

RECENTLY PATENTED INVENTIONS.

Engineering Improvements. WINDMILL.—E. H. BENEDICT, O'Neill, Neb. Means are provided in this case to revolve a perpendicular frame freely. It is propelled by sets of fans which automatically open and shut so as to keep a full front to the wind no matter from where it blows.

COMPOUND STEAM-ENGINE.—F. CAHA, Wahoo, Neb. The inventor's object in view is the production of an improved construction designed to secure an increased and uniform expansion of a motive fluid, a greater impulse from the same volume and pressure of a fluid, a reduction in the back pressure of the high-pressure cylinder during the return stroke of the piston therein, a decreased pressure on the steam-inlet valve, and the employment of short direct steam-passages to the working cylinders.

Of Interest to Farmers.

WIRE-STRETCHER.—J. E. HOWELL, Spearfish, S. D. Mr. Howell's improvement relates to that class of wire-stretchers employing a lever-and-ratchet mechanism to exert the necessary tension on the wire. The invention provides a means whereby considerable power will be effective to stretch the wire, while at the same time the operations of the lever-and-ratchet mechanism may be performed rapidly, the whole being arranged in a novel and convenient manner.

HEATER AND STEAM-GENERATOR.—O. R. RAND, JR., Smithfield, N. C. The design in this case is to provide a heater and steam-generator of improved construction by means of which the necessary degree of heat or moisture may be maintained in the tobacco-barn or pack-house during or after the curing of the tobacco to preserve the proper condition of the atmosphere as required by the tobacco at different stages.

WIRE FENCE.—B. B. WOOD, Helena, Mont. By certain novel constructions and combinations of parts the inventor secures a tie of the wires at crossings which will involve no exposed ends of the tie-wire and in which the tie-wire will be so made that when applied to a fence and properly handled it will form a practically continuous rigid tie around the joint with no exposed ends and will tend to bend the wires at the crossings equally.

Machines and Mechanical Devices.

RIMMING-MACHINE.—G. A. ENSIGN, Defiance, Ohio. This invention relates to wood-working machinery, and its object is to provide a new and improved rimming-machine, more especially designed for automatically driving or pushing wheel-rim sections onto the tenons of the spokes for cutting off the surplus portions of a rim-section to insure proper abutment of the ends of the rim-sections.

DRAG-SAW FRAME.—E. E. REDFIELD, Grants Pass, Ore. In the present patent the invention relates to a frame adapted to be engaged with and sustained on a log or other timber and to carry an engine and drag-saw in position for operation to saw the log. The saw and engine may be of any form, but concerning the engine the inventor prefers to employ the apparatus disclosed in a former patent granted to him for an improvement in engines.

Miscellaneous.

SWIMMING-GLOVE.—E. G. VANS AGNEW, Kissimmee, Fla. This inventor provides a glove for use in swimming, having a front portion and a back portion constructed to provide a double web portion between the compartments for the fingers and thumb and whose edge is reinforced to give rigidity at such point and which has a suitable outlet in its palm portion for the escape of any water that may get into the palm of the hand.

TACKLE-BLOCK.—T. E. MADDOX, Goldbar, Wash. The object claimed by the inventor is to provide a tackle-block with details of construction that adapt it for the free reception of a tackle rope at any point between the ends of the latter, to afford a block which permits the sheave to be readily removed, to provide a removable pintle-bolt for the support of the sheave, and to adapt the bolt to hold one of the hinged side walls of the shell of the block in closed adjustment, but permit its convenient release.

GAS-BURNER.—B. COLUMBUS, New York, N. Y. There is provision for a gas-burner in this improvement, which is simple and durable in construction and arranged to insure a perfect mixture of the air and gas, to allow of regulating the amount of gas to the minutest degree, and to permit of maintaining a pilot-flame of a mixture of air and gas whenever the valve-plug is turned into a closed position.

QUICKSILVER-FEED FOR AMALGAMATORS.—J. W. SWEARINGEN, Gaston, Cal. As quicksilver cannot be conveniently and certainly fed by any ordinary feeding device, this inventor has contrived a special form of feeding devices suited to the physical qualities of

quicksilver and to the needs of the amalgamators, whereby it is automatically fed in regulatable quantities and at close and proper intervals, thereby making a great saving in gold and silver and in the millman's time.

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

Business and Personal Wants.

READ THIS COLUMN CAREFULLY.—You will find inquiries for certain classes of articles numbered in consecutive order. If you manufacture these goods write us at once and we will send you the name and address of the party desiring the information. In every case it is necessary to give the number of the inquiry.

MUNN & CO.

Marine Iron Works, Chicago. Catalogue free. Inquiry No. 4420.—For a diving apparatus for pearl fishing.

AUTOS.—Duryea Power Co., Reading, Pa. Inquiry No. 4421.—For machinery for making ice on a small scale.

Morgan Emery wheels. Box 517, Stroudsburg, Pa. Inquiry No. 4422.—For the address of the Buckeye Jack Mfg. Co.

"U. S." Metal Polish. Indianapolis. Samples free. Inquiry No. 4423.—For manufacturers of combined sheathing and bath.

Blowers and exhausters. Exeter Machine Works, Exeter, N. H. Inquiry No. 4424.—For machinery for making coal briquettes.

Handle & Spoke Mch. Ober Mfg. Co., 10 Bell St., Chagrin Falls, O. Inquiry No. 4425.—For a chemical engine or some kind of fire extinguisher.

Mechanics' Tools and materials. Net price catalogue. Geo. S. Comstock, Mechanicsburg, Pa.

Inquiry No. 4426.—For manufacturers of shingles, axe handles, toothpicks, etc.

Sawmill machinery and outfits manufactured by the Lane Mfg. Co. Box 13, Montpelier, Vt.

Inquiry No. 4427.—For machinery for making chocolate, confectionery, and bread.

Write for anything you want made in metal novelties to Metal Stamping Co., Niagara Falls, N. Y.

Inquiry No. 4428.—For machinery for wineries for making liquors, cordials, etc., also machinery for evaporating fruits and vegetables.

Let me sell your patent. I have buyers waiting. Charles A. Scott, Granite Building, Rochester, N. Y.

Inquiry No. 4429.—For manufacturers of oil stills.

Bargain, 300,000 feet seamless steel tubing, 5-16 to 2 inches diameter. The Cleveland Distributing Co., Cleveland, O.

Inquiry No. 4430.—For makers of hand knotters or tying devices.

Special and Automatic Machines built to drawings on contract. The Garvin Machine Co., 149 Varick, cor. Spring Streets, N. Y.

Inquiry No. 4431.—Wanted to manufacture some small article in France on royalty.

The largest manufacturer in the world of merry-go-rounds, shooting galleries and hand organs. For prices and terms write to C. W. Parker, Abilene, Kan.

Inquiry No. 4432.—For dyeing and steam cleaning machinery.

We manufacture anything in metal. Patented articles, metal stamping, dies, screw mach. work, etc. Metal Novelty Works, 43 Canal Street, Chicago.

Inquiry No. 4433.—For the address of the manufacturers of the packing box typewriter.

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.

Inquiry No. 4434.—For makers of hand and steam laundry machinery.

Contract manufacturers of hardware specialties, machinery, stampings, dies, tools, etc. Excellent marketing connections. Edmonds-Metzler Mfg. Co., Chicago.

Inquiry No. 4435.—For makers of machinery for manufacturing manila rope and cordage.

Matthews Torpedo Launches. Matthews & Co., Bascom, Ohio, U. S. A. Builders of high grade power boats.

Inquiry No. 4436.—For manufacturers of yeast mixing machines.

Manufacturers of patent articles, dies, metal stamping, screw machine work, hardware specialties, machinery and tools. Quadriga Manufacturing Company, 18 South Canal Street, Chicago.

Inquiry No. 4437.—For a machine for making artificial stone of cement.

WANTED.—Patent Office draughtsmen; only thoroughly experienced men need apply. Must show specimens of patent drawings. Munn & Co., SCIENTIFIC AMERICAN office, 361 Broadway, New York.

Inquiry No. 4438.—For manufacturers of fiber or paper maché that can be molded.

WANTED.—In large manufactory representing many trades, in a large city of the West, superintendent of technical education and of experience in handling men. Address, with full particulars, Mechanic, Box 773, New York City.

Inquiry No. 4439.—For the address of the manufacturer of the patented skirt supporter, called the "Little Gem."

Patent No. 732,675. Improvement on fork for sale or on royalty. M. K. Kelter, No. 507 South Market St., Wilmington, Delaware.

Inquiry No. 4440.—For manufacturers of machines, outfits, etc., for making gravel ready-roofing.

POSITIONS FOUND AND FILLED. Are you looking for a good employe or a good position? Our system covers all high-grade fields—professional, commercial, expert, scientific. We operate throughout the country. We are listing the highest-grade men. Employers are inquiring of us for them. Write us. Bureau of Registration, 302 State Bank Building, Madison, Wisconsin.

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, ETC. GAERUNGS-ESSIG. Von Paul Hassack. With 75 illustrations. Vienna: A. Hartleben. 1903. Crown 8vo. Pp. 408. Price, \$3.

Mr. Hassack is a well-known New York vinegar expert who has in this work embodied his experiences in an industry with which he is thoroughly familiar. His first chapter gives a general idea of what a vinegar factory should be. In his second chapter he discusses the generator. How the generator should be operated is made the subject of the third chapter. In the fourth chapter, which is chemical in its nature, the methods of testing and controlling the production are treated. The difficulties which must be encountered and which must be overcome are discussed in the fifth chapter. "Ferments and Nutriment" is the title of the sixth chapter. In the seventh chapter the filtration of vinegar is described. Wine vinegar and new generator types are respectively the subjects of the eighth and ninth chapters. An admirable index completes the work.

INDEX OF INVENTIONS For which Letters Patent of the United States were Issued for the Week Ending July 21, 1903, AND EACH BEARING THAT DATE.

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

Table listing inventions with patent numbers and names of inventors. Includes entries like Acetyl cellulose, Eichenbrun & Becker; Adding and recording machine, A. S. Dennis; Adjustable wrench, E. F. Hirst; Air compressor, G. Code; Alkali chlorides, apparatus for the electrolytic decomposition of, C. Fournier; Animal trap, T. J. Foreman; Apparel clamp, wearing, W. Maybaum; Automobile rear axle construction, W. Morrison; Automobile transmission gearing, E. Whitcraft; Automotor carriage, C. J. Ollagnier; Awning operating device, C. H. Talley; Balls, manufacture of golf, C. T. Kingzett; Band cutter, T. E. Creelius; Barrel filler, F. W. & G. N. Inden; Barrel scrubbing machine, H. Olsen; Barrel washing tank, H. Olsen; Battery, W. Drawbaugh; Battery switch, electric, J. Appleton; Bearing, ball, A. Rebe; Bearing, rocker side, F. B. Townsend; Bed, folding, A. W. Pyle; Beer, preserving, F. Crotte; Beers or other liquids requiring added and even pressure, device for handling, F. Swinney; Bell switch, rotary extension, G. E. Cork; Belt fastener, M. N. Edwards; Belt lacing tool, T. Gingras; Belt, waist, H. J. Gaisman; Bending machine and die therefor, Hutchins & Losey; Bicycle gearing, C. S. Thompson; Bill holder, J. H. Parks; Binder, loose leaf, Sheridan & Wheeler; Blacking stand shoe holder, boot, E. L. Hann; Block, See Building block; Boilers, prevention and removal of incrustation in steam, R. L. Gamlen; Bolster, T. Mitchell; Bolt heading machine, C. W. Richards; Book support, C. P. Bley; Boots or shoes, mechanical hammering device for use in the manufacture of, G. Kron; Boring machine, A. Falkenau; Bottle closure, W. Harrison; Bottle, non-refillable, L. Brand; Bottle or jar safety closure, J. V. Hull; Bottle stopper, A. T. Otto; Bottle washing machine, J. G. Hauck; Box lock, collapsible, J. R. Van Wormer; Box locking attachment, F. H. Chase; Bracket for supporting rods or tubes, A. I. Grainger; Brake mechanism, W. H. Wendeler; Breech mechanism, J. E. Moore; Brick cut-off table, W. Frey; Bricks or bodies for refractory linings, etc., making, E. W. Engels; Bricks or bodies for refractory linings, etc., and the product thereof, making, E. W. Engels; Briale, O. W. Stiegler; Briquet binder, F. B. Merrill; Brooder, E. Bates; Broom head holder and shaper, combined, T. M. Gill; Brush, air, W. H. Shepler; Brush clearing implement, F. X. Vallee; Brush, hair, Newbro & Gallogly; Brush support, J. P. Erie; Brushes, making, J. Morrison; Brusher, fruit or vegetable, F. Stebler; Bucket, paint, J. E. Lucas; Bucket, well, G. P. Hobbs; Buckle, cotton tie, D. E. Edelman; Building block and wall construction, A. C. Waterman; Bundling apparatus, Wiseburn & Buhle; Bunsen burner, R. C. H. Sieverts; Burial caskets, rough box for, P. D. Skahen; Button, separable, W. M. H. Jockin; Cable, driving, G. S. Ingle; Cable grip or clutch device, Schuler & Erie; Calculating apparatus, C. A. N. Wallich; Calculating device, E. B. Alley; Can. See Self measuring can; Can body blank feed mechanism, A. Lotz; Can handling and cooling apparatus, W. Smith; Can washer, milk, T. L. Valerius; Cant hook, double, E. F. Cunningham; Car body bolster, railway, G. S. Hastings; Car body bolster, railway, J. W. Seaver; Car construction, Du Pont & Kobusch; Car coupling, C. A. Tower; Car door, Barnes & Woodford; Car fender, E. R. Keith; Car fender, J. D. Price; Car fender, H. P. Eskelsen; Car friction draft rigging, railway, J. J. Hennessey; Car friction draft rigging, railway, F. B. Townsend; Car friction draft rigging, railway, C. H. Wellman, et al.; Car hand brake mechanism, H. A. Parquette; Car step, folding, J. P. Grika; Car, street, J. A. Brill; Car unloading plow, Richards & Gilman; Car wheel, H. Bacon; Cars, wheels, tires, etc., manufacture of, Buhop & Ritter; Car, wrecking supply, Warner & Gilman; Cars, electric illumination for railway, M. Buttner; Cars, tandem spring friction draft rigging for railway, F. B. Townsend; Carriage pump mechanism, steam, E. H. White; Castings, manufacturing homogeneous metal, Goldschmidt & Mathesius; Chaffer and sieve, adjustable, B. F. Martien; Charging machine, H. Alken; Check hook, Buckley & Hollinger.

Table listing inventions with patent numbers and names of inventors. Includes entries like Cigar cutter, pipe tamper and cleaner, combined, D. S. Blanple; Circuit breaker, return current, C. C. Chesney; Clamp for suspending books or the like, J. B. Connolly; Clasp, J. H. Pilkington; Cleaning knife, electric, Nettleton & Dempsey; Clock, electric, H. Rempe; Clock, secondary electric, Wurm & Baumann; Coal, apparatus for separating bone, slate, etc., from, Boardman & Miskell; Coal bricks, particularly from bituminous brown coal, manufacturing, J. M. Schwarz; Coin-indicating device, electrical, R. B. Hazlett; Collar, horse, A. I. Butler; Commutating and current shaping device, F. H. Loring; Compass, beam, J. A. Traut; Compass, recording, E. Hedenstrom; Concrete body molding machine, M. A. Winget; Concrete mixer, E. S. Bryant; Conduit holder, H. Dreyer; Conduit guard, flexible, G. R. Pimlott; Conduit threading device, A. H. Knott; Confection clipping machine, E. J. Jenner; Connecting clip, sectional, W. C. Lyon; Conveyor, G. G. Horst; Conveyor, L. Abraham; Conveyor feeding device, C. Mittag; Cooler. See Cream cooler; Corn husking machine, Bellairs & Langton; Corner shield, F. A. Stevens; Corset, R. S. Oliver; Coupling for drill rods, line shafts, etc., F. J. Thoring; Crane, A. P. Van Tuyl; Crane, J. Matthews; Crate, collapsible folding and adjustable, Hornaday & Cornum; Crates, folding, E. G. Solomon; Cream cooler and aerator, A. G. Lifquist; Crusher, T. E. Hurley; Cultivator, corn, J. M. Richmond; Current regulator, J. P. Erie; Cut off and drain cock, combined, J. H. Jennings; Cyclorama, J. W. Reno; Dam construction, O. B. Clarke; Damper regulator, automatic, H. Fatic; Decorated surface, A. B. Porter; Decorated surface and producing same, A. B. Porter; Dental clamp, P. B. Lasker; Depurator, A. W. Ottignon; Die, J. M. Stetter; Die stock, R. Bartholomaeus; Disk drill, W. A. Van Brunt; Disk drill, double, W. A. Van Brunt; Display box, neckwear, J. H. Louder; Domestic boiler, A. A. Frost; Door closer, spring, H. J. Valentine; Door switch, safety, E. R. Renfrow; Draft rigging, friction, F. B. Townsend; Drawer bottom support, Fames & Roberts; Drawer, cash, H. H. Chesbrough; Drawer support, J. H. Roper; Drill press, multiple, F. J. Nutting; Dry kiln truck, H. B. Gillette; Dumb bell, F. Harris; Dye and making same, green anthraquinone, O. Hess; Electric machine coil, dynamo, H. F. T. Erben; Electric motor speed indicator, E. J. Berg; Electric signal, H. L. Lee; Electric switch, J. J. Rudwick; Electric stop lines, automatic bridge for, G. E. Bretz; Elevator, O. Schuler; Elevator door operating device, White & Steuer; Elevator guard, Fisk & Spencer; Elevator mechanism, E. Wright; Elevator safety catch, J. Genisio; Elevator safety device, W. H. Wilsey; Engine cooling device, explosive, M. Offenbacher; Engine electric igniter, explosive, A. L. Riker; Engine, combination internal combustion and compressed or liquid gas, compressed or liquid air, Bryan & Bayley; Engine fuel governor, oil, A. Krebs; Engine platform, traction, D. R. Gardiner; Engines, fuel mixing and charge controlling device for explosive, Gaeth & Griebel; Excavating machine, F. M. Bisbee; Excavating machine, T. H. Garland; Exercising apparatus, lung, P. von Boeckmann; Exhibitor, goods, Stenger & Mallory; Expanding and hanging tool, L. D. Lovekin; Expanding tool, L. D. Lovekin; Eye shade, O. B. Lester; Fastening for shoes, etc., Paschen & Duckro; Faucet, W. T. Nichols; Faucet, bung, W. F. Crowley; Faucet, hot and cold water, J. A. Greene; Feeding device, horse, H. Still; Feeding truck attachment, pneumatic, T. R. Marsden; Fertilizer distributor and seed dropper, S. S. Cudde; Filing case, W. D. & J. D. Kelly; Fire escape, H. E. Smith; Fire escape apparatus, F. Hillier; Fire extinguisher, automatic, G. E. Hibbard; Fire pot, E. S. Clark; Fire resisting door, G. E. Walter; Firing mechanism, Stout & Hughes; Fish scaler, C. Whitford; Flat iron stand, M. Schubert; Fluid pressure engine, J. Pengilly; Fly catcher, C. Wenigmann; Fly trap, F. J. Lampton; Folding box, R. A. S. Bloomer; Foodstuffs, etc., covering device for, M. M. Waite; Force feed lubricator, Ivor & Ward; Fruit picker, S. H. Alden; Fumigating and disinfecting device, G. F. Hardinge; Fuse circuit terminal, L. W. Downes; Gage. See Screw driver gage; Game and game board, H. T. Reed; Game board, C. H. Curran; Game board, H. Frank; Gang plank and loading chute, combined, C. B. Hallam; Garment hanger, J. E. Knowlton; Garment supporter, F. K. Hickok; Gas engine, J. D. McFarland, Jr.; Gas generator, acetylene, J. W. Tallmadge; Gas generator, acetylene, T. O. Amesos; Gas generator, acetylene, Feurt & Martin; Gas mixer and injector, L. Patric; Gas producer, Seaver & Morgan; Gas regulating means, E. E. Frederick; Glass bulbs or globes, frosting, P. Kennedy; Glass manufacture, plate, A. M. Gow; Glass shearing device, W. J. H. Fetters; Glass tile molding apparatus, L. R. Blackmore; Gold separator, D. C. Knowlton; Golf ball, A. W. P. Cramer; Golf ball, C. T. Kingzett; Golf club, O. Heeren; Grain drill seed tube connection, F. R. Packham; Grain loader, D. Barnes; Grain scourer and separator, W. E. Larmon; Grain separator, tangled, A. A. Hamilton; Grinding machine, A. G. Cassidy; Ground anchor, J. L. Smith; Gun mounting, Dawson & Burton; Gun sight mounting, H. Grubb; Hair drying machine, E. Mink; Ham cutting machine, W. Lacour, et al.; Hame and trace connection, W. C. Lawson; Hames, collars, or the like, connection for, W. C. Lawson.