# RECENTLY PATENTED INVENTIONS. Of Interest to Farmers.

HEATER FOR BROODERS .- J. C. NICHoLLS, Blue Mound, Ill. The invention refers to poultry culture, and its object is to provide a heater arranged to produce a proper heating of the air supplied to the young, to cause moistening of the heated air, and to allow convenient removal of the heater from the brooder. whenever it is desired, for cleaning, repairing or other purposes.

CULTIVATOR ATTACHMENT. - D. B BROWNING, Morrison, Okla. In operation the fender is supported by the hanger arm, and the runner is adjusted below the edge of the blade to prevent earth thrown up from covering the plants, yet permitting some earth to be thrown toward the plants at the roots. The runners prevent the fender being removed by earth thrown up by the plow. A chain acts to take the weight of the blade from the runners, when turning or moving. The runner permits the fender to follow ground ine qualities, so as to protect the plants, even when they occupy a lower plane than that traversed by the cultivator wheels.

## Of General Interest.

NON-REFILLABLE BOTTLE .- M. FORST, New York, N. Y. The aim in this case is to provide a new and improved non-refillable bottle, which is simple in construction and arranged to effectively prevent refilling of the bottle with spurious liquids by unauthorized parties, especially when the bottle is held in a horizontal position.

HOSE CONNECTION FOR STEAM THAW POINTS .- J. R. MATHEWS, Fairbanks, Alaska. The purpose in this invention is to provide details of construction for connections, which enables the attachment in a simple and secure manner, of one end of a steam conducting hose upon the body of a thaw-point into frozen ground, that is to be thawed by steam passing down through the thaw-point.

LENS-MOUNTING .- G. LOWENSTEIN, New York, N. Y. The more particular purpose in this case is to produce a lens so readily detachable from the framework which normally supports it and so readily attachable to the same, that any person can instantly remove the lens from the frame or replace it, the construction, however, being such that when the lens is upon the frame it is perfectly rigid and free from lost motion.

FEED-DISTRIBUTER FOR VANNERS .--C P. WHITMORE, Salt Lake City, Utah. The distributer is adapted to be disposed transversely over the conveyer. Side rails are on the distributer and a rear central member with obliquely disposed members connects the rear member with the rails. Guide members are provided at right angles to the rails, and material is introduced behind the slot in the rear guide member. Buffers direct the material in front of the last named member, there being rows of guide members in front of the same, to distribute the material, which flows to and through the feeder openings in front.

MEANS FOR KEEPING ACCOUNTS .-L. GRAYSON, Rutherfordton, N. C. The object in this improvement is to provide means for keeping accounts in banks and other institutions and business houses, and arranged to reduce the liability of clerical errors and mistakes to a minimum by providing movable tapes, one for each customer's account, the tapes being adapted to receive thereon the daily transactions.

SEAM-RIPPER.-T. F. FREEMAN, Dover, Maine. The invention relates more particularly to rippers such as combine a lap-board and cutter, and are adapted to be used for opening of letters, wrappers, seams of garments, and the like. The object is to provide a device adapted to be adjusted across the lap of the user, so that the cutter will be in a convenient position for use, thus leaving both hands of the operator free.

CEILING CONSTRUCTION .- P. ALLINIO, San Pablo, Cal. The inventor's object is to eliminate the furring-strips and support the lath directly from the concrete constituting the floor end at a distance therefrom. The construction is thus rendered fire-proof, the total thickness is reduced and the plaster may be applied immediately after the wooden forms are removed.

for use in the kitchen and provided with openings of special form through which hot and cold water may pass from the spigots, and further provided with smaller openings for facilitating the drainage of such water as may be accidentally spilled upon the sink cover.

COT FOR CHILDREN .- MURIEL M. S. BIN NEY, St. Clair, Elizabeth Bay, Sydney, New South Wales, Australia. The purpose of the invention is to provide what is called a collapsible safety cot which shall be capable of being folded up into a small compass when not in use, and which when set up shall form a rigid structure wherein a child may be left without fear of his failing out or otherwise coming to any harm.

COFFEE-URN .-- O. A. NENNINGER, El Paso Texas. The coffee may be extracted quickly by causing boiling water to percolate through the ground berries supported above an inner vessel for holding the extract. Means are provided for passing the liquid repeatedly through the mass, to increase the strength of the extract. The flow of the liquid in either ase is produced by steam generated in the boiler or outer vessel, the pressure of which can be controlled by means of a stop cock.

# Machines and Mechanical Devices.

WASHING-MACHINE .- J. W. SEIFERT, St. Louis, Mo. The invention comprises a combination with the body of the machine, and a kettle supported therein, of a reticulated closed drum, parallel levers in which the drum is journaled, a shaft the ends of which extend from the body, to serve as the pivots of the levers, a sprocket wheel fixed on one of the drum posts, another mounted loose on one of the lever pivots and furnished with a rigid handle socket, and a chain applied to and containing the two sprocket wheels.

CASH REGISTER, INDICATOR, AND RE-CORDER.-J. F. PARKER, Kansas City, Mo. The invention is an improvement in registers in which are employed multiple receptacles or money tills and a series of vertical banks of keys bearing numbers and characters corresponding to others inscribed on registering and printing wheels also slidable indicating tablets that are all movable and adapted to register and display or indicate and also print the amount of a sale, the initial of the clerk, and the character of the transaction. Parker has made an improvement on the above machine and the patent is on that class hav ing a series of movable keys which constitute the primary means for operating, through the medium of intermediate devices, the registering, indicating, and recording mechanism proper.

PEANUT-PICKING MACHINE .- F. F. FEB. GUSON, Murfreesboro, N. C. In operation the vines are fed through a chute against a drum, and are engaged by pins, and carried rear wardly between vibrating frames, and against spring teeth. The passage of vines beneath the teeth, separates them from each other, and removes a greater part of the nuts therefrom, the nuts falling through the drum onto the carrier, which delivers them onto the stemming device at the rear, the fan acting to clean them from the leaves and broken stems.

MOLD FOR CONCRETE-WALL CONSTRUC-TION .- G. TAUBERT, Pittsfield, Mass. More particularly this invention relates to means for holding the mold sections in engagement with the walls and for raising them step by step as the wall is built up. It also involves certain construction in collapsible cores to be used in connection with the molds and cooperating with the support of the mold sec tions to permit the removal of the latter.

WIRE-FENCE STRETCHER.-W. HOPPER, Jefferson, Iowa. In this patent the invention pertains to improvements in devices for stretching wire fencing while the latter is being secured to the fence posts, and relates more particularly to the mechanism for engaging with one of the posts and with a clamp secured to the fence for stretching the latter. CLAMP FOR WOVEN - WIRE - FENCE STRETCHERS .- W. HOPPER, Jefferson, Iowa. The invention relates more particularly to stretchers of the type shown in Mr. Hopper's previous patent. The present invention relates solely to the clamp, and this clamp may be used in connection with any suitable ten-

here is to produce a type of sink cover suitable improvement is in machines for use in removing lumps, kinks, ridges, etc., in saws, com-monly known as "leveling," preparatory to stretching the saw in adjusting its "tensions." which is secured in machines as now generally used by passing the saw longitudinally be tween rollers of equal width and thereby stretching the saw equally on both surfaces.

> SAFETY ELEVATOR-CAGE.-C. H. STUR-GIS, Granville, Ill. The cage is provided with dogs at its bottom, adapted to be thrown into engagement with hooks hung in sets to swing in channel irons in the shaft, a stud actuating means to throw the dogs into engagement with the hooks, over which it is adapted to slide during upward movement of the cage. the dogs locking with one set of hooks should the cage start downward. At the upper part of the shaft a trip throws the dogs inwardly and free from the hooks, means holding the dogs away from the hooks swung in the shaft. Means permit the dogs to engage the hooks should the cable break.

CONCRETE-BLOCK MACHINE. - E. Р. AUGER, Corinth, Miss. This machine makes blocks of concrete for use in building of various kinds, employing concrete material. An object of the invention is to provide a device in which the block may be molded and then by the use of a cam lever, the sides of the mold can be loosened and let down vertically, leaving the molded block upon the base from which it can be readily removed.

BUNDLE-WIRING PINCERS .- J. PFEFFER, Spokane, Wash. The invention is in the nature of a machine to be used in fastening together by wire, bundles of small boards, such for instance, as are used in making boxes, and for fastening together shingles into bundles, and other similar uses, and it consists the construction and arrangement of a in pair of pincers for cutting and twisting the wire about the bundle.

MACHINE FOR CASTING LEAD SEALS AND THE LIKE .- N. S. FRIDERICHSEN, 44 Vester Folledvej, Copenhagen, Denmark. The invention consists in the fact that the casting molds for the seals together with their cores are arranged in a disk rotatable between two stationary disks, this rotatable disk during its rotation receives the lead and automatically cuts off the supply, the seals being ejected from the molds after they have sufficiently cooled.

## **Prime Movers and Their Accessories.**

COOLING DEVICE FOR EXPLOSIVE EN-GINES.-G. BRAUN, 93 Quai de Valmy, Paris, The invention relates to means for France. cooling the cylinders and valve boxes of explosion engines of all kinds, but more especially and with more advantages in the case of the engines of agricultural and other locomobile machines and automobile vehicles, and has for its object to provide an efficient cooling device for such engines,

STEAM-ACTUATED VALVE. - A. MEHL-HORN, Dietrichsdorf, near Kiel, Germany. The valve gear is for use for direct acting steam pumps, of the kind in which at each end of the pump piston stroke a piston valve is shifted by moving parts of the pump until a steam inlet is opened, whereupon the piston valve is moved to the end of its stroke by steam pressure alone.

EXPLOSION-TURBINE .-- P. O. POULSON Brigham, Utah. The invention pertains to turbines and gas engines, and the object is to produce a turbine which will be propelled by exploding charges within the same. The general purpose is to produce a prime mover which will be efficient in operation and extremely simple in construction.

#### **Railways and Their Accessories**

METAL RAILWAY-TIE .- J. R. ROBINSON and J. F. SUGRUE, Ennis, Texas. The invention relates to improvements in ties constructed from one piece of metal and provided with integral clamps for the rails. It provides for the cheapest construction of such a tie, without the sacrifice of strength, and to render the tie more or less yielding between the rails, the material cut away in the side flanges to accomplish such a result, being utilized as stays or braces.

## Pertaining to Vehicles,

CARBURETER .- P. BERTRAND, New York, N. Y., and J. GOUBILLON, Vaulx en Velin, cements. France. The aim of the invention is to pro duce a device which will operate to produce thorough evaporation of the gasoline or other fuel in large quantities, and which will afford means for nicely regulating the vaporization of the gasoline and the proportion of gas and air which passes from the carbureter to the engine. PROTECTIVE DEVICE FOR RUBBER TIRES.-H. W. HARDING, New York, N. Y. One purpose of the inventor is to provide a chain or series of chains especially constructed for introduction into pneumatic tires to protect the area of the tire most liable to puncture, the chains being so constructed and placed that their radial line from the center of the tire within the protected area will pass through at least one thickness of the metal used in the construction of the chains.



Full hints to correspondents were printed at the head of this column in the issue of March 13th or will be sent by mail on request.

(12021) A. T. G. A. writes; In your issue of October 3rd, 1908, F. B., No. 10867, asks why the days and nights are not equal on the days the sun crosses the celestial equator. I have for many years been impressed with the care, patience, and directness of your answers to the many inquiries. It has been the most interesting column of the paper to me. In this one particular case, however, may I suggest you do not include the main reason for the discrepancy. In some almanacs the time of sunrise and sunset is computed for the instant the first glimpse (or the last) of the sun's disk would be seen on the true Allowance is made for the semihorizon. diameter of the sun and for the refraction of the atmosphere. This would cause the sun to appear a few minutes earlier in the morning and to be seen a few minutes longer in the evening, making the day (sometimes) 8 or 9 minutes longer than it would otherwise be. When this happens during the time of lengthening days (as in March) it would cause the equal days and nights to come earlier, and to ome later in September. The matter of semidiameter and refraction is not taken into account by all almanac computers, some giving the moment when the center of the sun would be on the horizon if there were no atmosphere. In such almanacs the equal days and nights come exactly on the days of spring and autumnal equinox, but it is only theoretically so. The equation of time would have the effect only of transferring the time of both sunrise and sunset earlier or later, as the case might be, and so would have no effect upon the length of the time of daylight. There would of course be a slight effect due to the change in the equation of time between sun-rise and sunset, but that would scarcely amount to as much as one minute. Pardon my "butting in" in this matter. My appreciation of the uniform accuracy of your answers in all other cases causes me to feel you will understand the spirit in which this correction is sent. A. We appreciate the spirit as well as the substance of the above correction or addition to our former reply.

(12022) W. B. asks: Will you please say through your Notes and Queries columns in which direction with regard to the wind does an ice boat sail fastest? Some say that sailing direct across the wind is best, others assert that sailing slightly into the wind is better for fast sailing, while others believe in sailing slightly before the wind. Can it be scientifically demonstrated apart from actual experiment which of these is correct? A. Undoubtedly an ice yacht sails faster across or into the wind than before the wind. It has been conclusively proved by tests over measured courses and accurate measurement of the wind that ice yachts have sailed much faster than the wind. The angle to the wind at which ice boats will sail fastest depends upon the individual design of the boats; some may sail faster into the wind, but it is probable that the majority would make their best speeds at about 90 deg., i. e., with the wind dead abeam or nearly so.

(12023) J. M. asks: What is cement? How is it manufactured? Why is it always called "Portland" cement? A. "Portland" cement was originally so called from its resemblance when set in artificial stone to Portland stone from the celebrated quarries of that name on an island off the coast of Dorset in It is made by calcining at nearly England. white heat an artificial mixture of carbonate of lime and clay in certain proportions and grinding to powder the clinker so formed. All cements are not called "Portland," that name being used in its present sense to distinguish cements which are made of an artificial mixture, from cements of similar properties made in a similar manner from single natural rocks without admixture. The latter are generally called "Rosendale" (from the name of the place where they were first made) or "natural"

#### Hardware,

RAZOR-STROP .- M. KRISCHER, New York, N. Y. This invention refers to improvements in the means for securing the yoke which holds the attaching ring to the end of the strop The object is to provide means for use in securing the ringholder to the strop, in such a manner as to obviate the use of a bolt and nut, as in the constructions at present in the market.

JAR-OPENER .- M. C. DEABING, Haverhill, Mass. In this case the inventor provides a device which can be arranged about the top of a fruit jar or other receptacle, and which has means whereby the cover of the jar may be readily removed, without danger of injury to the same or to the rubber washer on which it rests.

## Household Utilities.

KITCHEN-SINK COVER .--- A. G. DEMAREST

AIR-SHIP.-F. L. ORR, Omaha, Neb. In its road comprehension, the invention comprises an aeroplane, a basket, car, or other similar means affording carrying support; and means consisting of a combustion chamber into which gas, or other fluid may be charged and the fluid charge he ignited, and the ignited charge liberated through an exhaust opening into the air, directly under the aeroplane.

CLOCK AND COIN-FREED WINDING AP-PARATUS .- A. G. P. WIINGAABD, Römersgade 3. Copenhagen, Denmark, This invention is designed to provide mechanism in combination with a clock adapted to collect definite sums of money at certain times, for instance, the premiums on an insurance policy payable in daily or weekly rates, savings bank deposits, and the like, thus doing away with the cost of collecting these payments, which is often out of all proportion with the amount collected.

SAW LEVELING AND STRETCHING MA-New York, N. Y. The more particular object CHINE .- N. L. BOTTEN, Opelousas, La. The the invention, and date of this paper.

Note .--- Copies of any of these patents will Please state the name of the patentee, title of

(12024) R. S. P. asks: I will thank you to inform me whether salt will destroy (disintegrate) a cement sidewalk? If it does, what is the chemical combination? A. The theory of action of salt water upon cement is not fully understood, some cement structures exposed to the worst conditions having given most satisfactory results, while others under more favorable conditions have failed in a greater or less degree. The chemical action involved is generally agreed to be as follows: When the cement contains a high percentage of lime, all of the latter is not engaged in stable compounds, and when exposed to sea water, the sulphate of magnesia in the latter combines with the lime, forming calcic sulphate and precipitating magnesia. The discovery of magnesia in cements decomposed by sea water at first led to the supposition that NOTE.--Copies of any of these patents will the cause of failure was excess of magnesia be furnished by Munn & Co. for ten cents each. in the cement when used. The action is assisted when the cement is alternately wet and dry, as between tides, and the sulphate of