SUPPLEMENT

TO THE

NEW ZEALAND GAZETTE

OF

THURSDAY, JUNE 11, 1903.

Published by Authority.

WELLINGTON, THURSDAY, JUNE 11, 1903.

CONTENTS.

Notice of Acceptance of Complete Specifications.

Patent Office.
Wellington, 10th June, 1903.

COMPLETE specifications relating to the undermentioned applications for Letters Patent have been accepted, and are open to public inspection at this office. Any person may, at any time within two months from the date of this *Gazette*, give me notice in writing of opposition to the grant of any such patent. Such notice must set forth the particular grounds of objection, and be in duplicate. A fee of 10s. is payable thereon.

No. 14830.—2nd May, 1902.—JOHN SMAILL, of Port Chalmers, and of 24, Manse Street, Dunedin, New Zealand. Refrigerating Engineer. Improved means for determining the quantity of liquid in refrigerating-apparatus.*

Claims.—(1.) The general construction, arrangement, and combination of parts composing my improved means for determining the quantity of liquid in refrigerating-apparatus, all substantially as and for the purposes described with reference to the arming. (a.) Means for reducing below freezing-paint the temperature of the liquid used for freezing purposes, whereby an external frost-line is caused, indicating the level of the said liquid, substantially as and for the purposes set forth. (3.) Means far determinating the quantity of liquid in refrigerating-apparatus, consisting of a vertical column having pipe-connections top and bottom with the reservoir, and containing an eapsnsion-pipe with a connecting passage between it and said column, a regulating-valve in said passage, and a branch pipe connecting the expansion-pipe with the refrigerating system. substantially as &ascribed.*

(Specification, 2s. 9d.; drawing, 1s.)

No. 15024.—23rd June, 1902.—ROBERT HOLLAND, of Flemington, Canterbury, New Zealand, Mill-owner. An improved chain, especially applicable to the elevators of threshing and suchlike machines.*

[NOTE.—The title in this case has been altered. See list of Provisional Specifications, *Gazette* No. 67, of the 21st August, 1902.]

Claim.—As a means for operating the elevators of threshing and suchlike machines? a single endless chain consisting of U-shaped links substantially as described, and actuated by sprocket wheels, in combination with battens that are attached thereto by bolts, as set forth and explained.

(Specification, 1s. 6d.; drawing, 1s.)

No. 15065.—27th June, 1902.—QUINTIN ANDERSON MCILWRAITH, of Te Pahi, Kaipara, New Zealand, Settler. An apparatus far the easier uncoiling or unreeling of fencing, telegraph, or other wires.'

Claims.—(1.) *In* means for uncoiling *wires, a* frame adapted to be mounted and rotated upon a vertical spindle, and consisting of upper and lowercross-pieces joined together by bars connecting their corresponding ends, such bars being hinged to the lower cross-pieces, and being provided with means upon their upper ends whereby they may be fastened to the upper cross-pieces, substantially as and for the purposes set forth. (2.) The general arrangement, construction, and combination of parts in my apparatus for the easier uncoiling or unreeling of fencing, telegraph, or other wires, as described and explained, as illustrated in the drawings, and for the several purposes set forth.

(Specification, 3s. 3d.; drawing, 1s.)

No. 15141.—22nd July, 1902.—JOHN HILTON SMITHIES BROWN, of Auckland, New Zealand, Engineer. Improved means for heating fluids.*

Claim.—A device of the class described, comprising a body portion, and a pipe-coil secured to the bottom thereof, one end of which enters a short distance into the vessel and the other end to near the top of the vessel, substantially as and for the purpose set forth.

(Specification, 1s. 3d.; drawing, 1s.)

No. 15215.—2nd August, 1902.—ARCHIBALD WILLIAM HUMPHREYS, of corner of Adelaide Road and Brown Street, Wellington, New Zealand, Cycle Expert. Improvements in or relating to brakes for cycles and similar vehicles.*

Claims.—(1.) In cycling machines, a handle revolvably mounted upon the handle bar and connected to the outer end of a brake-lever pivoted upon the handle bar, as and for the purposes set forth. (2.) In cycling machines, a brake-lever pivoted to the handle bar, to the inner end of which is secured the brake-ml and a curved connecting piece upon the outer end of the brake-lever, in combination with a handle revolvably mounted upon the handle bar and to which the curved connecting pieoe is pivotally secured, substantially as and for the purposes specified.

(Specification, 2s. 6d.; drawing, 1s.)

No. 15341.—2nd September, 1902.—DAVID GWILLIM, of 174, Williams Road, Toorak, Victoria, carpenter. New or improved indoor-gsme apparatus:

Claims.—(1.) An improved indoor-gsme apparatus consisting of a cloth-covered board as A, having side cheeks as A^1, a transverse archway board as B, provided with seven openings or archways, the central or "penalty" arch being wider than the others, a transverse pocket as C, C^1, and C^2 at back of said archway hoard, and with a spot mark S and a baulk line W on surface of table, substantially as described and shown. (2.) An improved indoor-game apparatus consisting of a cloth-covered table or board, laving a spot mark S and a baulk line W marked there&, and provided with side cheeks, furnished with rubber-cushioned strip as A^2, a transverse archway board as B, having seven archwags or openings in it, a pocket as C, C^1, and C^2, and a shoot or race as D leading from the latter under table to a pocket as D^1 at its front end, and said table being mounted on screwed or adjustable legs as E, substantially as described and shown.

(Specification, 3s. 9d.; drawing, 1s.)

No. 15370.—9th September, 1902.—JAMES CAMPBELL, of Grove Bush, New Zealand, Farmer. Improvements in rabbit and other animal traps.

Claims.—(1.) In animal-traps, a base plate longitudinally upon which a pair of gripping-jaws are hinged, in combination with a spring arm extending throughout the length of the base plate and secured et one end thereto, the free end of the spring arm being shaped so as to loosely encircle the gripping-jaws upon one end, substantially as specified. (2.) In animal-traps, in combination, a base plate, a pair of gripping-jaws hinged longitudinally upon the base plate, a spring arm extending throughout the length of the base plate and secured at one end thereto, the free end of the spring arm being shaped so as to encircle the gripping-jaws upon one end, a trigger hinged to an arm secured at right angles to the base plate, and a bait-plate hinged to this arm and provided with a catch on its edge adapted to engage the free end of the trigger, all as and for the several purposes set forth. (3.) The general arrangement, construction and combination of parts in my improvements in rabbit and other animal traps, as described and explained, as illustrated in the drawings, and for the several purposes set forth.

(Specification, 3s. 3d.; drawing, 1s.)

No. 15973.—12th February, 1903.—PHILLIP HIEN, of 910, Warren Avenue, Chicago, County of Cook, State of Illinois, United States of America, Mechanic. Improvements in friction-springs,

Claims.—(1.) The employment in a device of the general character described of resilient elements having inclined the frictional surfaces which are relatively moved while engaged with each other, and place said elements under tension whenever the elements are subjected to compression in the direction of their axis. (2.) In connection with the subject-matter of claim 1, making the resilient elements of ring-form. (3.) In connection with the subjeot-matter of claim 1, supporting the resilient elements upon a telescoping core arranged between followers. (4.) In connection with the subject-matter of the foregoing claims, providing stops on the telescoping core to be engaged by each pair of rings to limit the tension which may be imposed upon the mm. (5.) In connection with the subject-matter of claims 1 and 2, making the rings open and normally somewhat spiral. (6.) The employment in a device of the general character described of a series of non-resilient elements supported adjacent to said resilient elements, said resilient and non-resilient elements having engaging frictional surfaces.

(Specification, 7s.; drawings, 2s.)

No. 16022.—25th February, 1903.—ALEXANDER GILLIES, of Terang, Victoria, Dairyman. An improvement in pneumatic milking-apparatus.

Claims.—(1.) In pneumatic milking-apparatus, a small air-inlet formed in the milk-passage between the mouthpiece and the receiver, substantially as and for the purpose set forth. (2.) In pneumatic milking-apparatus having separate pipes or passages for the pulsations and for the milk respectively, a small air-inlet for admitting atmospheric pressure behind the milk, substantially as set forth.

(Specification, Is. 3d.; drawing, la.)

No. 16256.—22nd April, 1903.—WILLIAM FOSDICK CHAMBERLIN, Manufacturer, of 43, South High Street, and WILLIAM HENRY STOUT, Mechanic, of 33, Glencoe Avenue, both in Dayton, Ohio, United States of America. A new or improved machine for making cylindrical boxes.

Claim.—A machine for making cylindrical boxes from veneer blanks, the same having as its essential features two drums around which the cylinders from which the bores are made are formed, the said drums having an intermittent rotary movement during which the veneer blanks are placed around the drums, and the hoops and the cylinder are united by nail mechanism, the said intermittent rotary movement being followed by a continuous rotary movement during which the cylinders formed upon the drums are cut into two equal parts, the said drums having also horizontal reciprocating movements from and toward each other, during which the cylinders are stripped from the drums and the said drums are returned to their inner positions.

(Specification, 13s.; drawings, 4s.)

No. 16258.—22nd April, 1903.—THE ELSPASS ROLLER QUARTZ-MILL AND MANUFACTURING COMPANY, a corporation having its office at 116, North Main Street, Pueblo, County of Pueblo, State of Colorado, United States of America (assignees of John Henry Elspass, of 1301, West Adams Street, Los Angeles, County of Los Angeles, State of California, United States of America, Gentleman). Improvements in pulverising-mills.

Claims.—(1.) In a pulverising-mill, the combination, with a suitable frame, of a circular rotary mortar whose pulverising face is highest at its outer edge and inclined downwardly to its inner edge. (2.) In a roller pulverising-mill, a circular rotary mortar having an annular ledge surrounding its pulverising face, said ledge being highest at its inner edge and downwardly inclined to its outer edge, where it is provided with a shallow upwardly projecting flange located below the screen. (3.) In a roller pulverising-mill, a circular rotary mortar having an annular stepped ledge surrounding its pulverising zone. (4.) In a roller pulverising-mill, a circular rotary mortar having an annular stepped ledge surrounding and occupying a plane above its pulverising surface. (5.) In a roller pulverising-mill, a circular rotary mortar having an annular pulverising face downwardly inclined from its outer edge, and a ledge surrounding said face and downwardly inclined from its inner edge. (6.) In a roller pulverising-mill, the combination, with a suitable frame, of a circular rotary mortar provided with a pulverising face, an annular ledge surrounding said face, a screen outside the ledge, and a plough supported on the frame and having a share located a short distance above the ledge and arranged to throw the upper stratum of pulverised material outwardly against the screen, said plough also having an inward projection occupying a position above pulverising face of the mortar, and having a tendency to throw the material inwardly and distribute it evenly over the said pulverising mortar face. (7.) In a roller pulverising mill, the combination of a rotary mortar, *in operative re-*

lation, the mortar being surrounded by a screen at its outer edge, an inwardly flared upwardly projecting flange at its inner edge, said flange being arranged to catch my material that may fall from the rollers after being carried upwardly, the axes of the rollers being downwardly inclined from their outer extremities, whereby the rollers are tilted inwardly above the pulverising face of the mortar. (8.) In a pulverising-mill, the combination with a suitable frame of a rotary mortar, and supporting rollers engaging the mortar from beneath and having bevelled faces engaging a correspondingly bevelled part of the bottom of the mortar, the axes of the rollers being inclined downwardly from their outer extremities. (9.) In a roller pulverising-mill, the combination with a frame provided with a number of inner and *outer posts, a circular rotary motor* mounted between the two sets of posts, rollers supporting the mortar from beneath, and interlocking guide-rings respectively mounted on the inner circumference of the mortar and at the outer circumference of the inner framework. (10.) The combination with a suitable framework composed of inner and outer posts, of a mortar mounted to rotate between the two sets of posts, the pulverising face of the mortar being downwardly inclined from it8 outer circumference, and pulverising-rollers whose faces are parallel with the pulverising face of the mortar, and with their axes which are downwardly inclined from their outer extremities. (11.) In a roller pulverising-mill, the combination of a framework and of outer and inner inclined pasts! a rotary mortar located between the two sets of posts, pulverising-rollers co-operating with the mortar, each roller having a shaft provided with journal-boxes slidable vertically in a pair of posts composed of one inner post and one outer post, the said roller-shafts being downwardly inclined from their outer extremities, and their pulverising faces being parallel with their axes, springs engaging the shaft-boxes from above, and located in the posts which form housings for the springs, 4 cross-head slidably mounted in each pair of posts, and engaging from above the springs bearing upon the journal-boxes of each roller-shaft, and means for applying downward pressure to the cross-beads to give the springs the required tension. (12.) The combination, with a suitable framework, of a rotary mortar suitably supported, pulverising-rollers co-operating with said mortar, shafts upon which the pulverising-rollers are made fast, the journal-boxes of the shafts being slidable vertically in the framework, coil springs engaging the said boxes from above, a cross-head slidable in the framework and bearing upon the springs of each roller-shaft, and a pressure-equalising device vertically slidable in the frame and simultaneously engaging all the cross-heads. (13.) In a pulverising-mill, the combination of a framework composed of inner and outer posts, a mortar mounted to rotate between the two sets of posts and suitably supported, pulverising-rollers engaging the mortar in operative relation, shafts upon which the rollers are made fast, journal-boxes for the shaft-extremities, the said bores for each shaft being *slidably mounted in an inner and an outer post, the said post* being bifurcated to receive the said boxes, springs mounted in the posts and engaging the said boxes from above, a cross-head engaging the two springs bearing upon the boxes of each shaft, and a pressure-equalising device vertically slidable in the inner posts and simultaneously engaging all the said cross-heads, and means centrally applied to the pressure-equalising device for faming the latter downwardly. (14.) In a pulverising-mill, the combination of a framework. a mortar mounted to rotate and suitably supported, pulverising-rolls engaging the mortar in operative relation, shafts on which tho rolls are made fast, said shafts being vertically movable in the frame, journal-boxes for the shafts, springs engaging the journal-boxes from above, a cross-head engaging the two springs of each shaft, a vertical shaft centrally located and made fast on the frame, an equalising-plate through which said shaft passes, said plate engaging all the cross-heads, and a nut screwed upon the upper extremity of the shaft and bearing against the equalising-plate, which is vertically slidable on the shaft. (15.) A pulverising-roll composed of two twin members having inwardly bevelled peripheries forming a groove deepest at the centre, a tire applied to said roll and having a counterpart inner periphery, and suitable means for fastening the two roll-members together whereby the tire is lacked in place.

(Specification, 12s.; drawings, 3s.)

No. 16318.—7th May, 1903.—HENRY DURAND, of Timaru, Canterbury, New Zealand, Gunsmith. An improved trace-fastening.

Claim.—The novelty in this invention consists in the manner of fixing the trace to the swingletree attachment by one or more studs, a D-loop; and a clasp, substantially as described and shown in the drawings.

(Specification, Is. ; drawing, 1s.)

No. 16335.—13th May, 1903.—The Honourable CHARLES ALGERNON PARSONS, *of Heaton Works, Newcastle-on-Tyne,* Northumberland, England, Engineer. Improvements in steam-turbines.

Claims.—(1.) In fluid-pressure turbines of the De Laval type. the method of securing a high relative velocity between *jet* and bucket with *reduced* skin *frictional losses* by *rotating* in opposite directions the element carrying nozzles and the element carrying buckets or vanes against which the fluid impinges, substantially as described. (2.) The improved turbine of the De Laval type consisting of a single pair of co-axial elements rotating in opposite dir&ions, the one element carrying nozzles and the other vanes, mid vanes being so disposed that the working-fluid after impinging on them passes to the exhaust without interfering with the action of succeeding jets, substantially as described. (3.) In turbines as claimed in claim 2, the method of reversing consisting in so disposing a separate set of nozzles supplied with the working-fluid through a separate set of passages and fed from a separate pressure-chest, that they. may direct the fluid against the reverse side of the buckets, or a separate row of reverse buckets, substantially as described. (4.) In turbines as claimed in claim 2, the method of reversing consisting in fixed jets causing the fluid to impinge on the reverse side of the buckets or on separate reverse buckets, substantially as described. (5.) The improved turbine substantially as described with *reference* to Fig. 1 of the drawings. (6.) The improved turbine substantially as described with reference to Fig. 2 of the drawings. (7.) In turbines as claimed in claim 2, the improved means for reversing sub. stantially as described with reference to Figs. 6 and 7 of the drawings. (8.) In turbines as claimed in claim 2, the improved means for reversing substantially as described with reference to Big. 8 of the drawings. (9.) In turbines as claimed in claim 2, the improved means for reversing sub. stantially as described with reference to Fig. 9 of the drawings.

(Specification, 9s. 6d. ; drawings, 7s.)

No. 16336.—13th May, 1903.—SUTCLIFFE, SPEAKMAN, AND COMPANY, LIMITED, Engineers, and EDGAR ROUSE SUTCLIFFE, Engineer., both of Leigh., Lancashire, England. Improvements in the manufacture of bricks from sand and lime and other materials, and in apparatus therefar.

Claims.—(1.) A method of producing bricks or blocks of sand, lime, and the like by pressing in moulds, characterized by the material being subjected to a preliminary pressure by means of a wedge-shaped plunger, and afterwards to a final pressure whereby a sharp-edged brick is obtained of great density on both its faces. (2.) A method of producing bricks or blocks from concrete and the like by pressing in moulds, characterized by the material being subjected to a preliminary top pressure by means of a wedge-shaped plunger, and to a final bottom pressure against a stationary press-head, whereby a sharp-edged brick is obtained of great density on both its faces. (3.) The combination of the ratchet table-rotating gear with the toggle-operating gear in such a manner that the table is mused to revolve with the weight of the tension system resting thereon for a short time before it is raised clear of the table, substantially as described and for the purpose set forth. (4.) In a brick-pressing machine, the use, in combination with a toggle-tension system for producing the main pressure, of a toggle member consisting of a *compression-strut, a projecting bracket,* and a tapered plunger attached together and operated by the connecting-rod of the system, substantially as described and for the purpose set forth. (5.) In a brick-pressing machine with a rotating table, the use, in combination with the tension-operating shaft, of a supplementary crank or eccentric attached thereto, a connecting-rod having a universal joint at each end, and a ratchet and pawl attached to and rotating the table, substantially as described. (6.) In a brick-pressing machine with a rotating table. the use. in combination with a ratchet and pawl for operating same, of a connecting-rod having a universal joint at each and, and a rooking-lever operated by a crank-pin moving in a slot formed in the rook. ing-lever for the purpose of giving a quick return motion. (7.) In a toggle-tension system for a brick-pressing machine, the use, in combination with the connecting bolts and nuts of the joints thereof, of springs interposed between ths heads or nuts of the bolts and the connected parts, for the purpose of neutralising the wear on the joint and keeping the surfaces in constant contact. (8.) In a brick-pressing machine, the use, in combination with a loosely carried tension system, of springs interposed between a bearing on the movable tension system and a bearing on a stationary part of the framework of the machines, substantially as described and for the purpose set forth. (9.) In moulds far the table of a brickmaking machine, the combination with liners formed

with fitting projections and recesses, of corresponding recesses formed in the body of the table to engage the projections on the liners, a space at one end for the insertion of the liners. and a packing-piece for filling said space, substantially es described.

(Specification, 10s. ; drawings, 5s.)

No. 16339.—13th May, 1903.—THE WINCHESTER REPEATING ARMS COMPANY, a corporation organized under the laws of the State of Connecticut, and having its principal place of business at the City and County of New Haven, State of Connecticut aforesaid, United States of America (assignees of Thomas Crossley Johnson. of New Haven aforesaid). Improvements in firearms.

Claims.—(1.) In a take-down firearm, the combination with the receiver and the tang thereof of a forwardly and downwardly inclined take-down screw mounted in the tang and entering the receiver. (2.) In a take down firearm, the combination with the receiver and the tang thereof of a take-down screw mounted in the tang and entering the receiver, and a look coacting with the screw and comprising a tooth, a finger-piece, and a spring, all made integral with each other. (3.) In a take-down firearm, the combination with the receiver and the tang thereof of a take-down screw entering the receiver, and a lock made in one piece and comprising a finger-piece and a U-shaped spring, and adapted to engage with the screw for holding the same against rotation. (4.) In a take-down firearm, the combination with the trigger thereof of a transversely arranged longitudinally movable manual trigger-lock mounted forward of the finger portion of the trigger, and projecting beyond one of the side walls of the frame, and formed wit,, a clearance-slot for the reception of a portion of the trigger, the operation of which it blocks when the slot is *not* in position to receive the trigger. (5.) In a firearm, the combination with the trigger thereof of a longitudinally movable trigger-lock formed with a clearance-slot for the reception of a portion of the trigger, and with two looking-recesses and a spring-actuated plunger coating with the recesses for securing the said look in its trigger-clearing and trigger-blocking positions. (6.) In a firearm, the combination with the tang thereof of a trigger mounted therein and having a forwardly projecting locking-arm, a trigger-lock mounted in the tang for transverse movement therein, beyond one of the side walls of which it projects, and formed with a clearance-slot for the reception of a portion of the said arm the movement of which the lock blocks except when the said slot is aligned with the said arm. (7.) In a firearm, the combination with the trigger thereof of an automatic timing-lever located forward of the finger portion of the trigger and coacting with the trigger to look it, and means for automatically operating the timing-lever to unlock the trigger just as the arm is closed. (3.) In a firearm, the combination with a longitudinally movable breech-block of a trigger, and an automatic timing-lever located forward of the finger portion of the trigger and coacting with the trigger to look the same, and operated upon by the breech-block just as the arm is closed for unlooking the trigger. (9.) In a firearm, the combination with the trigger thereof of an automatic timing-lever located forward of the finger portion of the trigger and formed with a depending hock to coact with the trigger and with a forwardly projecting unlocking-arm, and means coacting with the said arm for operating the lever to release the trigger just as the firearm is closed. (10.) In a firearm, the combination with a trigger having a forwardly projecting locking-arm, furnished with a Locking-lug, of a timing-lever provided with a depending hook coacting with the said lug and with a forwardly projecting unlocking-arm, and means coacting with the said arm to clear the said hock from the said lug just as the firearm is closed. (11.) In a firearm, the combination with a trigger having a forwardly projecting locking-arm and a locking-lug, of a tranversely arranged longitudinally movable stud-like trigger-look located forward of the finger portion of the trigger, and formed with a clearance-slot for the reception of a portion of the said arm, the operation of which it blocks except when the said slot is aligned with the said arm, an automatic timing-lever formed with a hock coacting with the said lug and with a forwardly projecting operating-arm, and means engaging the said arm to disengage the hook of the lever from the lug of the lock just as the firearm is closed. (12.) In a firearm, the combination with a tang provided with an upwardly projecting combined hammer-stop and box-magazine guide, of a hammer formed with a stop-shoulder coacting with the said combined part for limiting the forward movement of the hemmer, end a box magazine coacting with the forward edge of the said of part whiob constitutes a guide for it. (13.) In a box-magazine take-down firearm, the combination with a receiver formed at its forward end with a take-down lug having a dot in its rear wall and provided at its rear end with a take down bushing, of a tang formed at its rear end with a take-down lug. end at its forward end with en upwardly projecting combined magazine-guide and take-down hook coacting with the slot in the said lug of the receiver, and a take-down screw mounted in the take-down lug of the tang and entering the said bushing in the rear end of the receiver. (14.) In a firearm, the combination with a receiver formed at its rear end with a looking-lug, of a tang formed with an upwardly projecting take-down lug provided with a forwardly projecting transversely arranged locking-shoulder coacting with the said lug at the rear end of the receiver, and a take-down screw mounted in the ssid lug of the tang and entering the receiver. (15.) In a take-down firearm, the combination with a receiver formed et its rear end with a rearwardly projecting segmental locking-lug of a tang provided with an upwardly projecting take-down lug ormed with a forwardly projecting transversely arranged locking-shoulder coacting with the said lug of the receiver, and a take-down screw mounted in the said take-down lug of the tang and entering the rear end of *the* receiver. (16.) In a firearm, the combination with the tang ereof of a horizontally arranged box-magazine locking-lever mounted therein, provided at its forward end with an exposed finger-piece lying close to the side wall of the magazine when the same is in position, and provided et its rear end with a nose for engagement with he magazine. (17.) In an automatic firearm, the combine.. tion with a gun-barrel provided at its rear end with an integral depending guide-rod lug, of a longitudinally movable balanced breech-block, a portion of which extends forward under the barrel, a guide-rod mounted in the said guide-rod lug, into which its rear end is entered, end a spring encircling the said rod for returning the block to its closed position. (18.) In an automatic firearm, the combination with a gun-barrel formed at its rear end with a depending guide-rod lug, of a longitudinally movable balanced breech-block extending forward under the barrel, a guide-rod for the said block entered et its rear end into the said guide-rod lug, the forward end of whioh constitutes a recoil abutment-face, buffer-washers mounted upon the rear end of the said rod and bearing against the said recoil abutment-face, and a spring encircling the said rod far returning the block to its closed position. (19.) In a firearm, the combination with the barrel and the forestock thereof of a cap-like band or tip having a chambered body closed in front and opening rearwardly for the reception of the forestook, and formed with a circular opening and with two upwardly extending clamping arms, between which a slot extends downwardly into the said opening, and a clamping screw passing through the base of the said arms for clamping the tip upon the barrel. (20.) In a firearm, the combination with a receiver having the inner face of its left-hand wall formed with a recess the walls of which are undercut and formed with lateral clearance-openings, of an ejector having its base formed on its edges with tongues constructed end arranged in correspondence with the said clearance-openings into which the tongues are entered in securing the ejector in place. (21.) In a firearm, the combination with a receiver having the inner face of its left-hand wall provided with a recess, of an ejector adapted to be entered into the said recess, and a pressure-screw mounted in the ejector, and engaging with a portion of the receiver to crowd the ejector rearwardly and hold it firmly in place. (22.) In a firearm, the combination with a receiver having the inner face of its left-hand wall formed with a recess the walls of which are undercut, and formed with lateral clearance-openings, of an ejector the base of which is formed upon its edges with retaining-tongues corresponding in form and location to the said openings into which they are entered, and the rear end of the said base being solidly held against the rear-end we,, of the said recess, and a pressure-screw mounted in the forward end of the ejector, and pushing it rearwardly so as to firmly hold it in place. (23.) In a firearm, the combination with a barrel provided with an integral depending recoil-taking lug, of a longitudinally movable balanced breech-block coacting with the said lug which takes the recoil of the said block, and a spring coacting with the said block to return it after it has been forced rearward by the recoil. (24.) In a firearm, the combination with a barrel provided with an integral recoil-taking depending lug, of a longitudinally movable balanced breech-block having an opening receiving the said lug which takes the recoil of the block. and a spring coacting with the said block to return it after it has been forced rearward by the recoil.

(Specification, £1 0s. 6d. ; drawings, 5s.)

No. 16347.—14th May, 1903.—CHARLES HENRY JERRARD, 204, High Street, East Ham, Essex, England, Wine and Spirit Merchant. Improved apparatus for cleansing tram-rails and the like.

Claim.—An improved portable apparatus for automatically cleansing the surface and grooves of tram-rails and the like, consisting of a metal frame or box attached to the body of the tram or other vehicle, a tongue or scraper controlled by a spring or springs: all substantially as and for the purpose set forth and described, and illustrated by the drawings.

(Specification, 48. ; drawing, la.)

No. 16349.—14th May, 1903.—CYRIL FREDERICK DUNN, of 18, Gordon Avenue, Kew, Victoria, Accountant (assignee of Joseph Bartlett Davies, of "Elouera," Wheatland Road, Malvern, Victoria, Accountant). Improvements in and relating to soft-metal-heeded wire nails.

Claims.--(L) In iron or steel wire nails having a soft-metal head-enlargement, the direct union of the soft-metal head. enlargement with the wire-nail head by the "se of a suitable flux or fluxes, for which purpose chloride of zinc, resin, or other appropriate material or materials may be used, substantially as deaoribed. (2.) In iron or steel wire nails having a soft-metal head-enlargement, treating the wire-nail head with a suitable flux or fluxes, and the" casting the soft-metal head thereon within dies, to which the molten metal is forced under pressure, substantially as described. (3.) I" iron or steel wire nails having a soft metal head-enlargement, heating the wire-nail head either just before or after the nail-head has received its coating of flux, and before bringing it into contact with the molten metal, substantially as described. (4.) I" iron or steel wire nails having a soft-metal head-enlargement, heating the wire-nail head to about the temperature of the molten metal which *is* to form the head-enlargement before allowing the soft-metal enlargement to solidify around the iron or steel head, in order that the metals may come into more direct ""ion. substantially as desoribed. (5.) I" iron or steel wire "ails having a soft-metal head-enlargement, forcing the *molten* metal under pressure to dies, in which the wire-nail head is arranged, substantially as desoribed. (6.) I" iron or steel wire "ails having a soft-metal bead-enlargement, submitting the moulded soft-metal head-enlargement after casting and solidifying to a pressure between dies, to make the union more complete, and to bring the head to its finished form, substantially as desoribed. (7.) I" iron or steel wire "ails having a soft-metal head-enlargement, the shank thereof formed either twisted or jagged, or partly twisted or jagged, substantially as desoribed. (8.) I" iron or steel wire "ails having a soft-metal head-enlargement and having a shank twisted or jagged, or partly twisted or jagged, treating the iron head thereof with a suitable flux or fluxes, the" casting the soft-metal head-enlargement thereon, substantially as described. (9.) I" iron or steel wire nails having a soft-metal head-enlargement, roughening the surface of the iron heed thereof, and forming the shank plain. twisted, or jagged, or partly plain, twisted, or jagged, substantially as described. (10.) I" iron or steel wire "ails having a soft-metal head-enlargement, roughening the surface of the iron head thereof, and having the shank plain, twisted, or jagged, or partly plain, twisted, or jagged, and treating the iron head thereof with a suitable flux or fluxes, the" casting the soft-metal head-enlargement thereon. substantially as described. (11.) I" iron or steel wire nails having a soft-metal head-enlargement, treating the wire-nail head with suitable flux or fluxes while the nail-head is either heated or cold, the" further heating the prepared nail-head, and placing it in a die or pair of dies of the requisite form, and passing the molts" metal thereinto under pressure, substantially as described. (12.) A soft. metal head - enlargement formed on an iron or steel wire nail which has bee" previously galvanised, ooppered, or tinned, or made from galvanised, coppered, or tinned wire, substantially as desoribed. (13.) A soft-metal head-enlargement formed on an iron or steel wire nail which has bee" previously galvanised, coppered, or tinned, or made from galvanised, coppered, or tinned wire, by forcing the molten metal under pressure to dies in which the wire-nail head is arranged, substantially as described. (14.) In the manufacture of iron or steel wire nails having a soft-metal head-enlargement, treating the head of wire nails previously galvanised, coppered, or tinned, or made from wire previously galvanised, ooppered, or tinned, with a suitable flux or fluxes prior to casting the soft-metal enlargement about the wire-"sil head, substantially as described. (15.) A soft-metal head-enlargement formed on an iron or steel wire nail which has bee" previously galvanised, coppered, or tinned, or made from galvanised, ooppered, or tinned wire, by treating the wire-nail head with a suitable flux or fluxes and then casting the soft-metal head thereon within dies to which the molten metal is foroed under pressure, substantially as described. (16.) A soft-metsl head-enlargement formed on a" iron or steel wire nail having a shank twisted or jagged or partly twisted or jagged, and which nail has bee" previously galvanised, ooppered, or tinned, or made from galvanised, coppered, or tinned wire, substantially as described (17.) A soft-metal head-enlargement formed on an iron or steel wire nail which has bee" previously galvanised, ooppered, or tinned, or made from galvanised, coppered, or tinned wire, treating the iron head thereof with a suitable flux or fluxes, the" casting the soft-metal head-enlargement thereon, substantially as desoribed. (18.) I" iron or steel wire "ails having a soft-metal head-enlargement, treating the wire-nail head with a suitable flux or fluxes, the" casting the soft-metal head-enlargement thereon within suitable dies, and, after the soft-metal head is solidified, again further shaping and compressing the soft-metal head-enlargement, substantially as described. (19.) I" iron or steel wire-nails having a soft-metsl head-enlargement, treating the wire-nail head with &suitable flux or fluxes, the" further heating the prepared nail-head by passing it through a molten-metal bath, or in other ways, and the" casting the soft-metal head-enlargement on it in suitable dies, and, after the soft-metal head-enlargement is solidified, again further compressing and shaping the soft-mete, head-enlargement. substantiallv as described.

(Specification, 7s. 6d. ; drawing, Is.)

No. 16350.—14th May, 1903.—ISIDOR DEUTSCH, of Montreal, Province of Quebec, Canada, Electrical Engineer, and EDWARD JOHN FETHERSTONHAUGH, of Montreal aforesaid, Solicitor of Patents. Certain new and useful improvements in power-transmitting devices.

Claims.—(1.) In a power-transmitting device, the corn. bination with a support and a oar-wheel axle, of a hub having projeoting flanges therefrom, a gear attached to the said flanges, a sleeve extending from the gear, a strap designed to encircle the sleeve, a rigid arm on the strap, and a oosoting gear journalled in the arm, as and for the purpose specified. (2.) I" a power-transmitting device, the combination with a support and a oar-wheel axle, of a split hub having projecting flanges therefrom, a gear-wheel adjustably attached to said flanges, a sleeve extending from the gear and surrounding the axle, a strap designed to encircle the sleeve, an arm on the strap, and a oosoting gear journalled in the said arm, as and for the purpose specified. (3.) In a power-transmitting device, the combination with a support and a car-wheel axle, of a split hub having projecting flanges provided with radial elongated slots, a plurality of set-screws inserted in bosses and designed to be in alignment and in proximity with the aforesaid slots, a split gear-wheel bolted to the projeoting flanges through the elongated slots, and a oosoting gear meshing with the aforesaid gear, as and for the purpose specified. (4.) I" a power-transmitting device, the combination with a support and a oar-wheel axle, a split hub having projecting flanges therefrom, a plurality of set-screws radially inserted through suitable bosses on said flanges in alignment with elongated slots, a gear wheel bolted to the projeoting flanges, a sleeve *extending* from the gear wheel and surrounding the axle, and provided with an extension, a strap encircling the sleeve, and a coacting gear suitably journalled in said extension, as and for the purpose specified. (5.) I" a power-transmitting device, the combinatio" with a support and a oar-wheel axle, of a split hub having projecting flanges therefrom, a gear wheel attached to the projecting flanges, means for concentring the gear with the axle, a sleeve extending from the gear and surrounding the axle, a strap encircling the sleeve and having a projection therefrom, and a coacting gear journalled therein, as and for the purpose specified. (6.) I" a power-transmitting device, the combination with a support and a oar-wheel axle, of a split gear wheel, a separable split hub therefor, adjustable means for attaching the split gear to the split hub, a split sleeve extending from the halves of the gear, a strap encircling the sleeve and having a projection, a coacting gear journalled in said projection, and means for adjustably supporting the said projection, as and for the purpose specified. (7.) I" a power-transmitting device, the combinatio" with a support and a car-wheel axle, of &split gear wheel, a separable split hub therefor, adjustable means for attaching the split gear to the split hub. a split sleeve extending from the hilves of the gear. a strap having a rigid projection therefrom, a coacting gear journalled therein, and a swinging support for the rigid projection, es and for the purpose specified. (8.) In a power-transmitting device. the combination with a support and a car-wheel axle, of a gear wheel designed to rotate with the axle, a sleeve extending from the gear, a strap encircling the sleeve, and a" arm rigidly attached to the strap, and a support for the arm designed to allow any *movement* of translation in the oar-axle, as and for the *purpose* specified. (9.) I" a device of the class desoribed, a split hub having projeoting flanges therefrom, provided with elongated slots in a direct radial line with the centre of the oar-de, bolts in said slots, a plurality of set-screws in bosses in proximity to the slots, and designed to continuously abut said bolts, a gear wheel bolted to the sides of the flanges, end a coacting gear suitably journalled and supported, as and

for the purpose specified. (10.) In a device of the class described, a split gem having a sleeve extending in halves from each of its parts, and designed to rotate therewith clear of the car-axle, a separable split hub, a coacting gear, a strap encircling the aforesaid sleeve and having an extension therefrom designed to support the coacting gear, as and for the purpose specified. (11.) In a device of the class described, an adjustable and swinging support, comprising a pair of suspended rings and designed to have a lateral movement, a rod journalled in the rings, a thimble located in the rod, and suitable spiral springs designed to form a cushion on each side thereof, a sleeve connected to the rod projecting through the thimble, and a plurality of gears, as and for the purpose specified. (12.) In a device of the class described, in combination, a split hub having projecting flanges and radial adjusting slots therein, a plurality of set-screws in direct radial line with the slots and in proximity thereto, a split gear having a split sleeve extending therefrom, a strap encircling the sleeve, an arm rigidly attached to the strap, a coacting gear, a driving-shaft turned by raid gear, and a support for the arm adjustable to its various positions, as and for the purpose specified. (13.) In a device of the class described, in combinstion, a car-truck having a car-wheel axle suitably journalled therein, a gear with a sleeve extending therefrom designed to surround the axle and leave a clear space between, a separable hub with adjustable slots designed to carry the gear in its rotation on the axle, a strap encircling the sleeve, a coacting gear journalled in an extension from the strap, a swinging support for the arm, and a suitable driving-shaft driven by the emoting ar. as and for the purpose specified. (14.) In a power-transmitting device, the combination with a oar-wheel axle, suitably journalled in a truck, of a gear wheel, a separable hub therefar, means for attaching the gear to the hub, a sleeve extending from the gear wheel and designed to surround the axle, a strap encircling the sleeve and having a projection, a coacting gear wheel journalled in said projection, and suitable means for supporting the coacting gear, as and for the purpose as specified. (15.) In a device of the class described, in impact combination, a car-wheel and axle thereof, a split hub securely bolted on the said axle and provided with extending flanges, a split gear having projections therefrom parallel with the axle, and designed to be held clear of the same by the split hub; an arm having a ringed end encircling the said projections, a support for the arm designed to allow any movement of translation in the car-axle, a coacting gear, and a suitable driving-shaft, as and for the purpose specified. (16.) In a device of the class described, in combination, &gear wheel designed to rotate with the axle, a strap encircling the axle in proximity to the gear wheel, a bearing rigidly attached to the said strap end a coacting gear journalled therein, and a support for the bearing designed to allow my movement of translation in the car-axle, as and for the purpose specified. (17.) In a power-transmitting device, the combination with a support and a car-wheel axle, of a gear wheel designed to rotate with the axle, a sleeve extending along and-mound the axle and firmly secured thereto, a strap encircling the said sleeve, a bearing rigidly attached to the said strap, a coacting gear journalled therein, and a support far the bearing designed to allow any movement of translation in the oar-axle, as and far the purpose specified. (18.) In a power-transmitting device, the combinstion with a support and a car-wheel axle, of a gear-wheel designed to rotate with the axle, a sleeve extending along and around the axle and firmly secured thereto, a strap encircling the said sleeve, a bearing rigidly attached to the said strap, a coacting gear journalled therein, an arm extending from the said strap and having an orifice therethrough towards the end thereof, a rod suitably supported from its upper end and extending from the said orifice, and suitable cushions on the said rod above and below the aforesaid arm from the sleeve, as and for the purpose specified. (19.) In a power-transmitting device, the combinstion with a support and a car-wheel axle, of a gear-wheel journalled on the said axle, and designed to rotate therewith, a strap encircling the axle, a bearing rigidly attached to the strap, a coacting gear journalled in said bearing, and a support for the bearing designed to allow any movement of translation in the oar-axle, as and for the purpose specified.

(Specification, 12s. 6d.; drawings, 3s.)

No. 16360.—16th Meg, 1903.—THOMAS POTTS, of Pahiatua, Wellington, New Zealand, Medical Herbalist. An improved medicinal preparation for human use.

Extract from Specification.—The medicine is composed of the following ingredients in relative proportions approximately stated: 4 oz. decoction of aloes socotrine, 2 drachms of rhubarb pulv., ½ oz. oil of wintergreen, 2 oz. oil of sassafras, 1 oz. chlorate of potash, 1 oz. oil of carraway, ½ drachm resina podophylli, 1 drachm colocynth pulv., 1 oz. gentian pulv., ½ oz. bicarbonate of potash, 1 drachm jalap pulv., 1 oz. tincture of hyoscyami, 4 oz. of liquor taraxacun, 4 oz. rectified spirits, 2 drachms capsicum pulv.; add glycerine and treacle to make up to 20 oz. Four drachms of this mixture is put into an 8-oz. bottle, and to it is added 2 drachms of the tincture of belladonna. The bottle is then filled with water. The medicine is taken in doses of a dessertspoonful three times a day after food.

Claim.-An improved medicine consisting of the ingredients specified, combined in proportions approximately as stated.

(Specification, 1s.)

No. 16362.—13th May, 1903. GEORGE ARMSTRONG PETERS, of 109, College street, Toronto, County of York, Province of Ontario, Canada, Physician. Certain new and useful improvements in self-registering electrically operated Sectional targets.

Claims.—(1.) A self-registering electrically operated sectional target comprising a plurality of separate sections and a rigid support for each section, and means behind each section operated by the force emanating from the impact of the bullet transmitted through the rigid section for completing a circuit from such section to an annunciator, as and for the purpose specified. (2.) A self-registering electrically operated sectional target comprising a plurality of separate sections and a rigid support for each section, a contact located behind each section, and means between the contact and the section operated by the force emanating from the impact of the bullet transmitted through the rigid section for making connection with the contact and completing the circuit from such section to an annunciator, as and for the purpose specified. (3.) A self-registering electrically operated sectional target comprising a section rigidly supported and a contact located behind the section, and means interposed between the section and the contact operated by the force emanating from the impact of the bullet transmitted through the rigid section for completing an electric circuit to an annunciator, as and far the purpose specified. (4.) In a self-registering electrically operated sectional target, the combination with a plurality of sections having their edges lying in proximity to each other, of moss-bars supported on a suitable frame, and shanks connected to the cross-bars and to each section so as to support them in position, and means behind each section operated by the force emanating from the impact of tbe bullet transmitted through the rigid section for completing a circuit from such section to an annunciator, as and for the purpose specified. (5.) In a self-registering electrically operated sectional target, the combination with a plurality of sections having their edges lying in proximity to &oh other, of cross-bars supported on a suitable frame, and shanks connected to the cross-bars and to each section so as to support them in position, a bracket supported behind each section, a hammer pivoted at the rear end of the bracket and designed to have the front and lie normally against the motion., a contact insulated from the bracket and with which the rear end of the hammer is designed to be brought in contact by the force emanating from the impact of the bullet transmitted through the rigid section for completing the circuit to the annunciator, as and for the purpose specified. (6.) In a self-registering electrically operated sectional target, the combination with a plurality of sections having their edges lying in proximity to each other, of cross-bars supported on a suitable frame, and shanks connected to the cross-bars and to each section so as to support them in position, a bracket supported behind each section and provided with rear lugs at the rear end of the bracket! a hammer pivoted at the rear end of the bracket and designed to have the front end lie normally against the section., and provided with a rear spur., a resilient contact, and insulating plug fitting in a bracket and supporting such contact behind the hammer, such hammer being designed to be brought into connection with such contact by the force emanating from the impact of the bullet transmitted through the rigid section for completing the circuit to the annunciator, as and for the purpose specified. (7.) In a self-registering electrically operated sectional target, the combination with each section and contact thereof, of an annunciator, a wire leading from the contact to the annunciator and from the annunciator to the frame, a challenge board provided with a series of pins, an am, a wire leading from the frame to the arm, and a wire leading from each pin back to the contact, and the arm being arranged to complete the circuit, as and for the purpose specified. (8.) In a self-registering electrically operated sectional target, the combination with each section and contact thereof of an annunciator and challenging device electrically connected to each section and to the annunciator, and designed to demonstrate the working-order of the target, as and for the purpose specified. (9.) In a self-registering electrically operated sectional target, the combination with each section, the hammer and the contact, and the electrical connections from the contact, of means for limiting the

backward throw of the hammer, as and for the purpose specified. (10.) In a self-registering electrically operated sectional target, the combination with each section, the hemmer and the contact, and the electrical connections from the contact, of a stop or shoulder designed to limit the backward throw of the hemmer, as and for the purpose specified

(Specification, 88. 6d.; drawing. 1s.)

No. 16368.—13th May, 1903.—HENRY ISMAY MORALEE Ross, of Dunedin, New Zealand, Engraver. Improvements in double-current ventilators.

Claims.—(1.) In ventilators, the combination of passages far a downtake and an uptake of air, *id sir entering at the same opening, for working both currents, substantially as described and shown. (2.) In combination in a ventilator, trumpet. shaped openings A, A*, arranged to cause ad upward and downward current, with automatic louvre doors opening to admit passing air and forcing same to the lower part of the space to be ventilated, and at the same time inducing an up-current from an opposite or distant part of said space through suitable pipes, substantially as set forth. (3.) In combination, adjacent openings for admitting air, distributed as required and connected far forcing air to a space to be ventilated, and withdrawing air from a distant part of said space by suitable pipes, all substantially as set forth, and as shown on the drawing.

(Specification, 4s. 3d. ; drawing, 1s.)

No. 16369.—13th May, 1903.—JAMES OATEN, of 403. Lonsdale Street, Melbourne, Victoria, Importer and Manufacturer. An adjustable fastener for animal-rugs.

Claim.—My adjustable fastener for animal-rugs consisting of two lengths of webbing, straps, or the like fitted with suitable buckles, clips, snaps, or other fastenings, and arranged to cross each other diagonally under the animal's body, and to extend from the rump portion of the rug to about the centre of the neck portion thereof on the opposite side, the whole being constructed and arranged substantially as and for the purposes specified, and as illustrated in the drawing.

(Specification, 3s. 3d. ; drawing, 1s.)

No. 16370.—19th May, 1903.—JOHN KERR, of Yering, Victoria, Dairy Farmer. An improved milk-strainer.

Claims.—(1.) An improved milk-strainer consisting of four adjustable parts—namely, the vessel B, suspended cylinder C, inner projecting cylinder D, and milk-receiver E, *f*, *g*, *h*, adjusted together and used as desoribed and illustrated. (2.) As an improved milk-strainer, the oombination and arrsngement of the respective parts B, C, D, and E in manner to provide chambers therein such as G, H, I, as and for the purposes described, and as illustrated in the drawing.

(Specification, 2s. 6d.; drawing, Is.)

No. 16371.—19th May, 1903.—JOHN KERR, of Yering, Victoria, Dairy Farmer. An improved milking-bucket.

Claim.—As an improved milking-bucket, a bucket such as A, having a reversely shaped open base and convexed cone- or pyramidal-shaped bottom or floor such as C, so as to form a V-shaped annular dirt-collecting catchment such as D, strengthened by annular metal band such as E, as and for the purposes described, and as illustrated in the drawing.

(Specification, 2s. ; drawing, Is.)

No. 16373.—19th May, 1903.—WILLIAM MADDER, of New Plymouth, New Zealand, Builder. Improved damper-frame.

Claim.—A damper-frame having flanges between which brickwork is built to maintain said frame securely in position, substantially as and for the purposes specified, and illustrated in the drawing.

(Specification, Is. ; drawing, 1s.)

No. 16378.—20th May, 1903.—ALEXANDER GILLIES, of Terang, Viotoria, Dairyman. Improved method of and means for pulsating inflatable teat-cups of pneumatic milking-apparatus.

Claims.-(L) Improved method of pulsating inflatable teat-cups of pneumatic *milking-machines*, consisting in the employment of atmospheric pressure at 'the teat-cup in conjunction with an intermittent suction between the flexible lining and rigid casing and a continuous suction in the interior chamber, substantially as and for the purposes set forth. (2.) Improved means for pulsating inflatable teat-cups of pneumatic milking-apparatus, consisting in an automatic air-inlet valve opening into the annular space between the flexible lining and rigid casing for the intermittent admission of atmospheric pressure in combination with an intermittent-suction pipe at the base of said annular space and a continuous-suction pipe at the base of the inner compartment of the teat-oup, substantially as set forth and illustrated. (3.) In means far pulsating inflatable teat-cups of pneumatic milking-apparatus, a vertically arranged automatic air-inlet valve in the base of the annular space between the flexible lining and rigid casing of said test-cup, substantially as end for the purpose set forth, end as illustrated.

(Specification, 8s. 9d. ; drawing, 1s.)

No. 16379.—20th May, 1903.—WILLIAM HENRY ATKIN, of Auckland, New Zealand, Coachbuilder. Improvements in furnaces causing a larger consumption of carbon and other bodies in smoke, an increased draught, and a reduced consumption of coal or other fuel.

Claims.—(1.) The inwardly sloping perforated bridge fixed as specified, the box beneath said bridge, the baffle-wall built in front of said bridge, the opening made by arch in under-m,,, the furnace-door made to hold gauze or mesh, and gauze and mesh fixed therein, and having *solid* plates fitted outside of said door hinged so that they may be fitted to cover and uncover said gauze or mesh for the purposes set forth, substantially as desoribed and illustrated. (2.) The arrangement, combination, and application of the parts specified with and to furnaces as shown on the drawing, for the purpose set forth, substantially as desoribed.

(Specification, 2s. 3d. ; drawings, 1s.)

No. 16385.—20th May, 1903.—JAMES BROUGH, of 79, Wilson Street, Brunswick, Victoria, Pottery. manager. Improvements in the bottoms of wickered jars or similar vessels.

Claim.—The improvements in the bottoms of wickered jars or similar vessels consisting of a bottom of wood or other material, having around its outer edge a series of radial holes to accommodate the lower ends of the uprights or standards, in combination with cushions above the upper surface of said bottom, all as and for the purposes desoribed, and as illustrated in the drawing.

(Specification, 2s. 3d. ; drawing, 1s.)

No. 16396.—28th May, 1903.—JOHN KERR, of Yering, Victoria, Dairyman. An improved milk cooler or refrigerator.

Claims.-(1.) An improved cooler or refrigerator (convertible into a fluid-heating apparatus by the use of hot water in place of cold water) consisting of the adjustable parts described-namely, a bucket such as A, an sir-tight drum B, and a coil of piping C, with feed-pipe C^1, and discharge-pipe and regulating-tap D. D^1. D^2. to be fitted and adjusted together and used and operating as and in manner described and as illustrated. (2.) An improved butter and edible cooling apparatus consisting of the bucket A, the coil of piping (C, feed-pipe (C^1, and discharge-pipe and regulating-tap D, D^1, D^2. (3.) The combination and arrsngement of the several parts as a cooling and heating appliance, and alternatively as a butter and edible cooling appliance, to be fitted and adjusted together, and used and operating as described.

(Specification, 3s. 6d. ; drawing, 1s.)

NO. 16401.—28th May, 1903.—WILLIAM BOWIE STEVENSON, residing on the property of the Nourse Deep Gold-mining Company (Limited), Witwatersrand Goldfields, Transvaal, Engineer. Improvements in safety gear for mine skips, cages, and the like.

Claims.—(1.) In a safety gear for mine skips, cages, and the like, the oombination with the supporting frame of the angular containing and guiding straps and the dog-wedges, the latter *being* arranged in the straps in such manner that when raised the vertical, serrated, or toothed surfaces move inwards and parallel with the sides of the guides or runners, and means whioh operate to raise said wedges in their containing and guiding straps should the cage or skip become unsuspended, substantially as described. (2.) In a safety gear for mine skips, cages, and the like, in combination, the supporting frame, the containing and guiding straps fitted

thereto and forming angular recesses at the sides of the guides or runners, the dog-wedges or catches arranged in the angular recesses of the containing and guiding straps, and constructed with serrated or toothed vertical gripping-surfaces which move inward and parallel to the guides or runners when raised in the straps, the rods arranged in the supporting frame. the wipers fixed thereon, and the rods pivotally attached at one end to the wipers and at the other end to the wedges or catches for the purpose of raising the wedges or catches in their containing and guiding straps, substantially as and for the purposes described. (3.) A safety gear or mechanism for mine skips, cages, and the like, having its several parts constructed, arranged, and operating for the purposes specified, substantially as described, and illustrated in the drawing.

(Specification, 5s. 6d.; drawing, 1s.)

No. 16403.—28th May, 1903.—BENJAMIN CUSHING MUDGE, of Snow's Falls, Maine, United States of America, Chemist. Improvements in and relating to the manufacture or production of flax-fibre.

Claims.—(1.) Flax-fibre wherein shives, disintegrated and resolved into shive-fibres, are dispersed in the form of shive-fibres through and within the mass of flax-fibre. (2.) The method of rendering flax-fibre free from shives as such which consists in disintegrating the shives whioh are entangled in the flax-fibre and resolving them into their component fibres, said shive-fibres being dispersed through the mass of fibre. (3.) The method of rendering flax-fibre free from shives entangled therein which consists in treating the mass of fibre with a solvent of the cementitious and non-cellular portions of the shives, thus separating the shive-fibres. (4.) The method of rendering flax-fibre free from shives entangled therein whioh consists in treating the mass of fibre with an alkaline solvent of the cementitious and non-cellular portions of the shives, thus separating the shive-fibres. (5.) The method of rendering flax-fibre free from shives entangled therein which consists in treating the mass of fibre with caustic soda, separating the shive-fibres thereby, and bleaching the mass with a solution of chloride of lime and sulphate of magnesia.

(Specification, 10s. 6d.)

No. 16405.—28th May, 1903.—SIDNEY TRIVICK, of 76, Birchanger Road, South Norwood, County of Surrey, England, Chemist and Metallurgist. Process for the manufacture of dry sulphates of the alkali metals and the products thereof.

Claims.—(1.) A process for the production of a dry salt and the product thereof, which is composed of one chemical unit of an oxide of one or more of the alkali metals united with not less than four units of sulphuric anhydride, SO_3, and with not more than three chemical units of H_2O, consisting in adding to concentrated sulphuric acid, H_2SO_4, such a quantity of anhydrous salt or salts of the alkali metal or metals as will contain half as many chemical units of the metal or metals themselves as there will be of sulphur in the mixture, heating the mixture to a temperature not exceeding 250° C., granulating the mass by stirring whilst cooling, and subsequently exposing it to a current of warm dry air. (2.) A process and the product thereof, characterized as described in claim 1, omitting the heating of the mixture by an external source of heat, in which the anhydrous salt added to the H_2SO_4 is that of the metal sodium. (3.) A process and the product thereof, characterized as described in claim 2, in which the anhydrous salt added to the H_2SO_4 is NaCl. (4.) A process and the product thereof, characterized as described in claim 1, in which the anhydrous salt added to the H_2SO_4 is that of the metal potassium. (5.) A process and the product thereof, characterized as described in claim 1, in which to the H_2SO_4 is added a salt of ammonium. (6.) A process and the product thereof, characterized as described in claim 1, in which to the H_2SO_4 is added salts of two or more of the metals sodium, potassium, and ammonium.

(Specification, 5s. 6d.; drawing, 1s.)

No. 16407.—29th May, 1903.—WILHELM CONNSTEIN, of 16, Salzufer, Charlottenburg, Kingdom of Prussia, German Empire, Doctor of Medicine and Director. Process for the manufacture of fatty acids from their esters.

Claims.—(1.) A process of decomposition of esters of fatty acids in fatty acids and alcohols, whereof the main feature is that the esters of fatty acids in a medium of acid reaction are subjected to the action of fat-decomposing ferments of plants. (2.) A process of decomposition of esters of fatty acids in fatty acids and alcohols, whereof the main feature is that the esters of fatty acids are converted into an emulsion, and then, in the presence of acid, subjected to the action of fat-decomposing ferments of plants. (3.) A process of decomposition of esters of fatty acids in fatty acids and alcohols, whereof the main feature is thst the esters of fatty acids are subjected to the action of fat-decomposing ferments of plants in the presence of acid. (4.) A process of decomposition of esters of fatty acids in fatty acids and alcohols, whereof the main feature is that the esters of fatty acids are converted into an emulsion, and then, in the presence of acid salts, subjected to the action of fat-decomposing ferments of plants.

(Specification, 5s. 6d.)

No. 16427.—2nd June, 1903.—HERMAN CHARLES WOLTERECK, of 3, Edinburgh Mansions, Howick Place, Victoria Street, London, England, Consulting Chemist. Process for the production of ammonia by synthesis.

Claims.-(1.) The process for the synthetics1 production of ammonia, consisting in passing sir and steam, heated to a temperature between 300° C. and 400° C., and preferably to about 350° C., over iron or other suitable metal offering a large surface and intimate contact, and preferably heated to the same temperature. (2.) The process for the synthetical production of ammonia, consisting in passing air and steam sod a reducing gas, such as hydrogen or carbon-monoxide or both, heated toe. temperature between 300° C. and 400° C., and preferably to about 350° C., over iron or other suitable metal offering a large surface and intimate contact, and preferably also heated to the same temperature. (3.) Tbe process for the synthetical production of ammonia, consisting in passing air and steam, heated to a temperature between 300° C. and 400° C., and preferably to about 350° C., over iron or other suitable metal offering a large surface and intimate contact, and preferably also heated to the same temperature, and intermittently reducing the oxidized iron or other suitable metal by a reducing gas such as hydrogen or carbon-monoxide or both.

(Specification, 1s. 9d.)

An asterisk (*) denotes the complete specification of an invention for which a provisional specification has been already lodged.

NOTE.—The cost of copying the specification and drawings has been inserted after the notice of each application. An order for a copy or copies should be accompanied by a poet. office order or postal note for the cost of copying.

The date of acceptance of each application is given after the number.

Extracts from the drawings accompanying tbe foregoing complete specifications appear at the end of this *Gazette*.

F. WALDEGRAVE.
Registrar.

Provisional Specifications.

Patent Office,
Wellington, 10th June, 1903.

APPLICATIONS for Letters Patent, with provisional specifications, have been accepted as under:—

No. 16333.—12th May, 1903.—JOHN SHEPHERD, of Invercargill, Southland, New Zealand, Farmer. Improvements in and relating to dredging machinery.

No. 16363. -13th May, 1903. — WILLIAM BEAUMONT, of Wanganui, Wellington, New Zealand. Plumber. Aoombined strainer and aerator for the straining and aerating of milk.

No. 16364.—15th May, 1903.—ROBERT NOBLE ADAMS, of Dunedin, Now Zealand, Publisher. Improvements in and relating to pivots for swinging mirrors and the like.

No. 16365.—15th May, 1903.—STEPHEN BEER, of Kyeburn Diggings, New Zealand, Miner. Improved elevator.

No. 16366.—15th May, 1903.—EDWIN WADMAN, of Dunedin, New Zealand, Clerk; Improvements in and relating to shoe and black-lead brushes.

No. 16380.—22nd May, 1903.—JAMES WREN, of Invercargill, New Zealand, Carpenter. Improvement in screws.

No. 16382.—19th May, 1903.—GEORGE JOSEPH SMITH, of Greymouth, New Zealand, Carpenter, and JAMES SCOTT, of Cobden, New Zealand, Farmer. An improved tin opener and cutter.

No. 16383.—23rd May, 1903.—FREDERICK CHARLES GRIFFITHS, of New Plymouth, New Zealand, Plumber. Improvements in skylights.

No. 16384.—20th May, 1903.—ROBERT THOMSON STEWART, of Waikaia, New Zealand, Mining Engineer. Improved school-slate cleaner.

No. 16386.—26th May, 1903.—JAMES AUGUSTUS BOYD, of 15, Barker Street, Wellington, New Zealand, Painter. Improved potato-cleaner.

No. 16387.—26th May, 1903.—GEORGE RENNER, Journalist, and WILLIAM HENRY BOYENS, Mechanical Engineer, both of Kaikoura, South Marlborough, New Zealand. An improved method of opening and closing swing gates.

No. 16388.—22nd May, 1903.—JOHN SHEARS GRAY, of Auckland, New Zealand, Dealer. A combined luminous rim and hands for watches, clocks, compasses, and suchlike.

No. 16389.—26th May, 1903.—TOBIAS MILLER, Of Masterton, Herbalist, and JOHN FALLOON, of Ballance, Banner, both in New Zealand. An improved composition for the destruction of noxious weeds.

No. 16390.—26th May, 1903.—JOHN NICHOLAS DU FEU, of 281, Colombo Street, Christchurch, Canterbury, New Zealand, Bootmaker. An improved adjustable cushion heel for boots, shoes, and the like.

No. 16391.—27th May, 1903.—JAMES THOMAS KIBBLEWHITE, of Beach Street, Petone, Wellington, New Zealand, Carpenter, and RICHARD WALTON SHORT, of Bay Street, Petone aforesaid, Agent. Improvements in and relating to wheelbarrows.

No. 16393.—28th May, 1903.—RALPH COLLINS, of Midhirst, New Zealand, Farmer. An improved toe-protector for boots and shoes.

No. 16394.—28th May, 1903.—GEORGE SEXTON EVANS, of Bringenbrong Station, Corryong, County of Benambra, Victoria, Station-manage-an An improved ratchet screw-wrench with shifting jaw.

No. 16397.—28th May, 1903.—CHARLES VINCENT POTTER, of 20, Clyde Street, St. Kilda, Victoria, Engineer. An improved acidulated oleaginous solution, and process for mixing same, to be used foe mixing paints, street-sprinkling, and kindred purposes.

No. 16398.—28th May, 1903.—EDWARD THOMAS COX, of Yering, Victoria, Fencer. An improved wood-boring auger.

No. 16406.—27th May, 1903.—FRANCIS JOSEPH MAHONEY, of 6, Eaton Place, Christchurch, New Zealand, Commercial Traveller, and CHRISTIAN CASIMIR, of 15, Angus Street, Sydenham, Christchurch aforesaid, Tutor. An oil-gas incandescent lamp.

No. 16408.—26th May, 1903.—ANDREW GORDON FRENCH, of Williamson Avenue, Grey Lynn, Auckland, New Zealand, Chemist. The utilisation of the bark of New Zealand ti-tree for tanning purposes, and the preparation of tanning substances therefrom.

No. 16410.—29th May, 1903.—GEORGE CHRISTOPHER CLARKE, of Hastings, Hawke's Bay, New Zealand, Settler. Improved means for twisting and straining wires, and for retaining them in the twisted and strained condition.

No. 16411.—26th May, 1903.—JOSEPH GORDON SCOULLAR, of 5, Maitland Street, Dunedin, New Zealand, Journalist. A collapsible crate for rabbits or game.

No. 16412.—27th May, 1903.—JOSIAH WORSNOP, of Wellington Street, Auckland, New Zealand, Grocer. An improved hose-pipe coupling.

No. 16413.—27th May, 1903.—ARCHIBALD VASSAL HALE MONRO, Master Mariner, and HENRY GEORGE WILLIAM LAWRENCE NOY, Engineer, both of Dunedin, New Zealand. A safety grip-block.

No. 16418.—29th May, 1903.—ADOLPH FREDERICK WILLIAM LORIE, of Princes Street, Dunedin, New Zealand, Gentleman. Improvements in sash-fasteners.

No. 16419.—27th May, 1903.—IRVINE HURST, of Oamaru, New Zealand, Shipwright. Fire-escape.

No. 16421.—1st June, 1903.—ROBERT GRIERSON DOYLE, of Doyleston, Canterbury, New Zealand, Farmer. An improved device for preventing a cow from kicking whilst being milked.

No. 16422.—1st June, 1903.—JOHN CHARLES MORGAN, of Mangamahu, Wellington, New Zealand, Blacksmith. An improved attachment for fastening covers upon animals.

No. 16426.—2nd June, 1903.—JOHN CROTHERS, of Parker Street, Perth, Western Australia, Contractor. Ferro-granolithic composition for pavements and suchlike constructions.

No. 16429.—2nd June, 1903.—ANNIE ELIZABETH JENSEN, of Warwick Street, Feilding, New Zealand, Lady. An improved wire-fastener.

No. 16430.—2nd June, 1903.—ANNIE ELIZABETH JENSEN, of Warwick Street, Feilding, New Zealand, Lady. An improved wire "lip.

No. 16431.—2nd June, 1903.—FREDERICK BUTTERICK, of Wakanui, Ashburton, Now Zealand, Farmer. Improvements in the cutting mechanism of reaping-machines.

No. 16432.—4th June, 1903.—HENRY ASHWORTH, of Wadestown, Wellington, New Zealand, Engineer. A new or improved menu-holder.

No. 16434.—4th June, 1903.—HENRY COE, of Greymouth, New Zealand, Gardener. An appliance for holding nails or tacks while being driven.

No. 16436.—4th June, 1903.—GEORGE WILLIAM REMMANT, of Manutahi, near Patea, New Zealand, Farmer. An improved potato-plough.

No. 16437.—4th June, 1903.—SOREN JOHN WICKMAN, of 13, Cambridge Street, Hawthorn, new Melbourne, Victoria, Laundryman. An improved laundry-stove.

No. 16438.—5th June, 1903.—SAMUEL EDWARD DENNISON, of Avenal, near Invercargill, New Zealand, Engineer. An improved fastener for luggage-labels and the like.

No. 16439.—1st June, 1903.—ROBERT BAXTER, of Union Street, Milton, Otago, New Zealand, Practical Woollen Mechanical) Expert. Improved oil-emulsion.

No. 16440.—5th June, 1903.—CHARLES BRISTOW, "f Macauley Street, Addington, Christchurch, New Zealand, Mechanical Export. Butter-sizer.

No. 16441.—6th June, 1903.—ARTHUR P. MASTERS, of 8, Cambridge Terrace, Wellington, New Zealand. An improved ventilator to be attached to upper sash of windows.

NOTE.—Provisional specifications cannot be inspected, or their contents made known by this office in any way, until the complete specifications in connection therewith have been accepted.

The date of acceptance of each application is given after the number.

F. WALDEGRAVE,
Registrar.

Letters Patent sealed.

LIST of Letters Patent sealed from the 28th May to 10th June, 1903, inclusive :—

No. 14569.—A. Sutherland, wire-strainer.
No. 14590.—J. Pomeroy, sheep-sham
No. 14625.—W. M. Bartle, flushing water-closet.
No. 14627.—M. Zobel, gold-extraction.
No. 14677. F. Cooper, spring-tine cultivator.
No. 15251.—E. T. R. Coates, J. G. Coates, and W. K. Elder, trenching-plough.
No. 15299.—W. Harvey, milk-straining pan.
No. 15336.-A. F. Davis, detachable boot, &c., heel M. L. Hansen).
No. 15808.—M. Bjornstad and J. Stacey, medicated sweetmeat.
No. 15968.—E. S. Baldwin and H. H. Rayward, sewage-distributor (G. E. Ridgway).
No. 15971.—W. C. H. Hudson, r&bit-trap.
No. 16030.—R. Le P. Trench, hydrant-valve.
No. 16044.—E. Waters, jun., microtelephone (E. Volkers).
No. 16071.--H. A. Penrose, bottle filling sod sealing machine (E. D. Schmitt).

F. WALDEGRAVE,
Registrar.

Letters Patent on which Fees have been paid.

[NOTE.—The dates are those of the payments.]

SECOND-TERM FEES.

NO. 11664.—C. C. Worthington, steam-engine. 30th May, 1903.
No. 11694.—A. M. Linney, pneumatic-tire air-tube. 2nd June, 1903.
No. 11703.—J. Fender, motor. 4th June, 1903.
No. 11705. J. F. Stephenson, bedstead. 4th June, 1903.
No. 11714.—A. F. Ridland, obtaining auriferous material from river-beds. 6th June, 1903.
No. 11798.—The Whitecross Company (Limited), wire-fence dropper (J. W. Manchee). 2nd June, 1903.
No. 12164.--R. Diesel, internal-combustion engine. 27th May, 1903.

THIRD-TERM FEES.

No. 8578.—W. McPherson, watertight hatch-""wring, 8th June, 1903.
No. 8707.-H. Morrison, breaking up surfaces of roads. 8th June, 1903.

F. WALDEGRAVE,
Registrar.

Subsequent Proprietors of Letters Patent registered.

[NOTE.—The name of the patentee is given in brackets; the date is that of registration.]

NO. 13830.—Alexander Macfarlane, of Scarborough, New Zealand, Farmer, and David Petrie Davidson. of Pahiatua, New Zealand, Engineer. Weighing milk. [M. N. Olson.] 5th June, 1903.
No. 14099.—The Tonson Garlick Company, Limited, registered as proprietors for the North Island of New Zealand). Coiler for wire-weaving machine. [W. Bills.] 27th May, 1903.
No. 14774.—Pumice Filter Tobacco-pipe Company, Limited, of Wanganui, New Zealand. Tobacco-pipe. [E. T. and T. S. Towgood end J. Allison.] 6th June, 1903.

F. WALDEGRAVE,
Registrar.

Insertion of Address of Part Proprietor of Letters Patent in the Register.

NO. 14099.—Tonson Garlick Company, Limited (W. Bills), coiler for wire-weaving machine. To add after the name of the company, "304 to 312, Queen Street, City of Auckland, Furnishing Warehousemen."

F. WALDEGRAVE,
Registrar.

Applications for Letters Patent abandoned.

LIST of applications for Letters Patent (with provisional specifications only) which have been abandoned from the 28th May to the 10th June, 1903, inclusive:—

No. 15186.—H. Donkin, collapsible butter-box.
No. 15187.—F. Simpson, attachment to screw-cutting lathe.
No. 161$1.--N. C. Innes, running out barb-mire.
No. 15192.—G. George, bottle.
No. 15193.—A. Underwood, game.
No. 15194.--c. M. Robertson, preparation for hair.
No. 15195.—D. Thompson, moth, &c., trap.
No. 15197.—F. Henderson, gold-saving screen.
No. 15198.—H. F. Stewart, wire-strainer.
No. 15200.—A. W. A. Barnard and W. G. Reid, secateur.
No. 15214.-G. Croxford, lead-heeded nail.
No. 15216.—H. W. C. Avenal, stave-flue.
No. 15217.--P. J. Gossling, hairdressers' rack, &c.
No. 15218.—H. H. Gaudin and J. J. Whitley, acetylene--lamp.
No. 15219.—W. H. Atkin, smoke-consumer, &c.
No. 15221.—D. Wilson, acetylene-generator.
No. 15224.—J. H. Powell, indoor game.
No. 15227.—A. *Douglas, candlestick.*
No. 15231.—E. Collins, hedge-clipper.
No. 15235.—M. Earle, knife-cleaner.
No. 15237.—R. Williams, billiard-scorer.
No. 15238.—F. Lambert, tension bridge.
No. 15240.—F. Lambert, ship-canal.
No. 15243.—R. Dunne, mitre-cutting machine.

F. WALDEGRAVE,
Registrar.

Letters Patent lapsed.

LIST of applications for Letters Patent (with which complete specifications have been lodged) lapsed from the 28th May to the 10th June, 1903, inclusive:—

No. 14310.—F. W. Payne, driving dredge, &c., machinery.
No. 14313.—C. A. Loader, sprayer.

F. WALDEGRAVE,
Registrar.

Letters Patent void.

LIST of Letters Patent void through non-payment of renewal fees from the 28th May to 10th June, 1903, inclusive:—

THROUGH NON-PAYMENT OF SECOND-TERM FEES.

No. 11387.-W. Withers, fire-screen.
No. 11*09.-W. Cutten, suction elevator.
No. 11412.—J. L. Ferrell, wood, &c., preservative.
No. 11413.-T. H. Kelly, G. W. Boll, and R. N. Kirk, explosive (W. 0. Quinby).
No. 11416.—The Fish, Oil, and Guano Company, Limited, oil-extraction (J. C. W. Stanley and the Fish, Oil, and Guano Company, Limited).
No. 11418.-G. Barthel, 0. Henckels, and W. De Haas, hydrocarbon-burner.
No. 11424.—The General Liquid Air and Refrigerating Company, refrigerating fluid or gas (O. P. Ostergren and M. Burger).
No. 11427.—W. Angus, hydraulic ram.
No. 11428.—R. Stevens, preventing foot being caught in railway-points.
No. 11434.--P. E. Malmstrom and 0. W. Ackerman carbonating liquids.

THROUGH NON-PAYMENT OF THIRD-TERM FEES.

No. 8314.--J. Manttan, venetian-blind.
No. 8317.—A. L. Bricknell, bicycle.
No. 8326.—The Tubeless Pneumatic Tire and Capon Heaton, Limited, pneumatic tire (Fleuss Pneumatic Tire Syndicate, Limited).
No. 8327.—F. E. Hunter, box iron.

F. WALDEGRAVE,
Registrar.

Design registered.

DESIGN has been registered in the following name on the date mentioned:—

No. 182.—Charles William Fisher, of Christchurch, Canterbury, New Zealand, Commission Agent. Class 2. 8th June, 1903.

F. WALDEGRAVE,
Registrar.

Applications for Registration of Trade Marks.

Patent Office,
Wellington, 10th June, 1903.

APPLICATIONS for registration of the following trade marks have been received. Notice of opposition to the registration of any of these applications may be lodged at this office within two months of the date of this *Gazette*. Such notice must be in duplicate, and accompanied by a fee of £1.

No. of application: 4153.
Date: 3rd April, 1903.

TRADE MARK

The word

KURAPEPTIC,

NAME.

REGINALD ALBERT DUTTON, of View Road, Mount Eden Auckland, New Zealand.

No. of class: 3.

Description of goods: Patent medicines.

No. of application: 4206.
Date: 20th May, 1903.

TRADE MARK.

NAME.

LEVER BROS., LIMITED, of Balmain, State of New South Wales, Commonwealth of Australia, Soap-manufacturers.

No. of class: 47.

Description of goods: Common or laundry soap, washing-powders, detergents, and other preparations for laundry purposes, and lubricating-oils.

No. of application: 4207.
Date: 20th May, 1903.

TRADE MARK.

The essential particulars of this trade mark are (1) the combination of devices, (2) the word "Plantol"; and any right to the exclusive use of the added matter is disclaimed.

NAME.

LEVER BROS., LIMITED, of Balmain, State of New South Wales, Commonwealth of Australia, Soap-manufacturers.

No. of class: 48.
Description of goods: Perfumed soap.

No. of application: 4209.
Date: 21st May, 1903.

TRADE MARK.

The words

"THE CONTEST."

NAME.

JOHN WILLIAM COPITHORNE, of 19B, Ingestre Street, Wellington, New Zealand.

No. of class: 9.
Description of goods: Bend musical instruments.

NAME.

HERBERT WILLIAM DE BAUGH, of Auckland, New Zealand, Commercial Traveller.

No. of class: 6.
Description of goods: Steaming-appliances.

No. of application: 4211.
Date: 22nd May, 1903.

TRADE MARK.

The words

NEW CENTURY.

No. of application: 4212.
Date: 26th May, 1903.

TRADE MARK.

The word

TUBERCULETTE.

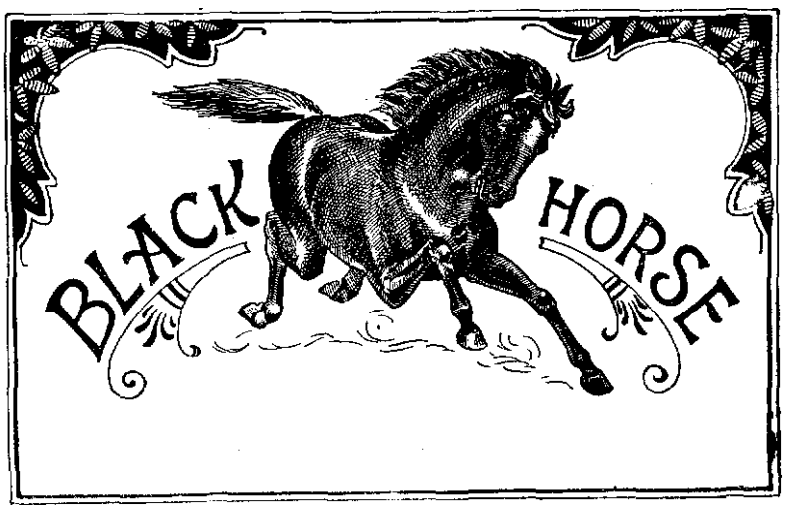
NAME.

PETER DUTTON, of View Road, Mount Eden, Auckland, New Zealand, Chemist.

No. of class: 3.
Description of goods: Chemical substances prepared for use in medicine and pharmacy.

No. of application: 4213
Date: 27th May, 1903.

TRADE MARK.



NAME.

JOHN HALL AND CO., LIMITED, of 104, Manchester Street, Christchurch, New Zealand.

No. of class: 42.
Description of goods: Butter, and all kinds of dairy produce; and all articles of food, except salt.

No. of application: 4214.
Date: 28th May, 1903.

TRADE MARK.

NAME.

FREDERICK MURRAY LINLEY, of Castle Hill, Castlemaine, in the State of Victoria, Commonwealth of Australia, Commercial Traveller.

No. of class: 38.
Description of goods: Shirts, collars, or cuffs, and shirt waists, blouses, and pyjamas.

No. of application: 4215.
Date: 30th May, 1903.

TRADE MARK.

ARROW.

NAME.

REGINALD ALBERT AND EMILY DUTTON, of View Road, Mount Eden, Auckland, New Zealand.

No. of class: 3.
Description of goods: Medicinal preparations.

No. of application: 4216.
Date: 2nd June, 1903.

TRADE MARK.

The words

DR. FOSTERS.

The applicants claim that the said trade mark has been in use by them and their predecessors in business in respect of the articles mentioned for twenty-seven years.

NAME.

A. M. BICKFORD AND SONS, LIMITED, whose registered office is at Currie Street, Adelaide, in the State of South Australia, Commonwealth of Australia, Wholesale Druggists.

No. of class: 3.
Description of goods: *Chemical substances prepared for* use in medicine and pharmacy.

No. of application: 4219.
Date: 4th June, 1903.

TRADE MARK.

The essential particular of the trade mark is the device of two concentric ovals enclosing the name "J. M. Mallo"; and any right to the exclusive use of the added matter is disclaimed.

The applicants claim that the said trade mark has been in use by them and their predecessors in business in respect of the article mentioned for five years prior to the 2nd day of September, 1889.

NAME.

RENARD LORIMER AND Co., of No. 11, St. James's Buildings Little Collins Street, Melbourne, in the State of Victoria Commonwealth of Australia, Merchants.

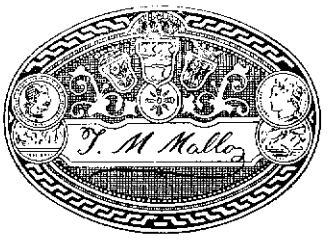
No. of class: 45.

Description of goods: Cigars.

No. of application: 4220.

Date: 4th June, 1903.

TRADE MARK.



The essential particulars of the trade mark are the fac simile signature and the combination of devices forming the distinctive label; and any right to the exclusive use of the added matter is disclaimed.

The applicants claim that the said trade mark has been in use by them and their predecessors in business in respect of the article mentioned for five years prior to the 2nd day of September, 1889.

NAME.

RENARD LORIMER AND co., of No. 11, St. James's Buildings Little Collins Street, Melbourne, in the Stats of Victoria Commonwealth of Australia, Merchants.

No. of class: 45.

Description of goods: Cigars.

No. of application: 4222.

Date: 5th June, 1903.

TRADE MARK

The word

LISTERINE

NAME.

LAMBERT PHARMACAL COMPANY, a Missouri corporation having its principal place of business at the City of St Louis, Missouri, United States of America.

No. of class: 2.

Description of goods: Medical antiseptic preparation.

No. of application: 4223.

Date: 5th June, 1903.

TRADE MARK.

The essential particulars of this trade mark are the combination of devices and the word "Rapiti"; and any right to the exclusive use of the added matter is disclaimed.

NAME.

SARGOOD, SON, AND EWEN, New Zealand.

No. of class: 38.

Description of goods: Hats.

No. of application: 4224.

Date: 5th June, 1903.

TRADE MARK.

The word

AVON.

The applicants claim that the said trade mark has been in use by them and their predecessors in business in respect of the articles mentioned for upwards of twenty years past.

NAME.

JOHN LYSAGHT, LIMITED, of St. Vincent Ironworks, Bristol, in England, Iron Manufacturers and Galvanisers.

No. of class: 5.

Description of goods: Galvanised iron and wire, fencing-wire, sheet iron, plate iron, bar iron, and boiler-plates.

No. of application: 4225.

Date: 5th June, 1903.

TRADE MARK.

NAME.
GEORGE MCINTOSH SCOTT, of Moray Place, Dunedin, New Zealand.

NO. of ohs: 18.
Description of goods : Mantlepieces.

No. of application : 4227.
Date : 8th June, 1903.

TRADE MARK.
The word
CADETS.

NAME.
S. ROSMAN, of Box 275, Post-office, Christchurch, New Zealand.

No. of class : 45.
Description of goods : Tobacco, cigars, cigarettes, and snuff.

No. of application : 4228
Date : 8th June, 1903.

TRADE MARK.
The word
ELECTRIC.

NAME.
S. ROSMAN, of Box 276, Post-office, Christchurch, New Zealand.

No. of class : 45.
Description of goods : Tobacco, cigars, cigarettes, and snuff.

F. WALDEGRAVE,
Registrar.

Trade Marks registered.

LIST of Trade Marks registered from the 28th May to the 10th June, 1903, inclusive :—

No. 3208; 3930-D. Nield. Class 50. (*Gazette* No. 13, of the 19th February, 1903.)

No. 3209 ; 4120. -The Bone Phosphate and Chemical Company, Limited. Class 2. (*Gazette* No. 21, of the 19th March, 1903.)

No. 3210 ; 3855.-P. Dutton. Class 3. (*Gazette* No. 60, of the 24th July, 1902.)

No. 3211 ; 3914.-P. Dutton. Class 3. (*Gazette* No. 71, of the 4th September, 1902.)

No. 3212; 4111.—Lever Bros., Limited. Class 47. (*Gazette* No. 21, of the 19th March, 1903.)

No. 3213 ; 4108.—Jameson, Anderson, and Co. Class 47. (*Gazette* No. 21, of the 19th March, 1903.)

No. 3214 ; 4109.—W. Thomas. Class 8. (*Gazette* No. 21, Of the 19th March, 1903.)

No. 3215 ; 4112.—The Compressed (whole leaf) Tea Syndicate, Limited. Class 42. (*Gazette* No. 21, of the 19th March. 1903.1

No. 3216; 4113.—Standard Varnish-works. Class 1. (*Gazette* No. 21, of the 19th March, 1903.)

No. 3211; 3289.—Havana Commercial Company. Class 45. (*Gazette* No. 18, of the 5th March, 1903.)

No. 3218; 4002.—I. P. Clarke and 00. Ohs 23. (*Gazette* No. 21, of the 19th March, 1903.)

No. 3219; 4040.—Waldberg and Co., Limited. Class 8. (*Gazette* No. 21, of the 19th March, 1903.)

No. 3220; 4054.—Glynn and Co. Class 38. (*Gazette* No. 18, of the 5th March, 1903.)

No. 3221; 4080.—La Société des Propriétaires Vinicoles de Cognac. Class 43. (*Gazette* No. 21, of the 19th March, 1903.)

No. 3223; 4098.—Booth's Distillery, Limited. Class 43. (*Gazette* No. 18, of the 5th March. 1903.)

No. 3223 ; 4099.—Breitenburger Portland Cement Fabrik. Class 17. (*Gazette* No. 21, of the 19th March, 1903.)

No. 3224; 4104.—Sir I. Pitman and Sons, Limited. Class 39. (*Gazette* No. 18, of the 5th March, 1903.)

No. 3225 ; 4105. —Continental Caoutchouc und Gutta-percha Compagnie. Class 40. (*Gazette* No. 18, of the 5th March, 1903.)

No. 3226; 4114.J. L. Grossmith. Class 43. (*Gazette* No. 21, of the 19th March, 1903.)

No. 3227 4115.--J. L. Grossmith. Class 48. (*Gazette* No. 21, of the 19th March, 1908.)

No. 3228; 4116.—J. L. Grossmith. Class 48. (*Gazette* No. 21, of the 19th March, 1903.)

No. 3229 ; 4121.—De Roubaix, Oedenkoven, and Co. Class 47. (*Gazette* No. 21, of the 19th March, 1903.)

No. 3230 ; 4124.---A. Frankau and Co, Limited. Class 50. (Gazette No. 21, of the 19th March, 1903.)

No. 3231; 4102.—The Imperial Leather-preserving Company. Class 50. (*Gazette* No. 25, of the 2nd April, 1903.)

No. 3232; 4126.—Thos. Collier and Co. (Fore&n), Limited. Class 38. (*Gazette* No. 25, of the 2nd April, 1903.)

No. 3933 ; 4127.—Thos. Collier and Do. (Foreign), Limited. Class 50. (*Gazette* No. 25. of the 2nd April 1903.)

No. 3234; 4128.—Thos. Collier and Co. (Foreign), Limited. Class 40. (*Gazette* No. 25, of the 2nd April, 1903.)

No. 3935 ; 4129.—Thos. Collier and Do. (Foreign), Limited. Class 38. (*Gazette* No. 25, of the 2nd April, 1903.)

No. 3836 ; 4130.—Thos. Collier and Co. (Foreign), Limited. Class 33. (Gazette No. 25, of the 2nd April 1903.)

No. 3237 ; 4131.—Thos. Collier and Do. (Foreign), Limited. Class 26. (*Gazette* No. 25, of the 2nd April, 1903.)

No. 3238 ; 4132.—Thos. Collier and Do. (Foreign), Limited. Class 23. (*Gazette* No. 25, of the 2nd April. 1903.)

No. 3239; 4133.—Thos. Collier and Co. (Foreign), Limited. Class 13. (*Gazette* No. 25, of the 2nd April, 1903.)

No. 3240 ; 4134.—Thos. Collier and Co. (Foreign), Limited. Class 14. (*Gazette* No. 25, of the 2nd April, 1903.)

No. 3241 ; 4135.—Thos. Collier and Co. (Foreign), Limited. Class 32. (*Gazette* No. 25, of the 2nd April, 1903.)

NO. 3242 ; 4137.—Thos. Collier and Co. (*Foreign*), Limited. Class 30. (*Gazette* No. 25, of the 2nd April, 1903.)

No. 3243; 4138.—Thos. Collier and Co. (Foreign), Limited. Class 24. (*Gazette* No. 25, of the 2nd April, 19.03.)

No. 3244 ; 4139.—Thos. Collier and Co. (Foreign), Limited. Class 25. (*Gazette* No. 25, of the 2nd April, 1903.)

F. WALDEGRAVE,
Registrar.

Subsequent Proprietors of Trade Marks registered.

[NOTE.—The name of the former proprietor is given in brackets ; the date is that of registration.]

NO. 1947/1594.—The British-American Tobacco Company, Limited, of 45, York Street, Sydney, New South Wales. [The National Cigarette Company of Australasia Proprietary, Limited.] 1st June, 1903.

No. 3043/2404.
No. 3044/2405.
No. 3046/2406.
W. Plowman and Sons, of Battery and Shakespeare Roads, Napier, New Zealand, Bottlers, Spice-grinders, and Cordial-makers. [Gifford, Plowman, and Co.] 1st June, 1903.

F. WALDEGRAVE,
Registrar.

Trade Mark Renewal Fees paid.

FEES paid for renewal of undermentioned Trade Marks for fourteen years from the 1st January, 1890 :—

No. 88/1895.—The Salt Union, Limited, of London, England. [Two trade marks.] 4th June, 1903.

No. 88/3936. — Alexander Ferguson and Do., of Glasgow, Scotland. 27th May, 1903.

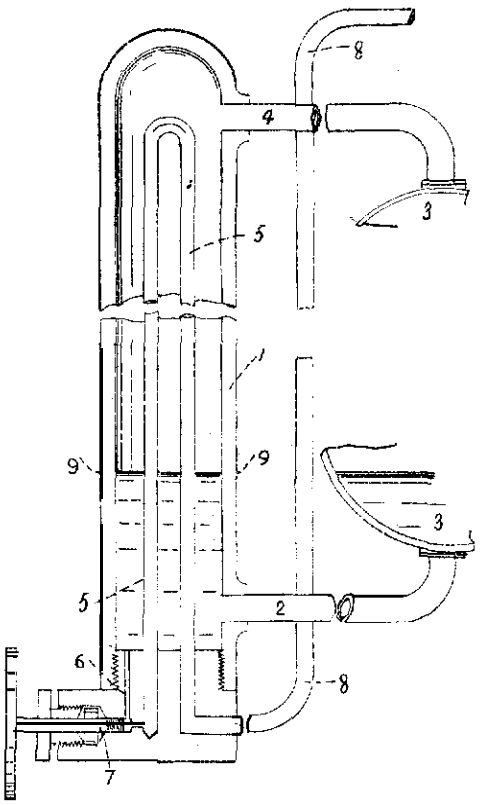
No. 89/781.—Lever Bros., Limited, of Balmain and Sydney, New South Wales. 2nd June, 1903.

F. WALDEGRAVE,
Registrar.

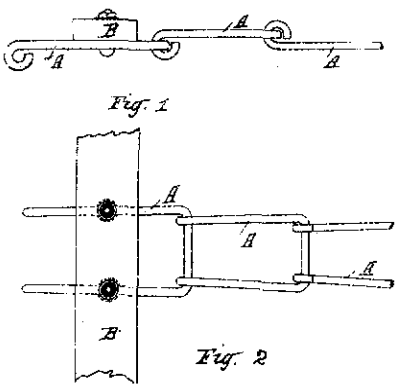
By Authority: JOHN MACKAY, Government Printer, Wellington.

ILLUSTRATIONS OF INVENTIONS.

[These illustrations refer to the complete specifications accepted, and advertised in this *Gazette*.]



14830
Smaill. Liquid-register for Refrigerator.



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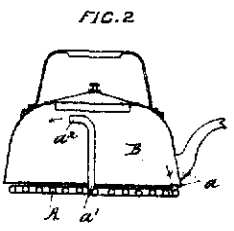
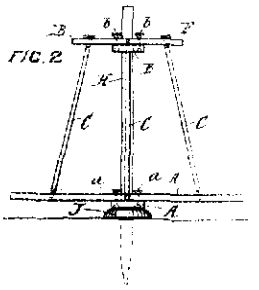
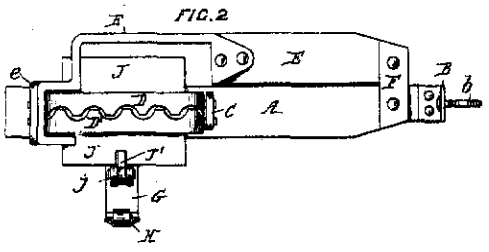
Holland. Threshing-elevator Chain.



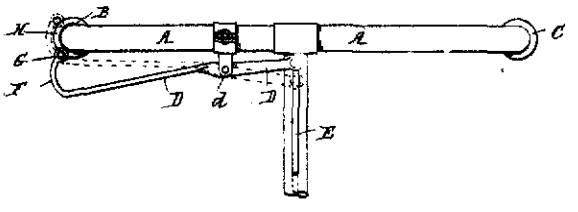
15141
Brown. Fluid-heater.



15065
McIlwraith. Wire-uncoiler.



15370
Campbell. Animal-trap.



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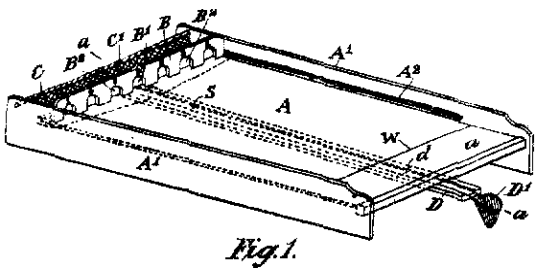
Humphreys. Cycle-brake.



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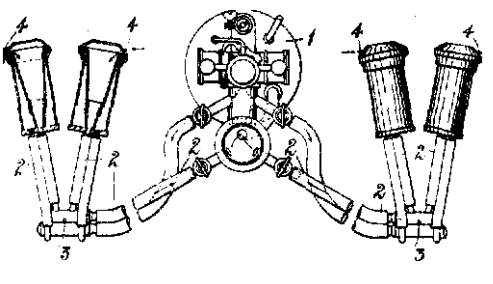
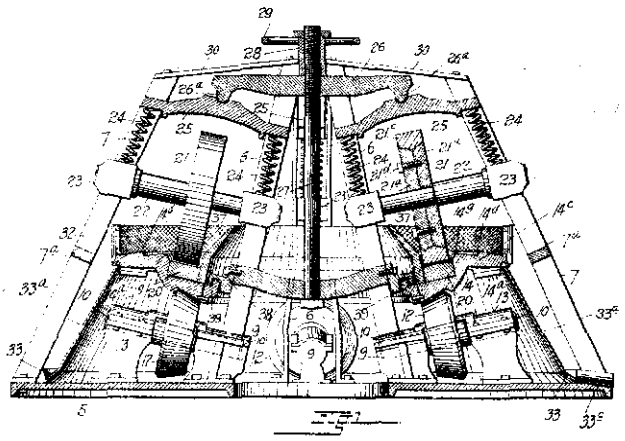
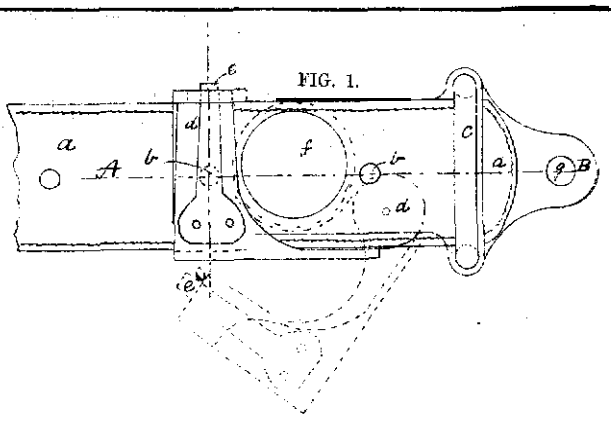
Gwillim. Indoor Game.



16022
Gillies. Milking-apparatus.



16268
The Elspass Roller Quartz-mill and Manufacturing Co.
Pulverising-mill. (Elspass).



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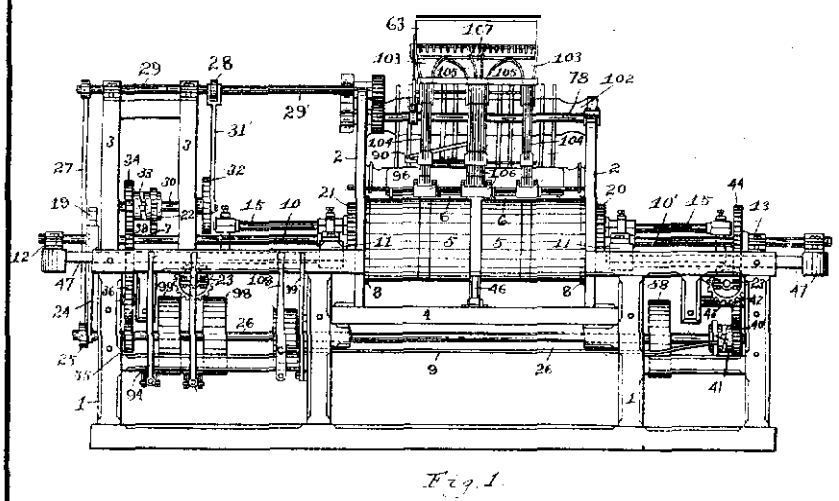
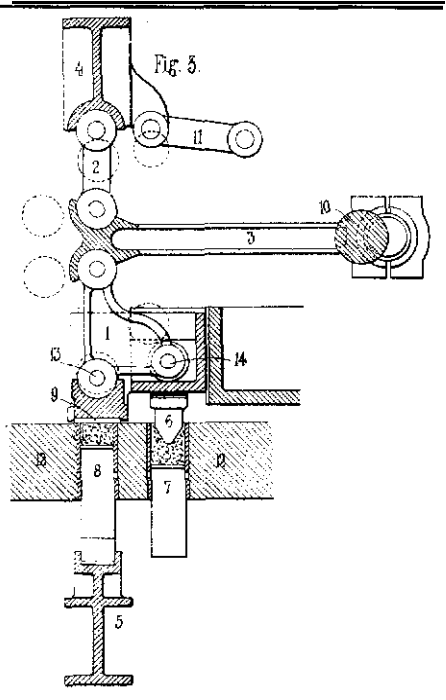
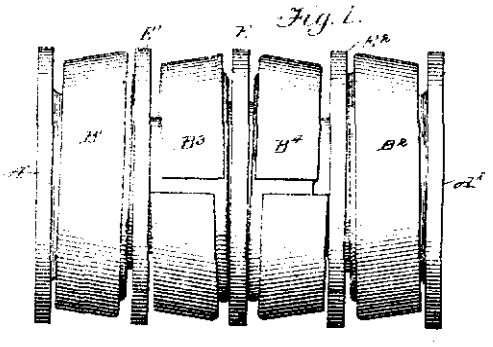
Durand. Trace-fastening.



16256
Chamberlain and Stout. Box-making Machine.



16336
Sutcliffe, Speakman, and Co. and Sutcliffe.
Lime-sand Brick.



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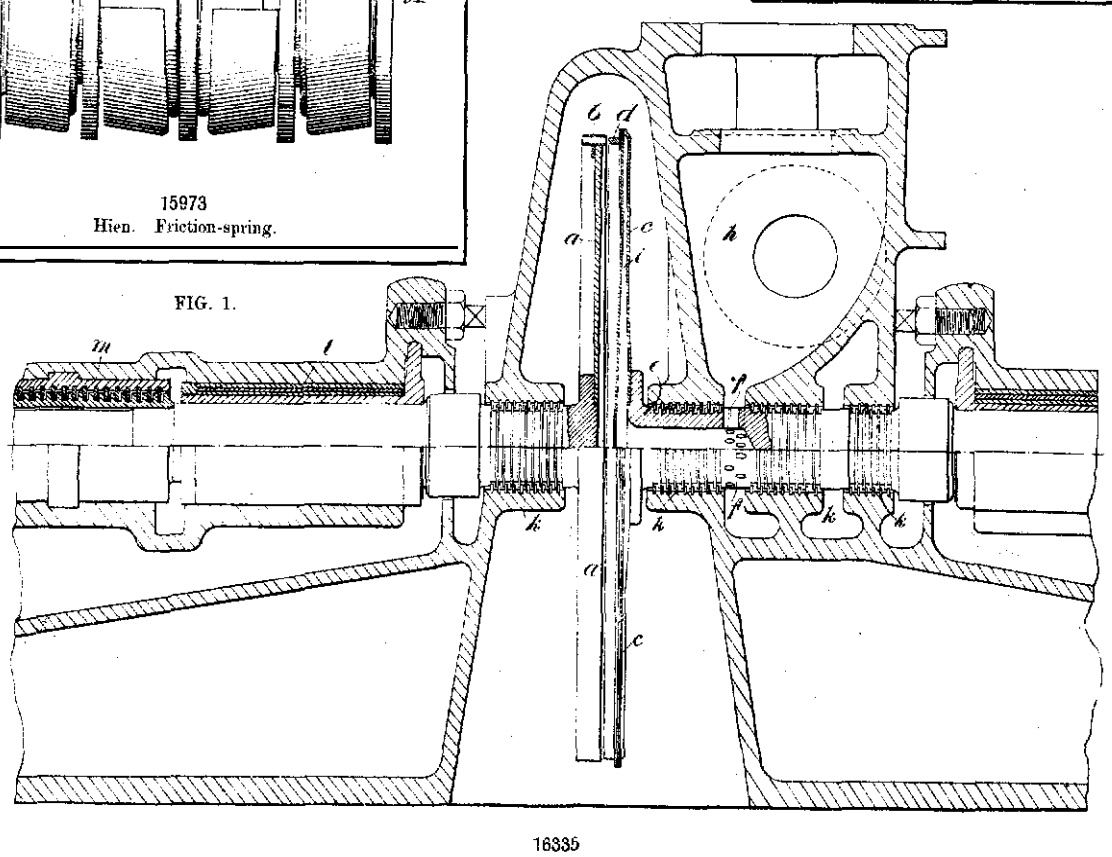
Hien. Friction-spring.



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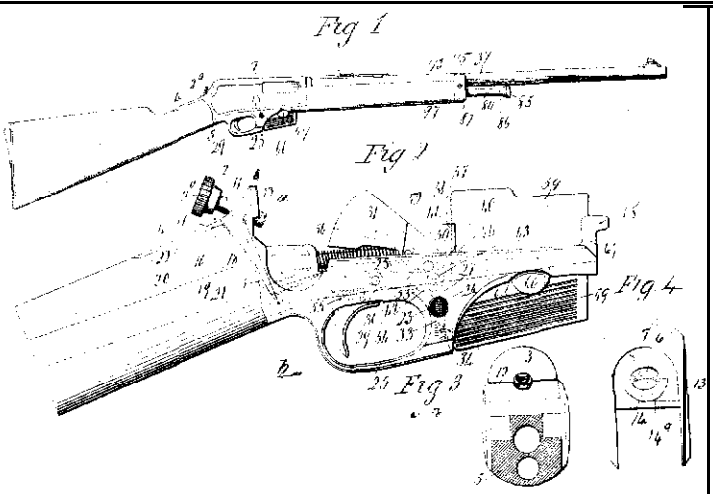
Parsons. Steam-turbine.



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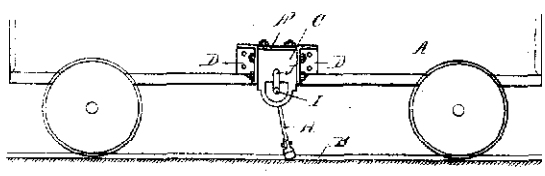
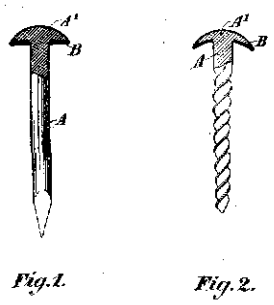
Winchester Repeating Arms Co. Firearms. (Johnson.)



16347
Jerrard. Tram-rail Cleaner.



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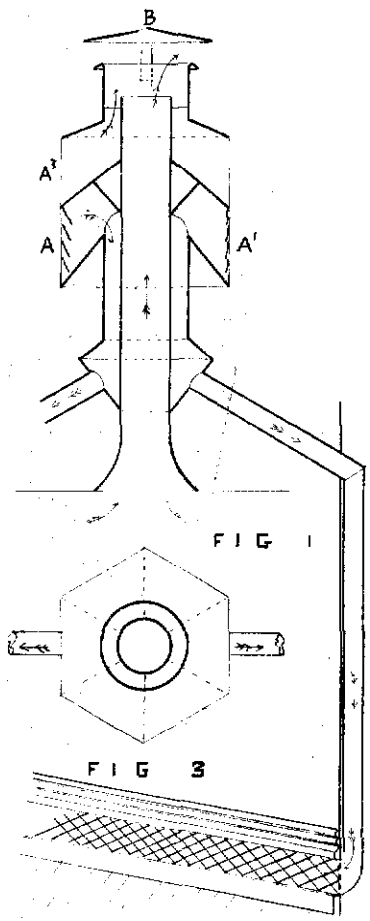
Dunn. Nail. (Davies.)



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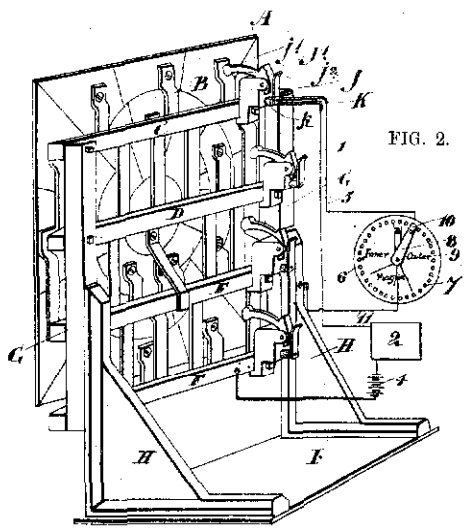
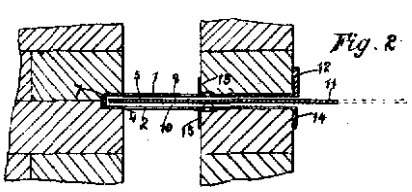
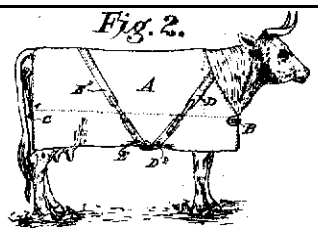
Ross. Ventilator.



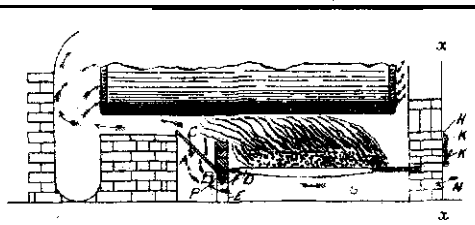
16362
Peters. Self-registering Target.



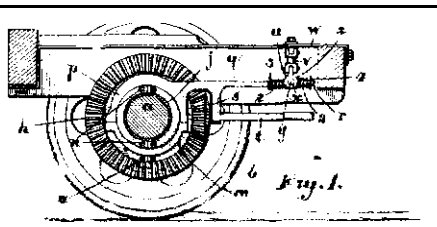
16373
Madder. Damper-frame.



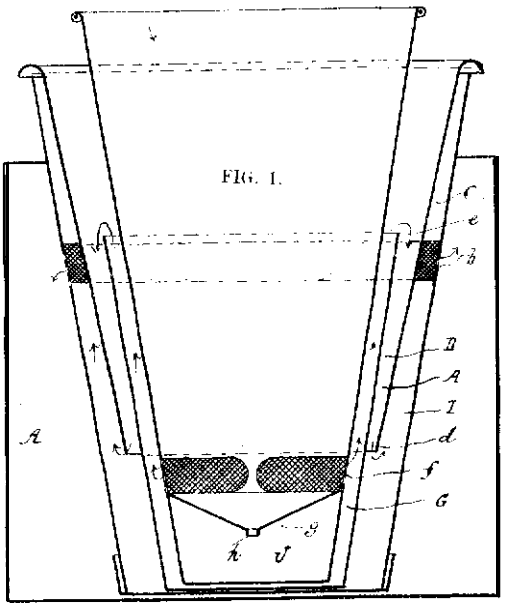
16369
Oaten. Animal-rug Fastener.



16379
Atkin. Steam-boiler Furnace.



16350
Deutsch and Fetherstonhaugh. Power-transmitter.



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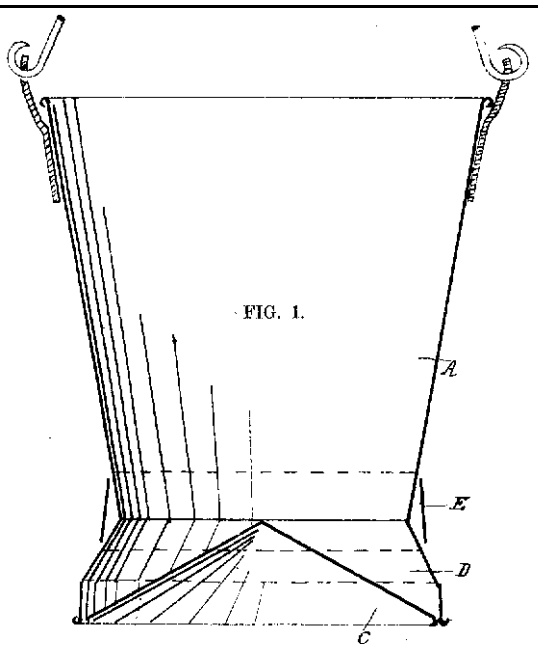
Kerr. Milk-strainer.



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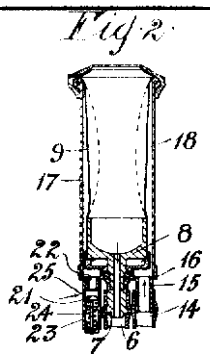
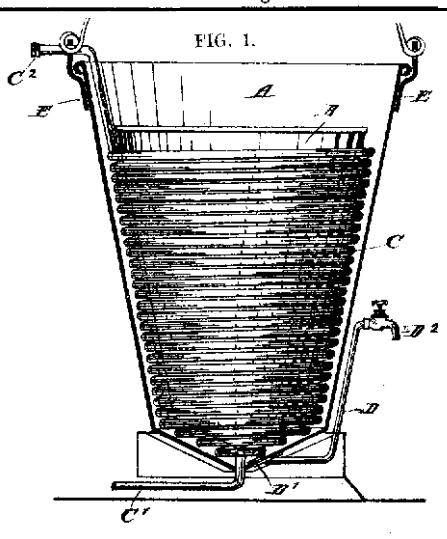
Kerr. Milking-bucket.



16378
Gillies. Milking-apparatus



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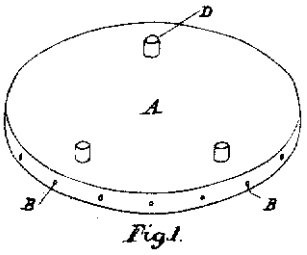
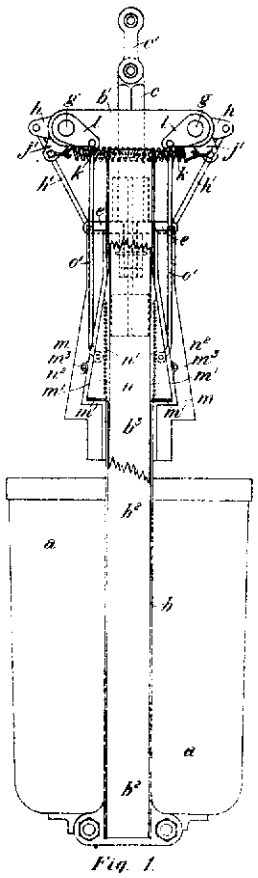
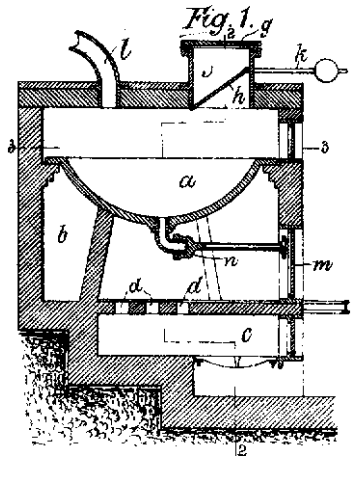
Kerr. Milk-cooler.



16385
Brough. Wickered-jar Bottom.



16401
Stevenson. Safety-gear for Cage, &c.



16405
Trivick. Dry Alkali Metal Sulphates.