white man, the suture between the parietal bones being present in the negro? A. Yes. 2. Please give process of preparing absorbent raw cotton. A. Boil best quality of cotton with 5 per cent solution of caustic soda or potash for one-half hour. Wash thoroughly and press out all water as far as possible, and immerse in a 5 per cent solution of chloride of lime (bleaching powder) for 15 or 20 minutes; wash with a little water, then with water acidulated with hydrochloric acid, then with water. Boil once more for 15 minutes with caustic soda solution and wash with acidulated and plain water as before. 3. Please give receipt for a good counterfeit detector. A. The ring, feeling, weight, size, and appearance are the most practical tests.

(2481) W. H. W. asks: 1. In what way is the dry plate used in photographing prepared? A. See SCIENTIFIC AMERICAN SUPPLEMENT, Nos. 272 and 541. 2. In what way is the albumenized paper prepared before the silver nitrate is added to it? A. It is coated with the white of eggs containing a small quantity of