

## RECENTLY PATENTED INVENTIONS.

## Engineering.

**GAS GENERATING MACHINE.**—John A. Enos, Washington, D. C. To generate gas for illuminating or heating this inventor has devised a machine by which a constant supply of air will be forced through the generator, preventing variations of the flame, the generator cylinder being so operated that all the heavier oils will be acted on by the air pressure. The generator cylinder is slowly rotated, to keep the heavy oil in constant movement through the absorbent material, which is held between perforated diaphragms, and the side and end walls of the cylinder are corrugated to counteract contraction and expansion.

## Railway Appliances.

**CAR COUPLING.**—Martin L. Mardis, Salem, Ohio. This invention relates to couplings of the Janney type, and provides improved means for locking the knuckle in operative position, while a releasing device actuated by the locking means engages and opens the dog to unlock the knuckle. The locking device may be actuated from the car platform or the top or side of the car, a locking dog or latch engaging and locking the knuckle in its closed position, and a knuckle releaser operated by the dog pushing the knuckle open when the dog is thrown out of engagement with the knuckle. The mechanism is so arranged that it is not liable to get out of order.

**RAILWAY CROSSING.**—Daniel Collen, Inwood, Canada. This invention provides continuous rails for the easy and safe passage of the wheels of a train and at the same time provides danger signals for approaching trains in case the crossing is open. There are fixed rail sections at the diamond, and endwise movable rails at opposite sides in longitudinal alignment with the fixed rail sections, the movable rails being between the fixed sections of the diamond and the track rails.

**AUTOMATIC AIR PIPE COUPLING.**—Wiley E. Crowson, Montgomery, Ala. To automatically join the ends of air-conducting pipes on trains, and hold them in airtight condition while the cars are coupled, according to this invention, the main coupling sections are made with male and female coniform coupling heads, the male head being elastic, and each head connected to an elongated body made up of portions joined in sequence with intervening elastic joint pieces. The slightly yielding main coupling sections are secured on the ends of the car frames and are spring-pressed forwardly, being sufficiently projected to adapt them for engagement with each other. Each main section has an interior sealing valve controlling the air passage, the valves automatically closing when the joined main sections are detached by uncoupling the cars.

**ANGLE COCK.**—Thomas A. Oothouse, Mount Olive, Ill. To automatically cause the brakes to be applied in the rear section of a train when the train has parted or the hose has burst, without applying the brakes at the front of the train, this inventor has devised a valve to be arranged in the cock body, controlling ports on one end of the angle cock body, the other ends of the ports registering with a port leading to a chamber in the angle cock body in which is a seat for a valve, a spring normally holding the valve off the seat.

**NUT LOCK.**—Charles T. Redfield, Glen Haven, N. Y. This improvement is especially applicable in connection with a railway fish plate, which is made with perforations adjacent to the nut to receive a wire-locking device, the wire ends being passed through the fish plate and bent to engage the nut. The arms at the ends of the wire are untempered, and the improvement affords a positive locking device of very simple character.

## Miscellaneous.

**LUMBER PILING.**—Howard Daniels, Atlanta, Ga. Two patents have been granted this inventor in this line, one of which is an improvement on an invention patented by him in 1893, and relates to machines by which the lumber is piled on edge. The machine has a swinging conveyor frame to be lowered to receive the lumber from a chute and lift the courses successively to position on a truck, the courses being supported by a pile-retaining bar which is movable into and out of position in rear of the lumber pile as the successive layers are applied. The stakes separating layers of boards are fed positively to the swinging conveyor frame, one at a time, by a stake feeder at each side as each layer of boards is moved upward. The other patent provides a simple and easily operated apparatus forming a hand machine which can be built at so small a price that one can be set at the head of each kiln. Transfer cars or trucks may be dispensed with if desired, and the machine can be adapted to kilns which take the lumber through endwise, without any expensive provision for changing the direction of the load. The machine comprises a carriage with upper receiving portion or loading bench and a piling portion connected therewith, a curved guiding device directing the lumber to the piling portion.

**NECK YOKE.**—James S. Brown, Eureka, Cal. According to this improvement a tip ferrule is removably held on the pole and a clip secured to the neck yoke is capable of pivotal and removable connection with the neck yoke, the latter thereby being conveniently connected with the pole and having proper movement thereon without danger of becoming disengaged, while the reins cannot become entangled with or caught by the yoke. The invention also provides means for lengthening the pole when desired, according to the character of the team to be harnessed.

**FENCE POST.**—Levi M. Brock, Mackinaw, Ill. A tube of sheet metal slitted down one side forms the body of this post, the lower end having a spiral flange which acts as a screw, by means of which the post may be inserted in the ground with a pipe wrench or other tool. The post has a cap on its upper end, and a wooden core which slightly spreads the edges of the tube, exposing the wood for sufficient space to permit of driving staples therein for the attachment of wires or for the driving of nails to attach boards.

**EXTENSION TABLE.**—James Stephens and Gilbert De Marce, Canisteo, N. Y. This table has two sections capable of relative sliding movement, one section having a stationary top and the other section having a series of movable top sections capable of swinging downwardly and inwardly to move beneath the stationary top of the first section. The extension leaves are by this arrangement at all times attached to the table, thus preventing their loss and facilitating the quick extension or contraction of the table as desired.

**LAUNDRY LIST INDICATOR.**—Richard Lundqvist, Laguna de Terminos, Mexico. This is a device on which to keep a record list of the number of pieces sent to a laundry and for other similar uses. It consists of a circular board with central inscribing surface, on which the date may be written, radial inscribing surfaces to accommodate the names of the articles, and an outside inscribing surface on which the number of pieces are marked. The device turns upon a handle.

**BOOTH.**—Albert F. Hunt, Jr., and George L. Walker, New York City. For the exhibition or sale of goods these inventors have designed a booth which may be either stationary or portable, and especially adapted for markets or fairs, where stands are required for the sale of fruits or merchandise. The invention comprises standards on which are mounted series of shelves, elevated by counterbalancing, and, when not wanted, the whole or any part of the contents of the stand may be elevated, leaving the space clear underneath.

**BICYCLE GEAR, ETC.**—Weston E. Watkins, Phelps, N. Y. To convert an oscillating foot or hand motion into rotary motion, as required in bicycles, tricycles, or machinery, without the aid of chains, springs, connecting rods or combinations of levers, this inventor has devised an improvement according to which a sleeve is secured to each of two levers, the sleeves turning on a stationary axis on which revolves the wheel hub, while a toothed segment secured to each sleeve operates converting gearing, and the latter actuates clutch devices engaging and revolving the hub. The vertical movement of the pedals rocks the sleeves, and they transmit their movement to the toothed segments working alternately in opposite directions, and both engaging pinions in connection with the clutch mechanism. Roller bearings are employed to lessen the friction, and the improvement may be applied to a bicycle wheel of any approved construction.

**OVEN THERMOMETER.**—Lizzie S. Bardollar, Trinidad, Col. This improvement is more especially designed for use with cooking stoves, to enable the cook to regulate the fire according to the heat required to properly cook different articles. It consists principally of a perforated casing in which is journaled a pointer provided with a crank disk, a lever fulcrumed in the casing being connected with a compound expansion bar and with the crank disk. The thermometer is set in the door of the oven and the heat circulates through it and acts on the expansion bars, which may be readily set to the desired degree of heat to cause the pointer to move and indicate properly.

**MAIL BAG.**—Henry L. Doynton, King Fisher, Oklahoma Ter. According to this improvement the mail bag is made with a folding flap through holes in which are passed bolts with enlarged heads, two slotted straps being secured to the back of the sack, with flat metal plates on opposite sides of the slots, metal arches rigidly connecting the plates, and a staple projecting through the lapped ends of the straps. The fastening is designed to be secure and durable, and may be manipulated with ease and rapidity.

**OIL WELL TOOL FISHING.**—George L. McKain, Washington, Pa. This invention comprises a tool carrier provided with slips adapted to grip within the removable casing, holding the tools up in the casing while the latter is being removed from the well. The carrier is designed for use within a casing smaller than the large starting casing, the smaller casing being lowered down to a point near where the tools are stuck in the well, and a fishing tool of any desired character is made a part of the carrier.

**COUCH OR BED HINGE.**—Ambrose Huttlinger, Cleveland, Ohio. This invention provides a locking device for the hinges of a couch or bed operated from either side of the couch, the locking devices normally holding one member of the hinge in the position to which it may be adjusted relative to the opposing member. When the head of the bed or couch is horizontal, it may be carried up to any desired position, when it will be automatically locked in place, or, by pressing on a foot lever, the head may be lowered and automatically locked in lowered adjustment.

**ANTI-REFILLING BOTTLE.**—Willis A. Smith, New York City. This bottle has at the lower end of the neck, on the outside, a collar having an easily breakable connection with the neck, and on the inner face of the collar is a recess engaged by a locking wire, which also extends through a recess in a cap fitting over the neck. When the bottle is thus closed it is necessary to break the collar or the cap to get at the contents of the bottle. The device is also applicable to fruit jars, etc., and applications have been made for several foreign patents upon the improvement.

**SALES COUNTER ATTACHMENT.**—Hugh Walkinshaw and James Kapp, Lebanon, Mo. According to this improvement, a sliding yard stick is arranged to be moved in a groove along the edge of the counter to facilitate the measuring of goods. In the edge of the counter is a dovetail groove, and the yardstick has a dovetail rib that fits in the groove, allowing the yardstick to slide freely parallel to the edge of the counter.

**CORK CABINET.**—George M. Wilson and Harry J. Neely, Wilbur, Washington. For holding corks of different sizes in place to be readily accessible for use, these inventors have devised a case to whose door on the inside are secured cork holding tubes, which extend down below the door, so that corks may be withdrawn from any of the tubes when the door is shut. The drawers in the case hold supplies of different-sized corks. The tubes are crimped at their lower ends to retain the larger ends of the corks, whose smaller lower ends project in position to be withdrawn as required.

**DISPLAY CARD AND HOLDER.**—William F. Jones, Baltimore, Md. This is a card upon which packages of medicines and other small articles may be held by means of an integral cut out portion in the form of a loop, which may be bent outward to serve as a clamp to embrace and hold the package and yet permit it to be readily detached. A folding brace is attached to the back of the holder to support it on a shelf or counter, or it may have a loop or eye by which it may be hung up.

**FOOT FOR PITCHERS, ETC.**—William McAusland, Taunton, Mass. To support pitchers, tea and coffee pots, etc., on trays, without scratching the latter, this inventor has devised a foot of globular form, but with central hollow space, in which is embedded a slightly projecting block or pad of cork, which is made to fill the hollow space and present a rounded bottom surface, which is both noiseless and durable.

**CUTLERY HANDLE.**—William B. Steeles, New Britain, Conn. This handle has a kerf at one end to receive the butt portion of the blade, the walls of the kerf being inclined to receive the transverse taper of the blade, and the handle also having throughout a lengthwise longitudinal perforation in which is a tube of spirally wound wire, the tang portion of the blade by its pressure forcing the outer ridges of the tube into the material of the handle. The construction is designed to be especially adapted for butcher knives, scraping knives, shoe knives and various forms of cutlery, there being no danger of the edge of the tang cutting into or splitting the handle when pressure is brought on the edge of the blade.

**FLEXIBLE PIPE JOINT.**—Andrew P. Jerguson and William W. Hunt, Hull, Fla. This invention provides a double ball joint in the end sections connected with the hose, the improvement being especially designed for use on suction pipes for sand pumps and other machines. The entire joint is inclosed by flexible corrugated tubing, to prevent leakage between the sections, and a full-sized bore is made through the joint for water, sand or other material.

**WHEELED EARTH SCRAPER.**—Joseph W. Hobson, Bayonne, N. J. In this scraper the scoop is suspended from a crank axle, permitting it to be carried in a horizontal position to deliver its contents where desired, the scoop being readily lowered to position for scraping the surface of the ground, and having a front gate to be closed for retaining the earth while being transported, and automatically raised when the scoop is being dumped.

**TROLLING HOOK.**—Allen H. Smith, Snoqualmie, Washington. A rod slidable in a tube, according to this improvement, has the shanks of hooks pivotally connected to one end with the points of the hooks passed through openings in the tube. The rod may be moved to bring the points of the hooks within the tube, when the hook may be safely carried in the pocket. The moment the hook is taken by the fish it fastens itself strongly in position, but it may be removed from the mouth of the fish without introducing the fingers in the mouth.

**BEDSTEAD.**—Herbert Douglas, Ripon, Wis. The side rails of this bedstead have lengthwise channels on their inner side in which are secured metal strips, bent outward at intervals to form sockets engaging the hook portions of stirrup hangers. The cross slats are supported by these hangers, thus making a bedstead of unusual strength and one that it will be practically impossible to break down with the customary use.

**COUNTER AND SHOW CASE.**—Joseph H. Ginnich, Red Wing, Minn. This is an improvement designed to facilitate the display, storage and handling of nuts, fruits, candies, etc., the counter being raised from the floor to keep its contents clean and dry, and being provided with trays or display boxes and dust-proof drawers. Any one or more of the trays or boxes may be rearranged or removed without inconvenience and without disturbing the counter or its contents.

**HEATING BURNER.**—Herman Rosenthal, New York, and Ludwig Kramer, Brooklyn, N. Y. In this burner air and gas are thoroughly commingled, whereby a minimum amount of gas is burned for a maximum of heat. The burner has a duplex mixing chamber, an outer chamber within a cylindrical casing and having an open end covered by a wire netting diaphragm, while an inner cylinder around the inner end of the receiving tube constitutes an inner mixing chamber. A bifurcated pipe connected with the inlet pipe supplies the proper proportions of air and gas. The burner is of simple and inexpensive construction, and all its parts are interchangeably and removably connected, so that they may be quickly and thoroughly cleaned.

**PHOTOGRAPHIC CAMERA.**—Frederick H. Sanderson, Cambridge, England. This invention provides means of supporting the lens-carrying front of a bellows body camera, rendering adjustment of the lens possible by a single motion, the picture being roughly focused and the lens at the same time raised or lowered to include as much of the subject or foreground as may be required, while the use of a swing back is rendered unnecessary to maintain the perpendicularity of the upright lines of an architectural or similar subject. Two pairs of slotted and curved arms are pivoted at each side of the front of the camera bed, and screw-threaded pivots on opposite sides of the camera front project through the slots of the arms.

**AUTOGRAPHIC REGISTER.**—George D. Bond, Hillsborough, Texas. To register fares paid by passengers and to keep account of cash receipts by salesmen, etc., this inventor has devised a small, portable ticket holder and registering device, having a tension device for a ticket strip and which is also a guard and ticket cutter. The register case has a transverse aperture below which is a table on which a carbon strip is held, a transverse roller holding a rolled ticket strip, while two other rollers carry a record strip and gearing transmits motion from the ticket holding roller to one of these record holding rollers.

**NOTE.**—Copies of any of the above patents will be furnished by Munn & Co. for 10 cents each. Please send name of the patentee, title of invention, and date of this paper.

## 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.

Marine Iron Works. Chicago. Catalogue free.  
 "U. S." metal polish. Indianapolis. Samples free.  
 Presses & Dies. Ferracute Mach. Co., Bridgeton, N. J.  
 Yankee Notions. Waterbury Button Co., Waterbury, Ct.  
 Handle & Spoke Mch'y. Ober Lathe Co., Chagrin Falls, O.  
 Screw machines, milling machines, and drill presses. The Garvin Mach. Co., Spring & Varick Sts., New York.  
 Concrete Houses—cheaper than brick, superior to stone. "Ransome," 757 Monadnock Block, Chicago.

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.

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.

Free! An Illustrated History of Cripple Creek gold camp (with correct map), together with our big family weekly, three months on trial for 25c. Illustrated Weekly, Denver, Colorado.

Wanted.—A young man of energy and some business experience, with a practical knowledge of the machinist trade, with a small sum to invest in a good business. To such a one with undoubted references a good opening is offered. Address W. A., Box 773, New York.

Electricians claiming they have primary batteries that will give one-half actual horse power or upward, not weighing over 100 pounds—preferably several batteries—with life of 10 or 12 hours each charging, will please write to "Electric," care SCIENTIFIC AMERICAN, giving size of batteries, cost in quantities, and such other particulars as they choose.

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

## NEW BOOKS AND PUBLICATIONS.

**SCRIBNER'S POPULAR HISTORY OF THE UNITED STATES.** From the Earliest Discoveries of the Western Hemisphere by the Northmen to the Present Time. By William Cullen Bryant, Sidney Howard Gay, Noah Brooks. With more than sixteen hundred illustrations and maps. Five volumes. New York: Charles Scribner's Sons. 1896. Pp. xlii, 562; xxviii, 605; xxv, 628; xxiv, 585; xxxiii, 732. Price \$20.

Perhaps no portion of Livy's history holds such deserved fame as the preface, wherein in two short pages the condition of Rome, already gradually going down the path to decadence, is so beautifully and incisively portrayed. Of the present work it may almost be said that it was worth being written to elicit the preface, written by William Cullen Bryant in the year 1876. The general history of the work is this: It was planned out and the plan was laid before Mr. Bryant in 1874, and work upon it was at once begun. Mr. S. Howard Gay, who had long been the chief assistant editor of the Evening Post, was chosen to write it under Mr. Bryant's supervision as editor, with numerous assistants in the work, including Rev. Edward Everett Hale. The work was originally carried down to the beginning of the civil war. The value of a book prepared under these auspices is self-evident. It was profusely illustrated, and among the illustrations appear trophies of the artist's and engraver's arts which represent the most celebrated illustrators of America. This was some thirty years ago. In the great rush of events of the last three decades, what we have written already seems like ancient history, but the book has since then been brought down to recent times by the addition of another volume prepared by Mr. Noah Brooks, whose work involved also the re-writing of a portion of the fourth volume, so that now the work comes down to within a few months of the present time. The fifth volume, with its picturesque and accurate account of events of the present generation and with numerous illustrations, is in itself a work of great value; and the contemporaneity of much of the two preceding volumes, referred to the events they tell of, gives them a status in respect to the war between the States which cannot fail to be recognized by all chroniclers. The book stands unique, and the very partisanship that appears in the portions treating of recent times was a necessary incident to the methods of its production and really gives it a definite value. The preface portrays briefly and conservatively the great question that brought about the war—the slave question; the sudden disappearance with the war of that question from American politics; the feeling of European nations toward the United States during the war; France's menace on the southwest and England's watchfulness across the seas; the full significance of the recovery of the States from the shock of the civil war, and the unfortunate after-effects of that war in the bringing about of crimes of violence and crimes against property; the opposing policies of protection and free trade during the century preceding 1876; its lapse and its later revival, with the prediction that circumstances "strongly imply that we have the same ground to go over again"; the bad effect and danger of the issue of paper money; the danger of undue centralization of government, are among the topics treated almost with prophetic force by the veteran editor and poet. To-day it is of especial interest to read the record by Mr. Bryant of what he terms "the great triumph of the cause of peace and civilization in the settlement of our collateral quarrel with Great Britain, a quarrel which at other times might be easily worked into a war." This utterance referring to the Alabama claims may with startling accuracy be applied to the late triumph of civilized methods in the settlement of the Venezuela case.