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CONTENTS.

Notice of Acceptance of Complete Specifications.

Patent Office,
Wellington, 6th January, 1904.

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.

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No. 15543.—23rd October, 1902.—RICHARD BOXALL, of Warren Street, Brisbane, Queensland, Engineer, and ARTHUR ANTHONY ROBINSON, of Moorooka, Queensland, Manufacturer. Tinning and printing machine for butter and other analogous substances.*

Claims.—(1.) In a tinning and printing machine for butter and other analogous substances, the combination of a travelling screw such as B with a bevelled cog wheel such as E, ratchet wheel such as E^1, said ratchet wheel operated by pawls T and T^1 connected to a lever-arm such as S and crank such as R, driven by a crank from propelling-shaft L, as described, and illustrated by drawings. (2.) In a tinning and printing machine for butter and other analogous substances, the combination of a travelling screw such as B in combination with a bevelled cog wheel such as E, mitre wheel such as G, and hand-wheel such as H, as and for the purpose set forth and as described, and illustrated by drawings. (3.) In a tinning and printing machine for butter and other analogous substances, the combination of an axle supported in bearings with a tin carrier such as *j*, a lever-arm such as *g*, a ratchet wheel such as *h* engaging with pawl such as *m* operated by connecting-rod such as *l* by disc crank such as N on propelling-shaft, as and for the purpose set forth and as described, and illustrated by drawings. (4.) In a tinning and printing machine for butter and other analogous substances, a knife-frame such as *b* moving against the face plate in the arc of a circle, in combination with a disc crank such as N fixed on propelling-shaft, as and for the purpose set forth and as described, and illustrated by drawings. (5.) In a tinning and printing machine for butter and other analogous substances, a spindle such as *q* in combination with a sleeve such as q^1 having teeth articulating with the teeth on collar such as q^3, and provided with disc such as q^4 and a spring such as *r*, as and for the purpose set forth

and as described, and illustrated by drawings. (6.) The combination and arrangement of parts forming the tinning and printing machine for butter and other analogous substances as described, and illustrated by drawings.
(Specification, 6s. 6d.; drawings, 5s.)

No. 15837.—5th January, 1903.—JOHN EDWIN PALMER, of Otokia (postal address: Box 164, Dunedin Post-office), New Zealand, Gentleman. An improved branding-compound.*

Claims.—(1.) A branding-composition consisting of a sulph-metallic compound of the copper or arsenic groups in combination with an alkali, incorporated with glycerine to form a homogeneous solution, with or without boiling, with the addition of tannin or tannic compounds, and made thinner by being mixed with a liquid organic oil, tar, or tar-oil, substantially as and for the purposes set forth. (2.) A branding-composition consisting of a sulph-metallic compound of the arsenic or copper groups in combination with either potash or soda, substantially as and for the purposes set forth. (3.) A branding-composition consisting of a sulph-metallic compound of the arsenic or copper groups in combination with either potash or soda and a sulpho-cyanide of the earthy alkalies or alkalies substantially as and for the purposes set forth. (4.) A branding-composition consisting of sulph-arsenite of potash, sulpho-cyanide of barium, sulpho-cyanide of potassium, glycerine, tannin, and tar or oil, substantially as and for the purposes set forth. (5.) The branding-composition consisting of sulph-arsenite of potash eight parts, sulpho-cyanide of barium three parts, sulpho-cyanide of potassium one part, glycerine thirty parts, tannin one part, tar or oil twenty parts, substantially as and for the purposes set forth.
(Specification, 4s.)

No. 15978.—11th February, 1903.—FREDERICK WILLIAM BARTON, of Dunedin, New Zealand, Gardener. Improved animal-trap.*

Claims.—(1.) The general construction, arrangement, and combination of parts composing my improved animal-trap, all substantially as and for the purposes described. (2.) In a trap of the class described, the use of indented rubber pieces secured to strips attached to the lugs of said trap, substantially as and for the purposes set forth.
(Specification, 1s. 6d.; drawings, 1s.)

No. 16023.—25th February, 1903.—THOMAS WILKINS, of Peel Street, Lawrence, New Zealand, Carpenter. An improved knife-cleaner.*

Claims.—(1.) A knife-cleaner comprising a base provided with side walls, a layer of carpet upon said base brought over and beneath the front edge thereof and a batten beneath said front edge, a back piece secured to the base and the side walls, a top hinged to said back piece, and a layer of carpet upon the back piece brought over the front edge thereof and secured in position, substantially as specified. (2.) A knife-cleaner consisting of the parts arranged, combined, and operating substantially as specified and illustrated.
(Specification, 2s.; drawing, 1s.)

No. 16034.—26th February, 1903.—JAMES WEBB, of Arrowtown, New Zealand, Carpenter. Apparatus for luring birds to take poison.*

Claims.—(1.) Apparatus for luring birds to take poison, consisting of a large cage with meshes sufficiently large to admit birds to be poisoned, surrounded at its base with a deep batten, a platform within the cage, and a small fine-meshed cage adapted to contain decoy birds and rest on said platform, substantially as described. (2.) Apparatus for luring birds to take poison, consisting of a large cage with meshes sufficiently large to admit birds to be poisoned, surrounded at its base with a deep batten, a platform within the cage, a small fine-meshed cage adapted to contain decoy birds and rest on said platform, and a trough to contain poisoned water adapted to rest outside said small cage and on said platform, substantially as described.
(Specification, 2s. 6d.; drawing, 1s.)

No. 16045.—4th March, 1903.—HENRY AGAR, of East Devonport, Tasmania, Inventor. Improved height-adjusting anti-rattling window-attachments.*

Claims.—(1.) In window-attachments, a barrel or wheel arranged to be pressed as indicated against a stile, and containing a coiled spring adapted to be compressed in opening or letting down the window and to uncoil in raising it, in combination with a ratchet wheel and pawl, substantially as illustrated for the purposes set forth. (2.) In window-attachments, the combination of the described parts C to N. (3.) In window-attachments, the combination of the described parts E to O. (4.) In window-attachments, the combination of the described parts C to P. (5.) In window-attachments, the combination of the described parts B to Q.
(Specification, 3s. 6d.; drawings, 1s.)

No. 16055.—6th March, 1903.—HARRY ERNEST JAMES MORGAN, of Midland Junction, Western Australia, Engineer. An improved tobacco-pipe.*

Claims.—(1.) In tobacco-pipes, a split or divided tube comprised of halves as *d* and *e*, and which half-tubes are pivoted together at one end for closing such halves into a united tube for insertion into the stem and mouthpiece of the pipe, substantially as described, and as illustrated in the drawings. (2.) In tobacco-pipes, a split or divided tube as above claimed made of a taper formation, and with a screw thread whereby the mouthpiece of the pipe is secured to the tube in its united form, substantially as described, and as illustrated in the drawings. (3.) In tobacco-pipes, a divided tube having its upper half formed with a vent whereby the bowl of the pipe communicates with the bore of the united tube, substantially as described, and as illustrated in the drawings. (4.) A split tube, as *d* and *e*, made of a taper form, in combination with a tobacco-pipe, and arranged so as to be telescopic and replaceable in connection with such tobacco-pipe, substantially as described, and as illustrated in the drawings.
(Specification, 3s.; drawing, 1s.)

No. 16065.—9th March, 1903.—GEORGE SYMONS BUDGE, of Takapuna, Auckland, New Zealand, Gentleman. A device for holding the leaves of books.*

Claims.—(1.) A device for holding the leaves of books, the same consisting of a base clip adapted to be secured upon the book-cover, a plate hinged to the base and provided with a longitudinal slot, a sliding-piece adapted to slide along such slot and to be secured at any point therein, and a plate hinged to the sliding-piece, substantially as set forth. (2.) In means for holding the leaves of books, a base clip composed of two plates hinged together and provided with means for forcing their adjacent faces together, a plate hinged to the base and provided with a longitudinal slot therein, a sliding-piece adapted to slide along the slot and provided with means for securing it at any point therein, and a plate hinged to the sliding-piece and adapted to lie at right angles thereto, substantially as specified. (3.) In means for holding the leaves of books, a base clip adapted to be secured upon the book-cover, a plate hinged to the base and capable of being held at right angles thereto, a longitudinal slot formed within the plate, a sliding-piece fitting within the slot, a spring plate secured to the outer side of the sliding-piece by means of a set-screw and having its ends bearing against the plate, and a plate hinged upon the inner side of the sliding-piece and capable of being held at right angles thereto, as specified. (4.) The general arrangement, construction, and combination of parts in my device for holding the leaves of books, as described and explained, as illustrated in the drawings, and for the purposes set forth.
(Specification, 3s. 9d.; drawing, 1s.)

No. 16225.—14th April, 1903.—THOMAS QUARTERMAINE EAST, of Napier, Hawke's Bay, New Zealand, Master Mariner. Improvements in ships' ventilators.*

Claims.—(1.) The combination with a ship's ventilator of a perforated cone arranged within the said ventilator, substantially as and for the purposes specified. (2.) For the purpose indicated, the combination with a ship's ventilator of a perforated cone arranged within said ventilator, a gutter being provided around the base of said cone, and openings in the ventilator for the discharge of water or the like therefrom, substantially as specified and illustrated.
(Specification, 2s. 3d.; drawing, 1s.)

No. 16358.—15th May, 1903.—CARL FERDINAND BÜNZ, of 173, Armagh Street, Christchurch, Canterbury, New Zealand, Professor of Music (assignee of Francis J. Rottman, of 167, New Bond Street, London, England, Medical Electrician). An improved instrument for the treatment of nervous and other constitutional diseases.*

Claims.—(1.) A vibrating instrument comprising in its construction a hollow casing having a lid enclosing an

adjustable weight, and provided with an adjustable crank-pin and a spring connecting the crank-pin with the vibrating plate so as to transmit vibration to the latter, substantially as specified. (2.) A vibrating instrument comprising in its construction a casing having a lid and enclosing a double screw spindle and adjustable weight, and provided with a crank-pin adjustable by means of the said screw spindle, substantially as described. (3.) The combination and arrangement of parts constituting the improved vibrating instrument described, and shown by the drawings.

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

No. 16372.—19th May, 1903.—JAMES MCKENZIE MACINTOSH, of 40, Albert Street, Brunswick, Victoria, Engineer. An improved sash-fastener.*

Claims.—(1.) In an improved sash-fastener, a barrel bracket as A furnished with a sliding-stem as A^1, which is capable of being worked to and fro by a screw as B-B^1, and with the outer end of said sliding-stem formed into a corrugated or serrated surface grip-jaw, substantially as described and shown. (2.) An improved sash-fastener consisting of the combination of a corrugated or serrated catch-bar as C with a barrel bracket as A, furnished with a sliding-stem as A^1, having a corrugated or serrated grip-jaw at its end and capable of being worked to and fro by a screw as B-B^1, substantially as described and shown. (3.) In an improved sash-fastener, the alternative corrugated or serrated surface catch-bar as C furnished with a lower flange as C^1, and a strengthening rib or bracket, substantially as described and shown.

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

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

Claim.—A toe-protector for boots and shoes, the same consisting of a plate of metal bent into a shape to conform to the inside shape of the toe of the boot or shoe, and adapted to be inserted therein from the inside, substantially as specified.

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

No. 16476.—11th June, 1903.—WILLIAM CHARLES CRUMP, of Elizabeth Street, Sydney, New South Wales, Medical Galvanist. Improvements in electro-medical belts and for other like purposes.

Claims.—(1.) In electro-medical belts, the cell *b*, the zinc *c*, with connecting wire *d*, in combination with a belt, substantially as described and explained, and as shown in the drawings. (2.) In electro-medical belts, the use of a miniature battery or a number of miniature batteries in combination with parts forming a complete belt, substantially as described and explained, and as shown in the drawings.

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

No. 16538.—24th June, 1903.—BABCOCK AND WILCOX, LIMITED, of Oriel House, 30, Farringdon Street, London, England, and RICHARD ANDREW MCLAREN, of Renfrew, Scotland, Engineer. Improvements in chain-grate stokers for boilers and other furnaces.

Claims.—(1.) A mechanical chain-grate stoker of the class set forth, embodying the several improvements described with reference to Figs. 1 to 19 of the drawings. (2.) In a mechanical chain-grate stoker, a fuel-hopper furnished with a shutter or intercepter to close off the supply of fuel and to form when open a lower extension of the hopper-side, as described. (3.) In a mechanical stoker, the improved devices described for raising and lowering the furnace-door. (4.) In a mechanical chain-grate stoker, a furnace-door constructed as described and having detachable top and bottom plates, as and for the purpose set forth. (5.) In a mechanical chain-grate stoker, the combination with the carriage-frame of side flange-plates detachably secured to the sides of the frame, as and for the purpose set forth. (6.) In a mechanical chain-grate stoker, an ash-plate for the rear of the furnace constructed as described, with detachable and renewable nose-pieces. (7.) In a mechanical chain-grate stoker, a balanced swivelling ash-door constructed as described and fitted at the rear of the ash-pit. (8.) In a mechanical chain-grate stoker, the arrangement in combination with the chain-grate driving-gear of a spring-actuated ball clutch connecting the ratchet wheel to the feed-shaft, as and for the purpose set forth. (9.) A carriage-wheel for the movable frame of a mechanical chain-grate stoker, having a perforated side-flange constructed as described to serve as a capstan for traversing the carriage.

(Specification, 5s. 6d.; drawings, 4s.)

No. 16635. — 14th July, 1903. — CHRISTOPHER GEORGE GAMBLE, of Gorge Hill, Waddington, New Zealand, Farmer. An improved appliance for winding up or unwinding wire.*

Claims.—(1.) In an appliance for winding up or unwinding wire, the combination of means whereby a winding-drum may be operated either vertically or horizontally upon the same mounting, for the purpose, when horizontally situated, of the easier winding-up of wire, as specified. (2.) The general arrangement, construction, and combination of parts in my appliance for winding up or unwinding wire, substantially as explained and operating in the manner set forth.

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

No. 16648.—17th July, 1903.—FRANCIS LIAS DAVIS, of Victoria Arcade, Auckland, New Zealand, Agent. An improved sash-regulator.*

Claim.—That by the adoption of rollers with a resilient surface housed in the frame of a window or shutter-frame, and projecting sufficiently to engage the sash-frame or wall, a simple and efficient prevention is provided for the rattling of windows and vibration caused by the ordinary street carriage, tram, or railway windows, and other like purposes, as substantially set forth.

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

No. 16733.—16th December, 1903.—JAMES MILLER, of *Times* Office, Dunedin, New Zealand, Artist. Improved wrappers.

Claims.—(1.) In wrappers for postal or delivery packets, newspapers, or suchlike, in combination on the wrapper, spaces for advertisements, with the device of a strip formed by two parallel perforations, said strip to be torn off, thus preserving the whole of the rest of the wrapper from damage, all substantially as set forth, and as shown on the drawing. (2.) In combination, on wrappers, two parallel rows of perforations for the purpose of tearing out the strip between them, with the end cut or torn for showing the method of opening and forming a convenient end for gripping said strip, all substantially as set forth.

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

No. 16800.—14th August, 1903.—WILLIAM BARNSDALE, of Scarborough Terrace, Auckland, New Zealand, Engineer. An improved sterilising device for bonedust and other like substances.*

Claim.—The combination of a furnace for generating hot air to heat tubes containing a worm conveyer for the purpose of passing the material to be sterilised or desiccated from the hopper to the discharge-port in diverse directions, controlled by sprocket wheels and regulated by pyrometer, as substantially set forth.

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

No. 16869.—27th August, 1903.—JOHN THOMAS, of 17, Ormeley Road, Middlesex, England, Draughtsman. Improvements in automatic couplings and buffers.

Extract from Specification.—The objects of my present improvements are, first, to provide flanges serving as buffing-faces upon the coupling-projections, such as those described; second, to provide a sliding-guide for the shank of the coupling where it passes through the end frame of the carriage; third, to provide means for preventing the side lever from being displaced longitudinally; fourth, to provide springs for bringing back the shanks to their central position after they have been displaced laterally in passing round curves; and, fifth, to provide fastenings by which the levers are secured in their normal position.

(Specification, 8s.; drawings, 5s.)

[NOTE.—The above extract from the specification is inserted in place of the claims.]

No. 16888. — 26th August, 1903. — ROBERT MARTIN CROSBIE, of 1, Clyde Street, Dunedin, New Zealand, Engineer. Guide chute for flax-stripping machine.*

Claims.—(1.) The combination with the beater drum and rollers of a flax-stripper of a guide chute adapted to guide flax from said feed-rollers to the beater drum, substantially as specified, and illustrated in the drawing. (2.) For the purposes indicated, a guide chute having laterally projecting ears and cheeks upon the sides, substantially as specified.

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

No. 16987.—17th September, 1903.—BARKER NORTH, A.R.C.Sc. London, F.C.S., of "Glenholme," Glenholme Road, Manningham, Bradford, York, England, Lecturer in Chemistry. Improvements in and connected with electricity-meters.

Claims.—(1.) The improvement in electrolytic electricity-meters which consists in substituting for the electrolyte of an acid character a solution of an alkali or salt such as described, preferably caustic soda, and replacing platinum electrodes by electrodes formed of a substance which will remain "passive" in such an electrolyte—for example, iron, nickel, or cobalt, preferably iron containing less than 0·4 per cent. of carbon, such as wrought iron—for the purposes stated. (2.) Electrodes for electricity-meters of the kind described, consisting of iron, nickel, or cobalt, in a perforated, gridlike, or coiled form, substantially as described. (3.) For retaining the electrodes of electrolytic electricity-meters a given distance apart, the combined clip and spacing-piece G, *g*, substantially as described. (4.) In electrolytic electricity-meters, the application of a float in a vertical guide tube to move with the fall of level of the electrolyte for the purpose of enabling the fall of level (consumption of current) to be more accurately read, said float bearing a mark directly or carried by a second tube or paper within the float for reading on a scale, substantially as described. (5.) In electrolytic electricity-meters, the float-guiding tube having double walls forming an annular space closed at the bottom to receive and protect the scale, substantially as described. (6.) In electrolytic electricity-meters, the adjustable mounting of the float-guiding tube within the vessel by friction or a clip, substantially as described. (7.) In electrolytic electricity-meters, the application of dial mechanism for registering the consumption of current, said mechanism having an actuated drum operated by a cord or chain connected to a float which moves with fall of level of the electrolyte against the action of a suitable counterpoise weight, substantially as described. (8.) In electrolytic electricity-meters, the connection of the float to the actuating-drum of the dial registering mechanism by means of a cord of cotton or other cellulose material, which is rendered possible by the use of an electrolyte of a non-acid character consisting of a solution of an alkali or salt such as described, preferably caustic soda. (9.) In electrolytic electricity-meters, providing the measuring-vessel with one or more subsidiary vessels (or chambers) each containing an electrolyte and electrodes with or without intercommunication of all the vessels for maintaining a common level of electrolyte, and connecting all electrodes in parallel, whereby the subsidiary vessel or vessels act as a shunt, and only a known fraction of the current is passed through the measuring-vessel, thereby also enabling the capacity of the meter to be varied, substantially as described. (10.) The combined arrangement of electricity-meter and prepayment mechanism, comprising a main switch having a catch device to hold it open and an electro-magnetic device in a shunt circuit, including a prepayment index and a registering index, all so disposed that an inserted coin, which enables the prepayment index to be moved ahead of the registering index, liberates the catch, causing the switch to close for supply until the registering index overtakes the prepayment index and closes the shunt circuit through the electro-magnetic device, which now opens the switch and the catch again engages, substantially as described. (11.) The combination of electrolytic electricity-meter, prepayment mechanism, and means for registering the consumption on dials by the fall of level of electrolyte, substantially as described. (12.) The several improved constructions of electricity-meters—viz., the meter with float for accurate reading; the meter with dial registering mechanism; the meter with variable shunt for measuring a known fraction of the current; and the meter with prepayment mechanism—each comprising the several parts having the combined construction and arrangement adapted to operate substantially as described with reference to and shown in the respective figures of the drawings.

(Specification, £1; drawings, 2s.)

No. 17041.—30th September, 1903.—WILLIAM ERNEST HUGHES, of Queen's Chambers, Wellington, New Zealand, Patent Agent (nominee of the British Westinghouse Electric and Manufacturing Company, Limited, of Westingbouse Building, Norfolk Street, Strand, Westminster, England, Manufacturers, the assignees of Frank Conrad, of 1301, Walnut Street, Edgewood Park, Pennsylvania, United States of America). Improvements in alternating-current watt-meters.

Claims.—(1.) An alternating-current watt-meter provided with two quadrature adjusting coils connected together in parallel circuit, and means for transferring resistance from the circuit of either of said coils to that of the other. (2.) An alternating-current watt-meter provided with quadrature adjusting coils connected in parallel with either one or two non-adjustable resistances and a variable resistance substantially as and for the purpose specified.

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

No. 17109.—16th October, 1903.—JOHN OGILVY MCPHERSON, of Fortrose, Southland, New Zealand, Farmer. An improved fencing-dropper.*

Claims.—(1.) An improved fencing-dropper consisting of the parts arranged, combined, and operating substantially as specified and illustrated. (2.) A fencing-dropper having a recess to receive fencing-wire, a plate pivoted upon said strip adapted to pass over said recess and maintain the wire therein, and a socket slidable upon the strip adapted to receive the plate and hold it in position, substantially as specified. (3.) A fencing-dropper comprising, in combination, a hoop-iron strip having a hook at its outer end to receive the top wire of a fence and recesses to receive the lower wires, plates pivoted upon the strip, one for each wire, adapted to retain the wires in the recesses, and sockets sliding upon the strip designed to pass over the plates and hold them in position, substantially as specified.

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

No. 17169 —27th October, 1903.—JOHN RAMAGE, of Balclutha, New Zealand, Tinsmith and Plumber. Improvements in taps.

Claims.—(1.) The combination and arrangement of parts constituting my improvements in taps, constructed and operating substantially as described. (2.) Improvements in taps, which consist in making the handle and spindle of the closing-valve and the valve-box at an acute angle with the general direction of the outlet, substantially as and for the purposes set forth.

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

No. 17193.—4th November, 1903.—LAMSON STORE SERVICE COMPANY, LIMITED, a registered company of Great Britain, carrying on business at 20, Cheapside, London, England, and at 234, Clarence Street, Sydney, New South Wales (assignees of Charles Francois René Estienne, of 326, Rue des Pyrenees, Paris, France, Engineer). Improvements in carriers for use in pneumatic-tube despatch systems.

Claims.—(1.) In combination with a pneumatic-tube despatch carrier, having thereon a cardinal number, a movable or sliding covering or hiding piece over a series of other numbers adjustably adaptable to exhibit one number of such series, substantially as described and explained. (2.) The combination with a pneumatic-tube despatch carrier, having thereon a cardinal number and a series of other numbers, of a rotating collar with an orifice therein adapted to exhibit one number of such series, substantially as described and explained, and as illustrated in the drawings.

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

No. 17194.—4th November, 1903.—LAMSON STORE SERVICE COMPANY, LIMITED, a registered company of Great Britain, carrying on business at 20, Cheapside, London, England, and at 234, Clarence Street, Sydney, New South Wales (assignees of Edwin Luther Giles, of 20, Cheapside aforesaid, Pneumatic and General Store Service Engineer). Improved machine for bending tubes.

Claims.—(1.) An improved machine for bending tubes, wherein a bending-arm with a thrust-block is partially rotated around a stationary former adapted by said thrust-block to press or bend a filled tube held at the end by said former on to the same, substantially as described and explained. (2.) An improved machine for bending tubes, wherein a bending-arm with a thrust-block having a groove of the semiperipheral contour of the pipe to be bent adapted to partially rotate around a stationary former having a complementary groove of the like semiperipheral contour, substantially as described and explained. (3.) An improved machine for bending tubes, wherein is a stationary former, a bending-arm, and devices for partially rotating said bending-arm and stopping its rotation, and reversely partially rotating and stopping it, substantially as described and explained. (4.) In a machine for bending tubes, the combination with a stationary former such as 14, having a clamp or holder such as 17, of a partially rotatable bending-arm such as 19 and devices for stopping the partial rotation in either direction of said arm such as 19, substantially as described and explained, and as illustrated in the drawing. (5.) In a machine for bending tubes, the combination with the parts set forth in the preceding (4) claiming clause of striking-forks such as 28 and 29 controlling two belts and inclined

blocks or striking-pieces such as 36 and 34 on the periphery of the main-shaft driving-wheel such as 10, substantially as described and explained, and as illustrated in the drawings. (6.) The combination together of the mechanical integers or their equivalents, all forming an improved machine for bending tubes, substantially as described and explained, and as illustrated in the drawings.

(Specification, 4s. 6d.; drawings, 2s.)

No. 17195.—4th November, 1903.—LAMSON STORE SERVICE COMPANY, LIMITED, a registered company of Great Britain, carrying on business at 20, Cheapside, London, England, and 234, Clarence Street, Sydney, New South Wales (assignees of Edwin Luther Giles, of 20, Cheapside aforesaid, Pneumatic and General Store Service Engineer). Improvements in receiving-terminals for pneumatic-tube despatch systems.

Claims.—(1.) A receiving-terminal of the class set forth, wherein a straight tube is interposed between a curved section from the main tube and an automatically closing discharge-orifice, and wherein a damper or regulator is interposed between said straight tube and said discharge-orifice, substantially as described and explained. (2.) A receiving-terminal of the class set forth, having below the conducting-tube and the discharge-orifice an enlarged or expanded enclosed space or spreader box connecting said tube with the air, suction, or discharge pipe, substantially as described and explained. (3.) In receiving-terminals of the class set forth, the combination with a conducting-tube, and on the end thereof an adjustably sliding damper or regulator, substantially as described and explained. (4.) In receiving-terminals of the class set forth, the combination with an automatically closing door or valve on the discharge-orifice of buffers of resilient material to receive the impact of the said door when thrown open, substantially as described and explained. (5.) The combination and arrangement together of the mechanical integers or their equivalents, comprising an improved receiving-terminal for pneumatic-tube despatch systems, substantially as described and explained, and as illustrated in the drawings.

(Specification, 3s. 6d.; drawings, 2s.)

No. 17213.—6th November, 1903.—HENRY BEST, of Dunedin, Otago, New Zealand, Hotel Porter. An improved knife-cleaner.

Claims.—(1.) In means for cleaning knives, a base plate provided with a polishing-surface on its top side and a plate provided with a polishing-surface on its under-side hinged to the base plate in such a manner that the two polishing-surfaces shall be in contact, such surfaces consisting of layers of felt or other polishing-material secured upon the plates, and sheets of rubber or other resilient material inserted between the polishing-material and the plates, substantially as specified. (2.) In means for cleaning knives, a base plate provided with a polishing-surface on its top side and a plate provided with a polishing-surface on its under-side hinged to the base plate in such a manner that the two polishing-surfaces shall be in contact, in combination with a polishing-pad secured upon a frame hinged to the back of the base plate and extending forwardly to the front thereof, substantially as specified.

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

No. 17266.—19th November, 1903.—THOMAS HENRY ALEXANDER, of Kensington, Victoria, Engineer. Improvements in valve-mechanism for reciprocating engines.

Claims.—(1.) In valve-mechanism for reciprocating engines, a rotary valve having oscillating motion, in combination with two cams revolving with the crank-shaft and alternately setting the valve for admission of steam to the cylinder and for cut off and consequent expansion, substantially as described. (2.) In valve-mechanism for reciprocating engines, two cams which revolve with the crank-shaft and are adapted to alternately set the valve for admission and expansion of steam, in combination with means for angularly adjusting the cams upon the shaft for the purpose of reversing the engine and varying the degree of expansion, substantially as described. (3.) In valve-mechanism for reciprocating engines, a sleeve mounted upon the crank-shaft, a cam rigidly connected with the sleeve adapted to actuate an oscillating valve, a sheave revolving with the shaft and engaging with the sleeve, and means for moving the sheave longitudinally of the shaft so as to rotate the said sleeve and cam relatively to the shaft, all in combination, substantially as described. (4.) In valve-mechanism for reciprocating engines, the combination for the purposes indicated of the described parts *a* to *q* for the purposes indicated. (5.) In valve-mechanism for reciprocating engines, the combination with the described parts *k* to *m* of parts *q* and A, and means for adjusting said parts *q* and A, substantially as described for the purposes indicated. (6.) In valve-mechanism for reciprocating engines, a crank-shaft having a sleeve *q*, a sheave *s* engaging therewith and longitudinally movable on fixed rods *u*, a second sleeve A mounted upon portion of the first sleeve *q*, a second sheave D longitudinally movable on fixed rods E, and two cams, one rigidly connected with each sleeve, to actuate an oscillating valve *a*, all in combination, substantially as described.

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

No. 17267.—19th November, 1903.—ARTHUR PERCY RICHMOND, of "Kelvin," Enmore Road, Marrickville, near Sydney, New South Wales, Commercial Traveller. Therapeutic apparatus.

Claims.—(1.) In therapeutic apparatus, a nest of three cylindrical cells hermetically sealed at each end and enclosing a partial vacuum in which is suspended a diamagnetic element, as specified. (2.) In therapeutic apparatus, a nest of three cylindrical cells closed at the bottom by a cap and at the top by a disc to each cell from which is suspended in partial vacuo a diamagnetic element, a cap above each such closing-disc and a nipple in the cap for the passage of a wire, as set forth. (3.) In therapeutic apparatus, a nest of three cylindrical cells hermetically sealed top and bottom, a diamagnetic element suspended in partial vacuo in each cell, a cap over each cell, a nipple in each cap, a connecting wire projecting from each nipple, a flesh disc connected to each wire, and a strap or belt to which the flesh discs are attached for binding such flesh discs on to the part to be therapeutically treated, as specified.

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

No. 17268.—19th November, 1903.—WILLIAM REYNOLDS BAWDEN, of Kalgoorlie, Western Australia, Mine-manager. Improved clinostat for surveying deep boreholes.

Claims.—(1.) In a clinostat, a removable compass-box as *b2* for the reception of the gelatine or other recording medium, and fitted with a gimbal movement and provided with a cap as *b4* and transparent face as *b5*, and having a solid bottom, substantially as and for the purpose described, and as illustrated in the drawings. (2.) In a clinostat, a protractor dial or plate as *d4*, on which are pivoted pendulums as *d* and *d1* to denote the true vertical and horizontal, and fitted in a removable case as *e* and provided with parallel windows or transparent faces as *e3*, substantially as and for the purposes described, and as illustrated in the drawings. (3.) In a clinostat, a cradle as *a*, having a solid bottom as *a3* for maintaining same in the horizontal position, and which cradle is mounted on pivots or trunnions as *a4*, and contained in an outer casing as *f* provided with caps as *f1* and buffers as *g* and rings as *g1*, substantially as and for the purposes described, and as illustrated in the drawings. (4.) The peculiar construction and combination of parts comprising a clinostat as described, and as illustrated in the drawings.

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

No. 17272.—20th November, 1903.—JOHN MORGAN, of Dunedin, New Zealand, Ploughman. An improved rope-buckle.

Claims.—(1.) A rope-buckle comprising a double loop and a cross-bar substantially as specified. (2.) A rope buckle consisting of the parts arranged, combined, and operating substantially as and for the purposes specified and illustrated.

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

No. 17281.—23rd November, 1903.—JAMES STRACHAN GREIG, Land Agent, and SIDNEY ARTHUR WARD, Ironmonger, both of Stratford, Taranaki, New Zealand. An improved hoe.

Claims.—(1.) The improved hoe, comprising, in combination, a head having a blade with a knife-edge, sides and back integral with the blade, and a socket flattened at its end, to which the head is secured by rivets, substantially as set forth. (2.) The improved hoe, characterized by a head made by bending band steel into approximately rectangular shape, and by sharpening the edge or edges of the forward member of the head, substantially as set forth. (3.) The improved hoe, consisting of the parts combined and arranged substantially as set forth and illustrated.

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

No. 17283.—21st November, 1903.—HENRY OLUF OLSEN, of 513, Flinders Street, Melbourne, Victoria, Manufacturer. Improved method of manufacturing artificial stone, such as marble and the like.

Claims.—(1.) A method of manufacturing artificial stone, such as marble and the like, consisting essentially in treating burnt gypsum with carbonic acid, thereafter burning same and mixing it with size to which has been added alum, colouring such mixture with colours that have been mixed with size, spreading such mass on a plate of glass to the required thickness, then covering same with a backing or layer of the gypsum that has been treated with carbonic acid and afterwards burned, substantially as and for the purposes set forth. (2.) In a method of manufacturing artificial stone, such as marble and the like, in combination, a sheet of smooth glass and a layer of coloured gypsum spread upon same and retained in position until the layer is sufficiently hard to remove, substantially as and for the purposes set forth. (3.) My improved method of manufacturing artificial stone, such as marble and the like, consisting in treating burnt gypsum with carbonic acid, again burning said gypsum until its water is expelled, mixing same with size to which alum has been added until a suitable consistency has been obtained, colouring same to obtain a marbled effect, said colours being mixed with size, spreading the whole mixture over a sheet of glass, adding a backing of gypsum, and allowing the whole to remain upon the glass for a few days, and thereafter drying and storing the slab for about fourteen days and polishing same with or without the addition of oil, substantially as and for the purposes set forth.

(Specification, 3s.)

No. 17284.—21st November, 1903.—GEORGE FREDERICK HOLDEN, of Wallace, Victoria, Produce Merchant. Apparatus for compressing chaff, oats, bran, fodder, or other material into bales.

Claims.—(1.) A verticle box or press open throughout its length, and of a length to carry a number of bales, means for feeding material to the press, and means for pressing the material into bales in the box, substantially as and for the purposes described. (2.) In combination, a vertical open box or press of a length to hold a number of bales, a plunger in the box, a feed-hopper, a horizontal plunger operating in the feed-hopper, means for operating the press-plunger, and means for operating the feed-plunger, substantially as and for the purposes described. (3.) A vertical open box or press of a length to carry a number of bales, having a portion below the lowest level of the plunger stepped or shouldered, substantially as and for the purposes described. (4.) A vertical open box of a length to hold a number of bales, a slide door at top of press, means for operating slide door, hinged sides to form a guideway for the dividing boards and means for operating same, and a feed-tray for the boards, substantially as and for the purposes described. (5.) A vertical open box of a length to hold a number of bales, a slide door at top, the means shown for operating it, hinged sides, the means shown for operating them, and a feed-tray at bottom of door, substantially as described. (6.) A vertical open box of a length to hold a number of bales, and having its lower portion constructed with open framing to allow of binding the bales, substantially as and for the purposes described. (7.) The means herein described and illustrated for operating the feed-plunger, substantially as and for the purposes described. (8.) In combinaiton with a vertical open press of a length to hold a number of bales, means of coating the bales with a viscous, gummy, or sticky medium as they pass through the press, substantially as and for the purposes described. (9.) The combination and arrangement of the several parts for the purposes described, and substantially as illustrated on the drawings.

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

No. 17294.—26th November, 1903.—CARL LUDWIG HOLM, of Dobelnsgatan, 62, Stockholm, Sweden, Fitter. Improvements in box bearings for rapidly rotating shafts.

Claims.—(1.) The combination with a box bearing of one or more liquid-holders in one element of the bearing, liquids in said liquid-holders, and projections from the other element of said bearing into the said liquids, substantially as and for the purpose set forth. (2.) The combination with a box bearing of one or more liquid-holders in the one element of the bearing, liquids in the said liquid-holders, projections from the other element of said bearing into the said liquids, and means for preventing the bushing from rotating with the shaft, substantially as and for the purpose set forth.

(Specification, 4s. 6d.; drawing, 1s.)

No. 17302.—24th November, 1903.—JAMES TONGE, Jun., of Skerryvore, Westhoughton, near Bolton, Lancaster, England, Mining Engineer. Improvements in drills for mining purposes.

Claims.—(1.) A drill formed hollow or of tubular shape and having volute flanges to remove the refuse or cuttings, substantially as specified. (2.) A tubular drill having its volute flanges and cutting-edges formed integrally with it, substantially as specified. (3.) In a tubular drill, cutting-edges formed to have an annular base piece to take over the tubular body of the drill and be secured thereto, substantially as specified. (4.) In a tubular drill, detachable cutters formed to cut the outer and inner circumferences of the cylindrical passage to receive said drill, and means for attaching said cutters to the body part of the drill, substantially as specified. (5.) In a tubular drill, detachable cutters for attachment to said drill, said cutters being formed with stems to enable their said attachment volute flanges formed on said drills and openings made in certain of said flanges to receive the stems of said detachable cutters, substantially as specified. (6.) In a tubular drill, detachable cutters flanges formed on the body of the drill to have openings to receive the stems of said cutters, and openings in the body part made to receive the bent ends of said stems, substantially as specified. (7.) A tubular drill made in sections, one section carrying a projecting part to take into an opening made in a part secured to another section, the former projection also having an opening to receive a supplementary projection on the second part, whereby the parts are secured together, substantially as set forth. (8.) A tubular drill made in sections, one section being formed to be detachably secured to another, and each section having its complement of volute flanges, substantially as specified. (9.) Drills for mining and like purposes, the same being constructed and arranged to operate substantially as specified.

(Specification, 4s. 6d.; drawing, 2s.)

No. 17314.—2nd December, 1903.—MIKAEL PEDERSEN, of Raglan House, Dursley, Gloucester, England, Engineer. Improvements in cream-separators.

Claims.—(1.) The improvements in cream-separators consisting of a series of conical plates mounted in a rotating bowl or drum and having their outer edges flanged and perforated, substantially for the purpose set forth. (2.) The improvements in cream-separators consisting of a series of conical plates mounted in a rotating bowl or drum and having their centre opening bent or flanged outwards, in combination with recesses and perforations arranged around the centre, substantially for the purpose described. (3.) The improvements in cream-separators consisting of a series of conical plates mounted in a rotating bowl or drum and having the centre of the plates cut away to form alternate recesses and spaces, in combination with flanged and perforated outer edges, substantially for the purpose set forth. (4.) The improvements in cream-separators consisting of a series of conical plates mounted in a rotating bowl or drum and having perforations around the centre opening flanged and perforated edges to the plates, substantially as described. (5.) The improvements in cream-separators consisting of a bowl or drum containing a series of plates such as claimed by claims 1 to 4, and which is mounted upon a ball-head driving-spindle having a groove or slot for the purpose described. (6.) The combination in the top conical plate of a neck projecting through the opening of the bowl having the regulating-screw placed inside the bowl, substantially for the purpose set forth.

(Specification, 5s. 6d.; drawing, 4s.)

No. 17320.—3rd December, 1903.—MARTIN EKENBERG, of Odengatan, 40, Stockholm, Sweden, Doctor of Philosophy. Improved method of and apparatus for concentrating and evaporating liquids.

Claims.—(1.) A method of evaporating or concentrating, in vacuum or under ordinary atmospheric pressure, emulsions, solutions, and the like, consisting in causing the liquid under constant circulation to flow many times over the free surface of a heated rotary body which is mounted in a receptacle, and from which the evaporation takes place, substantially as described. (2.) A method of evaporating, in vacuum or under ordinary atmospheric pressure, emulsions, solutions, and the like to a dry condition, consisting in causing the liquid, when circulated in a suitable manner, to flow over surfaces (or a surface) of a heated rotary body mounted in the liquid receptacle, which surfaces are not employed for the evaporation to a dry condition, from which rotary body the residue produced by evaporation is scraped, substantially as described. (3.) A method of evaporating, in vacuum or under ordinary atmospheric

pressure, emulsions, solutions, and the like to a dry condition, concentrating the liquid, consisting in causing the same to flow from the chamber or place where it comes into contact with the cylinder-shaped rotary body mounted in the liquid-receptacle—from which rotary body the dry residue produced by evaporation is scraped—in a circulating current effected by means of a pump or the like many times over suitable surfaces, especially the end walls, of the said body, so that it is frequently brought into contact with said surface under constant supply of heat, substantially as described. (4.) In combination, the pipes, such as 7, 8, mounted along the side walls or end walls of the rotary body, and provided with a number of outlet-openings formed in the side facing the said walls, which pipes extend from a pump communicating with that part of the interior of the liquid-receptacle where the fluid can settle, in order to produce a circulating current of liquid flowing over the end walls, substantially as described. (5.) An evaporating-apparatus, the active metallic surface of which—adapted to be heated and on which the material is evaporated, and from which the dried product is scraped off—is composed of a plate or structure of nickel or suitable nickel alloy (such as nickel-cobalt alloy), which by hammering, rolling, pressing, or like operation has been given great hardness, in order to afford a surface which resists the chemical action of the acids or salts of the material treated, so that the dried substance is not contaminated with impurities, while at the same time it has great heat-conductivity, so that the evaporation proceeds with rapidity, substantially as described. (6.) A rotatory evaporation-device consisting of a rotatory drum provided with a metallic evaporation surface of the kind described in claim 5, said drum having double walls and dished or corrugated bottoms and a perforated partition wall concentrically mounted about the drum-shaft between the double walls, said wall being adapted to cause the heating medium introduced through the hollow shaft of the drum to pass over the entire interior surface of the drum. (7.) A rotatory evaporation-device comprising a rotatory drum with double walls and dished or corrugated bottoms and with perforated partition wall mounted concentrically about the drum-shaft and between the double walls, and about which the heating medium can circulate, said wall being connected with the shaft by radial tubes, which tubes place the shaft in communication with the chamber in the drum outside the concentric wall, while openings in the shaft, between which and the tubes there is no direct communication, place the chamber between the bottoms 14, 15, and the chamber between the concentric partition wall and the inner wall in communication with the shaft, in order to obtain such a circulation of the heating-medium within the drum that the entire interior surface of the latter is subject to the heat, substantially as described. (8.) A modification of the device described in claim 7, wherein the radial tubes are replaced by a circular partition wall 21 at right angles to the shaft and extending to the concentric tube or wall, which circular wall separates the inlets and outlets in the shaft from one another and fits closely to the concentric tube, substantially as described. (9.) A modification of the device described in claim 7, wherein the radial tubes are replaced by two walls situated close together and traversed by cross-tubes 22, and between which there are openings in the concentric tube, substantially as described. (10.) The complete liquid concentrating and evaporating apparatus substantially as described, or illustrated in the drawings.

(Specification, 9s. 6d.; drawing, 2s.)

No. 17329.—5th December, 1903.—WATTS GOODWIN, of Tuapeka Mouth, Otago, New Zealand, Miner. Improved apparatus for operating and sustaining window-sashes.

Claims.— (1.) Apparatus for operating and sustaining window-sashes in their frames, comprising the parts arranged, combined, and operating substantially as specified and illustrated. (2.) In apparatus for the purpose indicated, in combination, a window-sash, a cam pivoted in a bracket thereon, a ring upon said bracket, and an extension integrally formed with the cam, substantially as and for the purposes specified.

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

No. 17334.—4th December, 1903.—PAUL DU BUIT, of 15, Rue des Halles, Paris, France, Engineer. Improvements in the manufacture of explosive charges.

Claims.—(1.) The arrangement of charges of explosives for firearms consisting essentially in diminishing the total surface while allowing ready ignition, this result being obtained by making the charge of a sheet, or, if need be, of several sheets, of a thickness varying with the rate of burning sought; this sheet being rolled up in spiral form, but cut on its lower side more or less deeply in the form of comb-teeth or fringe so as to insure more or less rapid ignition. (2.) In a charge of explosive made up as described in the preceding claim, the arrangement consisting in cutting the edge of the sheet constituting, when rolled up, the charge, over a portion only of its length in such a way that, when rolled up, the cut portion is protected against deformation by the uncut portion. (3.) In a charge of explosive such as that described in the two preceding claims, the application of cuts in the form of teeth of greater or less length and width, capable of being separated by greater or less empty spaces, or no space at all, the incisions reaching, if so required, through only a portion of the thickness of the sheet.

(Specification, 4s. 6d.; drawing, 2s.)

No. 17339.—8th December, 1903.—JOHN PRATT ANDREWS, of Waikuku, Canterbury, New Zealand, Flax-miller, and JOHN ANDERSON, of Christchurch, Canterbury aforesaid, Engineer. Improved apparatus for truing up the beater-drums of flax-strippers.

Claims. — (1.) Improved apparatus for truing up the beater-drums of flax-stripping machines, consisting of the parts combined, arranged, and operating substantially as and for the purposes specified and illustrated. (2.) In apparatus for truing up the beater-drums of flax-stripping machines, the combination of a tool-holder secured to the base plate of the machine, a cutting-tool secured therein, means for adjusting said tool to the periphery of the drum, and means for revolving the drum, substantially as specified and illustrated.

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

No. 17342.—9th December, 1903.—LEONARD SCHADE VAN WESTRUM, of 90, Wilhelm Strasse, Berlin, Germany, Engineer, at present residing at the Coburg Hotel, Carlos Place, Grosvenor Square, London, England. An improved method of road-making.

Claim.—Method of road-making, more especially macadamised roads and the like, characterized by the fact that as binding-material for the materials forming the road-surface, such as broken stones, sand, earthy constituents, or the like, a solution or emulsion of oily substances, such as naphtha, petroleum, tar, and other oils or the like, in water is employed for the purpose of obtaining an intimate and permanent binding-together of the materials.

(Specification, 2s. 6d.)

No. 17343.—9th December, 1903.—GUSTAF GRÖNDAL, of Djursholm, Sweden, Engineer. Improvements in reducing iron-ore to iron-sponge, and in furnaces therefor.

Claims.—(1.) A method of reducing iron-ore to iron-sponge, consisting in heating the ore with carbon by means of a mixture of combustible gas and air, cooling in the furnace the iron-sponge produced by means of one of the components of the gaseous combustible mixture before it is mixed with the other component, leading the products of combustion through suitably arranged passages to and fro through the ore and carbon in the upper part of the furnace, and withdrawing the gases generated during the reduction from the spot where they are generated, substantially as and for the purpose set forth. (2.) A furnace for operating by the method referred to in claim 1, of such form that the charge of ore and carbon can move through it by gravitation, and having an adjustable discharge-opening and substantially horizontal passages from the bottom to the top of the furnace connected with conduits for combustible gas and for air at suitable points, said passages having openings towards the interior of the furnace, substantially as and for the purposes set forth. (3.) The modification in which the furnace is substantially of rectangular cross-section, and has tubes of suitable form arranged in an upper and lower set across the shaft communicating with each other and with a chimney, the lowest tubes of the lower set being connected with a pipe for combustible gas, while the lowest tubes of the upper set are connected with a pipe for air, the tubes for combustible gas being open at the under-side and the tubes for air being perforated on the under-side, substantially as and for the purpose set forth. (4.) The modification in which the tubes of the lower set are connected with the air-pipe, while the tubes of the upper set are connected with the gas-pipe, and in which the wells of the air-tubes have no openings, substantially as and for the purpose set forth.

(Specification, 6s.; drawings, 2s.)

No. 17344.—9th December, 1903.—GUSTAF GRÖNDAL, of Djursholm, Sweden, Engineer. Improvements in and apparatus for magnetic separation of iron-ore.

Claims.—(1.) Method of separating magnetically finely divided or pulverised iron-ore, consisting therein that the ore is suspended in water which is led in a horizontal or nearly horizontal current through a magnetic field past but not in contact with a rotating drum surrounding a stationary magnet pole acting on the more or less magnetic particles in the current with the suspended material, and separating them from the non-magnetic particles which sink down, and the power of which magnet pole is regulated in such a manner that the most magnetic particles are lifted out of the current against the magnet pole and the drum and are carried away by the latter, while the less magnetic particles are gathered separately, substantially as set forth. (2.) An apparatus for carrying out the method set forth in claim 1, characterized by a stationary electro-magnet *a* having each pole-piece *b* formed with an elongated edge *c*, and around each of the pole-pieces a rotating hollow drum *e* of a magnetically indifferent material provided with iron lamels in the mantle, under and past which drum the current containing the suspended material to be separated is led in such a manner that its direction of motion is at right angles against the edge of the pole-piece of the magnet and the same as the direction of motion of the drum, whose mantle moves between the edge of the pole-piece and the current of water without touching the latter, substantially as set forth. (3.) An arrangement for leading the current containing the suspended material in the apparatus set forth in claim 2, characterized by a vessel *g* located under the drum *e*, and divided by means of a partition *h* in two compartments *i*, *k*, lying side by side, the one compartment *i* being provided at the bottom with a supply-pipe *l* for the suspended material, and the other compartment *k* being provided at the bottom with a discharge-conduit *m* for the non-metallic part of the material, and at the top with an overflow discharge *n* for the less magnetic part of the material, substantially as set forth.

(Specification, 4s. 6d.; drawing, 1s.)

No. 17347.—4th December, 1903.—JAMES DUNBAR, of Invercargill, New Zealand, Engineer. An improved ribber for flax-stripping machines.

Claims.—(1.) The distinct novelty of a metal ribber as described, with interchangeable lips of suitable metal. (2.) In a flax-dressing machine, a body-piece (Fig. 2) capable of being fitted with interchangeable lips 3 to be used in manner set forth in specifications. (3.) In a flax stripping or dressing machine, interchangeable lips in combination with a suitable body capable of quick adjustment, as described in specification, and shown on plans.

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

No. 17348.—7th December, 1903.—GEORGE WILLIAM BASLEY, of Vulcan Chambers, corner of Queen Street and Vulcan Lane, Auckland, New Zealand, Patent Agent (nominee of National Cash Register Company, of Dayton, Ohio, United States of America). Improvements in manifolding account-books.

Claims.—(1.) In a manifolding account-book, the combination with two independent leaf-sections superposed one over the other of a suitable back, and means for attaching one of said leaf-sections to said back, with provisions permitting adjustment of said leaf-section to and from the other leaf-section. (2.) In a manifolding account-book, the combination with a metal back of an under leaf-section detachably secured at one end of said back, an upper leaf-section, and means for detachably securing the same to said back, with provisions permitting adjustment thereof to and from the under leaf-section. (3.) A manifolding account-book consisting of a metal back having at one end a pocket adapted to hold a detachable leaf-section, and having at the other end an enlarged pocket adapted to hold a detachable leaf-section, two independent leaf-sections for said pockets, and means for attaching one of said leaf-sections within said enlarged pocket, with provisions permitting the adjustment of said leaf-section to and from the other leaf-section. (4.) A manifolding account-book consisting of a metal back having at one end a pocket adapted to hold a detachable leaf-section, and having at the other end an enlarged pocket adapted to hold a detachable leaf-section, two independent leaf-sections for said pockets, means for attaching one of said leaf-sections within said enlarged pocket, with provisions permitting the adjustment of said leaf-section to and from the other leaf-section, and a carbon sheet adapted to be interposed between a sheet of the upper leaf-section and a sheet of the under leaf-section. (5.) In a manifolding account-book, the combination with two independent leaf-sections superposed one over the other of a single-piece metal back adapted to hold said leaf-sections, and bent slightly at one end to raise the level of the binding end of the under leaf-section, and means for attaching the upper leaf-section to the other end of said back, with provisions permitting adjustment thereof to and from the other leaf-section. (6.) As an article of manufacture, a back for manifolding account-books consisting of a single piece of metal having a flat body part, and bent at one end into the shape of a pocket to receive a single leaf-section, and at the other end into an enlarged pocket of sufficient size to have inserted into it the free end of said leaf-section and the binding end of a second and superposed leaf-section. (7.) As an article of manufacture, a metal clip for binding a plurality of independent leaves, said clip having a tongue projecting from each end, substantially as and for the purpose described.

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

No. 17349.—7th December, 1903.—GEORGE WILLIAM BASLEY, of Vulcan Chambers, corner of Queen Street and Vulcan Lane, Auckland, New Zealand, Patent Agent (nominee of National Cash Register Company, of Dayton, Ohio, United States of America). Improvements in manifolding account-books.

Claims.—(1.) In a manifolding account-book, a back therefor consisting of a single piece of metal shaped with two pockets, one pocket being raised above the level of the other pocket. (2.) In a manifolding account-book, a back therefor consisting of a single piece of metal shaped into a flat body part, with a raised horizontal shelf at one end. (3.) A manifolding account-book consisting of a single-piece back having a raised shelf at one end, two independent leaf-sections attached at opposite ends of said back, one of said leaf-sections being supported upon said shelf, and a carbon sheet adapted to be interposed between a sheet of the upper leaf-section and a sheet of the lower leaf-section. (4.) A manifolding account-book consisting of a single-piece metal back shaped with two pockets, one at each end thereof, one pocket being raised above the other pocket, two independent leaf-sections secured within said pockets, and a carbon sheet adapted to be interposed between a sheet of the upper leaf-section and a sheet of the lower leaf-section. (5.) A manifolding account-book consisting of a single-piece metal back shaped with two pockets, one at each end thereof, one pocket being raised above the level of the other pocket, two independent leaf-sections adapted to be detachably secured within said pockets, and a carbon sheet adapted to be interposed between a sheet of the upper leaf-section and a sheet of the lower leaf-section. (6.) A manifolding account-book consisting of a single-piece metal back having a raised shelf at one end, a pocket adjacent to said shelf, a second pocket at the opposite end of said back, two independent leaf-sections secured within said pockets, and a carbon sheet adapted to be interposed between a sheet of the upper leaf-section and a sheet of the lower leaf-section. (7.) A manifolding account-book consisting of a single-piece metal back having a raised shelf at one end, a pocket adjacent to said shelf, a second pocket at the opposite end of said back, two adjacent leaf-sections adapted to be detachably secured within said pockets, and a carbon sheet adapted to be interposed between a sheet of the upper leaf-section and a sheet of the lower leaf-section. (8.) As an article of manufacture, a back for manifolding account-books comprising a single piece of metal having a flat body part, and bent at one end into the shape of a pocket, and at the other end bent in such manner as to form a vertical shoulder, a horizontal shelf at right angles thereto, and a second pocket at the other end of said shelf, substantially as and for the purpose described. (9.) In a manifolding account book, the combination, with a suitable back, of two independent leaf-sections, one arranged to overlay the other, and the under one thereof arranged to extend beyond the upper one, and a carbon manifolding-sheet, substantially as and for the purpose described. (10.) In a manifolding account-book, the combination, with a suitable back, of two independent leaf-sections attached at opposite ends of said back, one of said sections being arranged to overlay the other section, and the lower section extending beyond the upper section for the purpose of carrying forward amounts, a suitable support between said leaf-sections, and a carbon manifolding-sheet, substantially as and for the purpose described. (11.) In a manifolding account-book, the combination, with a suitable back, of two independent leaf-sections, one of said sections being arranged to overlay the other, means for attaching the upper leaf-section to said back in such manner that it will be held above the level of the lower leaf-section, and a carbon manifolding-sheet, substantially as and for the purpose described. (12.) In a manifolding account-book, the combination, with a suitable back, of two independent leaf-sections, one arranged to overlay the other, a rigid support for holding one of the upper leaf-sections above the level of the lower leaf-section, and a carbon manifolding-sheet, substantially as and for the purpose described. (13.) In a manifolding account-book, the combination, with a suitable back, of two independent leaf-sections attached at opposite ends of said

back, a rigid support for holding the upper leaf-section above the level of the lower leaf-section, said upper leaf-section being decreased in length to leave a space or margin on the lower leaf-section at the attached end thereof for the purpose of carrying forward the total of past account, and a carbon manifolding-sheet, substantially as and for the purpose described. (14.) In a manifolding account-book, the combination with an original sheet, comprising a main part and a stub part, of a duplicate sheet extending under both said main part and said stub part, a carbon sheet interposed between said original sheet and said duplicate sheet, and means concealed beneath said carbon sheet to prevent the duplication of memoranda on said stub part. (15.) In a manifolding account-book, the combination with an original sheet, comprising a main part and a stub part, of a duplicate sheet extending under both said main part and said stub part, a carbon sheet interposed between said original sheet and said duplicate sheet, and means concealed beneath said carbon sheet to prevent the duplication of a certain portion of said stub part. (16.) In a manifolding account-book, the combination with an original sheet, comprising a main part and a stub part, of a duplicate sheet extending under both said main part and said stub part, a carbon sheet interposed between said original sheet and said duplicate sheet, and a flexible flap beneath said carbon sheet to prevent the duplication of memoranda on the stub part. (17.) A manifolding account-book consisting of a lower leaf-section composed of a plurality of leaves, each of which consists of a main part adapted to be retained within the book and a stub part adapted to be detached, an upper leaf-section composed of a plurality of duplicate leaves adapted to be detached from the book, a carbon sheet extending over the entire portion of the detachable duplicate sheet, and a flexible flap bound together with said duplicate leaves and situated beneath said carbon sheet in such manner as to prevent a duplication of memoranda of said stub part, substantially as described.

(Specification, 11s.; drawings, 2s.)

No. 17352.—10th December, 1903.—WILLIAM JOSEPH ARMBRUSTER, Chemist, and JOHN MORTON, Gentleman, both of St. Louis, Missouri, United States of America. Improvements in chlorination-barrels.

Extract from Specification.—The object of my invention is to construct a chlorination-barrel which shall be provided with a special compartment to contain the chemicals from which the chlorine is generated, provision being made to conduct the chlorine-gas from such compartment to the main chamber of the barrel containing the ore or pulp to be treated, such provision being either through an opening disposed about the axis of rotation of the barrel and communicating directly with the space above the surface of the pulp, or through an open coil disposed adjacent to the inner peripheral surface of the barrel and having its intake or fixed end in direct communication with such compartment. . . . . A further object of my present invention is to provide special means for heating the contents or pulp to be treated; a further object is to provide means for cutting off the supply of chlorine at the end of the operation, or at any time when occasion therefor may arise; a further object is to provide means for introducing the chlorine-producing reagents without the danger of their reacting upon each other until after the barrel is set in motion; and a further object is to provide such other improvements better apparent from a detailed description of the invention. . . . .

(Specification, 15s.; drawings, 5s.)

[NOTE.—The above extract from the specification is inserted in place of the claims.]

No. 17353.—10th December, 1903.—HENRY R. WORTHINGTON, a New Jersey corporation having its place of business at 114, Liberty Street, New York, United States of America (assignees of William Clinton Brown, of Richmond, New York aforesaid, Mechanical Engineer). Improvements in compensating direct-acting engines.

Claims.—(1.) In a compensating direct-acting engine, the combination with a plurality of pistons timed differently, of means whereby power is stored up during the first part of the strokes of the pistons and utilised during the latter part of the strokes, and connections between the pistons for aiding each piston in the last part of its stroke and securing a uniform stroke and timing of the pistons. (2.) In a compensating direct-acting duplex engine, the combination with the cylinders and pistons on opposite sides of the engine, of compensating mechanism acting to store up power during the first part of the stroke of each piston and utilise it to aid the piston during the latter part of its stroke, and connections between the pistons for aiding each piston in the last part of its stroke by the other piston and securing a uniform stroke and timing of the pistons. (3.) In a compensating direct-acting duplex engine, the combination with the cylinders and pistons on opposite sides of the engine, of compensating cylinders and pistons acting in opposition to the pistons during the first part of their strokes and in conjunction therewith during the latter part of their strokes, and positive mechanical connections between the pistons whereby each piston in the first part of its stroke aids and controls the other piston in the last part of its stroke. (4.) In a compensating direct-acting engine, the combination with connections between the pistons for aiding each piston in the last part of its stroke and securing a uniform stroke and timing of the pistons, of mechanism acting independently of said connections to store up power during one part of the piston-stroke and utilise it to aid the piston during another part of the stroke. (5.) The combination with the cylinders and pistons on opposite sides of a duplex direct-acting engine, of the compensating cylinders and pistons e, e^1, slide 21 guided in a fixed path transverse to the piston-rods, and compensating toggle levers connecting the slide with the piston-rods. (6.) A compensating direct-acting duplex engine substantially as described in connection with the drawings.

(Specification, 9s.; drawings, 3s.)

No. 17354.—10th December, 1903.—HENRY R. WORTHINGTON, a New Jersey corporation having its place of business at 114, Liberty Street, New York, United States of America (assignees of William Clinton Brown, of Richmond, New York aforesaid, Mechanical Engineer). Improvements in valve-movements for duplex steam-engines.

Claims.—(1.) In an expansion duplex engine having two or more cylinders on each side, the combination with the valves, of rock shafts extending across the engine and connected to the valves for operating the valves on each side of the engine from the opposite side, rock-shaft-operating rods carried by the pistons of the larger cylinders, and connections between said rods and the rock shafts. (2.) In a multiple-expansion duplex engine, the combination with the cylinders on opposite sides of the engine and their valves, of rock shafts mounted between the high and intermediate pressure cylinders and extending across the engine and connected to the valves for operating the valves on each side of the engine from the opposite side, rock-shaft-operating rods connected to the low-pressure pistons, and connections between said rods and the rock shafts. (3.) In a multiple-expansion duplex engine, the combination with the cylinders on opposite sides of the engine and their valves, of rock shafts mounted between the high and intermediate pressure cylinders and extending across the engine and connected to the valves for operating the valves on each side of the engine from the opposite side for admission, and operating the high-pressure-cylinder valves by their own side for cut-off, rock-shaft-operating rods connected to the low-pressure pistons, and connections between said rods and the rock shafts. (4.) The combination with the cylinders B, C, and B^1, C^1, on opposite sides of the engine, and their valves, of rock shafts K, L, mounted outside the smaller cylinders B, B^1, and connected to the valves, rods M carried by the pistons N of the larger cylinders C, C^1, and extending between the cylinders B, B^1, and connections from the rods M to the rock shafts K, L, between the cylinders B, B^1, substantially as described. (5.) A triple-expansion duplex engine substantially as shown and described in connection with Figs. 1 and 2. (6.) A compound duplex engine substantially as shown and described in connection with Figs. 3 and 4.

(Specification, 5s.; drawings, 2s.)

No. 17357.—8th December, 1903.—MONCKTON DAVY SYNNOT, of 504–526, Bourke Street, Melbourne, Victoria, Wool-broker (assignee of Michael Murphy, of Winton, Campbelltown, Tasmania, Rabbiter). An improved method of trapping rabbits.

Claim.—An improved method of trapping rabbits, consisting in throwing a little earth into the burrow, placing a piece of wire netting or wire-netting framework over the mouth of the burrow, and securing same in position in such a manner that the rabbits will scratch back the earth and block the burrow, so as to imprison themselves, substantially as set forth.

(Specification, 1s.)

No. 17369.—14th December, 1903.—JOSEPH COOK, care of Messrs. Danks and Son, of 10, Brandon Street, Wellington, New Zealand. Improved apparatus for feeding calves and other young animals.

Claims.—(1.) Apparatus for the purpose indicated, comprising a tube the upper portion of which is bent approximately at right angles, a disc upon said tube, a nipple at its

outer end, and a rubber tube between the disc and the mouthpiece, substantially as specified and illustrated. (2.) Apparatus for the purpose indicated, comprising a tube the upper portion of which is bent approximately at right angles, a disc upon said tube, a nipple at its outer end, a rubber tube between the disc and the mouthpiece, and a strainer at the lower end of the tube, substantially as specified. (3.) For the purpose indicated, apparatus consisting of the parts arranged, combined, and operating substantially as specified, and as illustrated in the drawings.

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

No. 17370.—14th December, 1903.—DONALD CHARLES MACDONALD, of Campbelltown, Southland, New Zealand, Storeman. Means for treating grain.

Claims.—(1.) In means for treating grain, a furnace adapted to burn the desired material, and a chamber adapted to receive the grain mounted on the top of such furnace and provided with perforated passages or tubes extending upwards from the top of the furnace and distributed over the space enclosed by the chamber, substantially as specified. (2.) In means for treating grain, a furnace adapted to burn the desired material, and a chamber adapted to receive the grain mounted on the top of such furnace and provided with double sides around its bottom half, enclosing a space between them, and the inner side of which is formed of perforated material, and with a cone-shaped bottom fitting above the open top of the furnace, and perforated tubes extending upwards from the cone and distributed evenly over the space enclosed by the chamber, the space enclosed by the double sides of the chamber and the tubes being in communication with the top of the furnace, substantially as and for the purposes specified. (3.) In means for treating grain, a furnace adapted to burn the desired material, and a chamber adapted to receive the grain mounted on the top of such furnace and provided with perforated passages or tubes extending upwards from the top of the furnace and distributed over the space enclosed by the chamber, and with a feed-hopper upon its top and with outlet-openings around its lower end, substantially as and for the purposes specified. (4.) The general arrangement, construction, and combination of parts in my means for treating grain as herein described and explained, as illustrated in the drawings, and for the purposes specified.

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

No. 17372.—15th December, 1903.—THOMAS GILLESPIE, of Lawrence, Otago, New Zealand, Dredgemaster. Improved shoe for the links of dredge-buckets.

Claim.—A shoe for the links of dredge-buckets made of angle steel and fixed in position by rivets, substantially as specified and illustrated.

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

No. 17389.—7th October, 1903.—JOHN R. WATT, of Islington, Canterbury, New Zealand. Improvements in and relating to the covering of walls of houses, &c.

Claims.—(1.) The covering of walls of houses, &c., by sheets of galvanised iron or steel bent to form several sloping projections in each sheet, substantially as shown in the drawings. (2.) The covering of the walls of houses, &c., by sheets of galvanised iron or steel bent to form several sloping projections in each sheet, and having a swage bend run in the fleat between each projection, substantially as shown in the drawings. (3.) The covering of the walls of houses, &c., by sheets of galvanised iron or steel bent to form several sloping projections in each sheet, and having a swage bend run in the fleat between each projection, the longitudinal joints being formed by the upper edge of the lower sheet being turned out at right angles, the lower edge of the upper sheet being turned in at right angles and overlapping the upper edge of the lower sheet, substantially as shown in the drawings.

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

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 post-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 the foregoing complete specifications appear at the end of this *Gazette*.

F. WALDEGRAVE,
Registrar.

Provisional Specifications.

Patent Office,
Wellington, 6th January, 1904.

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

No. 17163.—23rd October, 1903.—RICHARD RADCLIFFE TAYLOR, of High Street, Roslyn, New Zealand, Water-proof Manufacturer. A concentrated marl brick.

No. 17237.—12th November, 1903.—JAMES HOLMS, Jun., of Waimahaka, New Zealand, Farmer. Clasp for spreaders, traces, or chains.

No. 17278.—19th November, 1903.—LIZZIE FRAME, wife of John Frame, of Reed Street, Oamaru, New Zealand. An improvement in or relating to washing-boilers.

No. 17288.—25th November, 1903.—CHARLES COOPER, of Mangatoki, Taranaki, New Zealand, Dairy-factory Manager and Mechanical Engineer. An improved weighing-machine specially constructed for the purpose of delivering by weight skim-milk from dairy factories.

No. 17345.—9th December, 1903.—WALTER EDWIN CLIFFORD HOADLEY, of St. Kilda Road, South Melbourne, Victoria, Jam-manufacturer. An improved process for the inversion of sugar.

No. 17346.—7th December, 1903.—WILLIAM HOOD, of Dunedin, New Zealand, Upholsterer. Border spring for chairs, couches, and the like.

No. 17351.—10th December, 1903.—JOHN THEOBALD, of Wellington, New Zealand, Carrier. An improved shaft-tug for harness.

No. 17356.—8th December, 1903.—EDWARD WATERS, Jun., a member of the firm of Edward Waters and Son, Patent Agents, of 414–418, Collins Street, Melbourne, Victoria (nominee of Edwin Midgley, of 38, Hyde Park Gate, London, England, Gentleman). A new or improved construction of pneumatic-tire cover.

No. 17358.—8th December, 1903.—WILLIAM SUTTON, of Hedgehope, Southland, New Zealand, Farmer. An invention for strengthening disc-harrows travelling-gear.

No. 17359.—8th December, 1903.—JOHN MARKS, of Devonport, near Auckland, New Zealand, Engineer. An improved hose-coupling.

No. 17360.—11th December, 1903.—CHRISTINA STRINGFELLOW, of Arch Hill, Auckland, New Zealand, Dressmaker. An improved button-fastener.

No. 17361.—11th December, 1903.—WILLIAM TONGMAN EARL, of Waikari, Canterbury, New Zealand, Farmer. Improved apparatus for straining and splicing fencing-wires.

No. 17362.—11th December, 1903.—CHARLES HAMILTON KNOWLES, Insurance Agent, and FREDERICK WILLIAM TAYLOR, Bottler, both of Wanganui, Wellington, New Zealand. An invention for speedily stopping all kinds of ships, steamers, vessels, or any kind of craft whatsoever propelled by wind, steam, or other power.

No. 17363.—11th December, 1903.—JOSEPH RITSCHER, of 319, Swanston Street, Melbourne, Victoria, Engineer. An adjustable throw-crank for cycles and other machines.

No. 17365.—11th December, 1903.—RALPH HOWARD SKIPWITH, of Christchurch, New Zealand, Pressman. An improved locking-device for doors, more particularly applicable to the sliding doors of railway-carriages, tramcars, and the like.

No. 17367.—10th December, 1903.—JOHN HERCUS, Agent, and FREDERICK WILLIAM BARTON, Gardener, both of Dunedin, New Zealand. Improved horn-protectors for cattle.

No. 17368.—10th December, 1903.—HUGH KERR, Farmer, and JAMES WOODHEAD, Farmer, both of Drummond, New Zealand. Improvements in seed-sowers.

No. 17371.—15th December, 1903.—GERALD IRVIN LOWE, of Palmerston North, New Zealand, Flax-mill hand. Improved apparatus for scutching flax and the like.

No. 17373.—11th December, 1903.—JANE STEWART, of Invercargill, New Zealand, Married Woman. A machine for spreading polish on floors and the like.

No. 17374.—12th December, 1903.—JOHN CHRISTIE and THOMAS REID CHRISTIE, both of Dunedin, New Zealand, Plumbers (assignees of William Borlase, of North-east Valley, Dunedin aforesaid, Mechanical Engineer). Improvements in wire-strainers.

No. 17375.—15th December, 1903.—RICHARD SEPTIMUS ROUNTHWAITE, of 20, Tinakori Road, Wellington, New Zealand, Civil Engineer. An improved apparatus for dipping wood blocks in tar.

No. 17378.—16th December, 1903.—THOMAS HEATH, of Pokororo, Nelson, New Zealand, Farmer. Improved instrument for use in castrating lambs.

No. 17379.—16th December, 1903.—WILLIAM JOSEPH SELLARS, of 14, Salisbury Street, Christchurch, Canterbury, New Zealand, Fitter. Improved apparatus for manufacturing skewers, spiles, and the like.

No. 17380.—17th December, 1903.—UNITED SHOE MACHINERY COMPANY, of Paterson, State of New Jersey

United States of America, a corporation duly organized under the laws of said State of New Jersey, and having a place of business at 205, Lincoln Street, Boston, Massachusetts, United States of America (assignees of George Goddu, of Winchester, Middlesex, Massachusetts aforesaid, Inventor). Improvements in or relating to loose nailing machines.

No. 17381.—17th December, 1903.—JOHN ALLEN MANTON, Clerk, and CHARLES SHELLEY OAKES, Engineer, both of Parramatta, New South Wales. An apparatus for indicating the score of players in such games as billiards and the like.

No. 17382.—16th December, 1903.—ALEXANDER LEITH, of Albert Brewery, Queen Street, Auckland, New Zealand, Farmer. An improved leg-bail and tail-holder in connection with milking cows.

No. 17386.—17th December, 1903.—CHARLES EDWARD GRAY, of New Town, near Hobart, Tasmania, Timber-merchant, and JOHN SHAW TOLMAN, of Elizabeth Street, Hobart aforesaid, Wood and Coal Merchant. Improvements in mechanical coin-freed franking and stamping machines.

No. 17387.—17th December, 1903.—CHARLES DAVIS LIGHTBAND, of 17, Roxburgh Street, Wellington, New Zealand, Commission Agent. A boot-polishing machine.

No. 17393.—17th December, 1903.—JAMES GLOSSOP, of Dunedin, New Zealand, Commission Agent. Improvements in socks and the like.

No. 17394.—17th December, 1903.—ROBERT BAXTER, of Milton, New Zealand, Woollen Mechanical Expert. Improved oil emulsion.

No. 17396.—18th December, 1903.—JAMES ROBINSON, of Albert Street, Carpenter, and ALBERT HENRY LIGHT, Piano-importer, both of Auckland, New Zealand (trading under the name of "John Tregea and Co."). A mixture for destroying insect-life.

No. 17398.—18th December, 1903.—JOHN ANDREW EASTON, of Dunedin, New Zealand, Groom. Improved feed reservoir and box for horses and the like.

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

[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.]

F. WALDEGRAVE,
Registrar.

Letters Patent sealed.

LIST of Letters Patent sealed from the 11th December, 1903, to the 6th January, 1904, inclusive:—

No. 15061.—G. Claydon, supplying steam and air to furnace.

No. 15304.—J. M. Armour, making chairs, &c., collapsible.

No. 15338.—P. Petersen, life-saving appliance. (L. Rosengren.)

No. 15365.—C. Lashlie, hat and clothes brush.

No. 15372.—J. B. Mason, concentrating-table.

No. 15381.—R. W. Gibbs and T. H. Manson, truss.

No. 15449.—J. Armstrong, securing cords to sashes.

No. 15487.—R. S. Black, animal-trap.

No. 15536.—R. L. H. Murray, water-heater.

No. 15653.—E. R. Jennings and the Pyrojim Syndicate, Limited, treating floor-dust. (J. M. Jameson.)

No. 15677.—F. F., L. B., A. C., and H. W. Coulsell, vertical multitubular water-column boiler.

No. 15703.—F. S. Ornstein, wheel-tire cover.

No. 15749.—Economic Hoisting and Ballast Company, unloading cargo from vessel. (A. Mullan.)

No. 15925.—F. A. Brand, disc plough.

No. 15976.—J. Reid, preventing crossing of shear-blades.

No. 16249.—J. H. Reid, generating electricity.

No. 16409.—E. S. Koch, operating curtain-pole.

No. 16556.—G. W. Donning and H. T. Ambrose, typewriter.

No. 16598.—C. M. Brophy, measuring ladies' skirts.

No. 16620.—G. E. and A. J. Fortescue, forcing mixture from rabbit-poison distributer.

No. 16621.—T. A. Edison, dry separation of ores.

No. 16663.—C. Cristadoro, kneading and mixing machine.

No. 16678.—W. E. Hughes, manufacturing coal-gas. (T. Settle and W. A. Padfield.)

No. 16702.—Planters Compress Company, feeding-mechanism for press. (W. M. Rheem.)

No. 16703.—W. Peto and J. W. T. Cadett, electric accumulator.

No. 16739.—A. Harvey, liquid-separator. (D. H. Burrell—M. L. Hoyt.)

No. 16740.—G. G. Turri, football-valve. (J. McKay.)

No. 16743.—E. F. W. Wieda, mixing-machine.

No. 16744.—D. A. Poe and W. H. Scharf, linotype machine.

No. 16751.—C. W. Neilsen, food-product. (F. Bunyan.)

No. 16782.—B. F. McTear and H. C. W. Gibson, tubes, &c.

No. 16784.—E. M. G. Coleman, igniting matches.

No. 16790.—H. Poetter, blasting-substance.

No. 16795.—G. W. Brown and G. M. Norton, furnace fire-bridges.

No. 16804.—T. G. Rennerfelt, centrifugal liquid-separator.

No. 16808.—Regenerated Cold Air Company, treating air. (F. White.)

No. 16823.—T. McDonough, oil-lamp.

No. 16825.—W. E. Holderman, treating slimes.

No. 16847.—T. d'A. C. Maxted, water-closet seat.

No. 16853.—H. Passow, blast furnace.

No. 16870.—The Wilfley Ore-concentrator Syndicate, Limited, concentrating ores. (A. R. Wilfley.)

No. 16871.—The Wilfley Ore-concentrator Syndicate, Limited, concentrating ores. (A. R. Wilfley.)

No. 16874.—W. H. Dunk, turning-machine.

No. 16878.—C. A. Ulrich, bucket dredge.

F. WALDEGRAVE,
Registrar.

Letters Patent on which Fees have been paid.

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

SECOND-TERM FEES.

NO. 12107.—W. E. Hughes, attaching corrugated-iron sheets on buildings. (C. H. Windle.) 19th December, 1903.

No. 12235.—D. McRorie, umbrella. (J. Husbands.) 7th December, 1903.

No. 12256.—E. Sandow, dumb-bell. 10th December, 1903.

No. 12259.—F. Gold, nail for iron roofing, &c. 15th December, 1903.

No. 12266.—A. R. Pullen, rail-joint. 9th December, 1903.

No. 12269.—A. Smith, cleaning sheep-dags, &c. 16th December, 1903.

No. 12270.—E. Shaw, cooking, concentrating, &c., liquids. 29th December, 1903.

No. 12274.—J. Anderson, cream-temperature controller. 30th December, 1903.

No. 12309.—New Zealand Loan and Mercantile Agency Company, Limited, seed-feeding device. (C. Bristow.) 17th December, 1903.

No. 12335.—W. S. and C. I. Corby and T. J. Mayer, making dough for bread. 30th December, 1903.

No. 12372.—United Shoe Machinery Company, stitch forming and finishing machine. (E. F. Mower and P. A. Coupal.) 17th December, 1903.

No. 12632.—E. R. Hill, electro-pneumatic controlling apparatus. 10th December, 1903.

No. 12656.—G. Westinghouse, railway-coupling, &c. 11th December, 1903.

No. 13293.—W. M. Mordey and G. C. Fricker, electricity-meter. 24th December, 1903.

THIRD-TERM FEES.

No. 9110.—J. Sands, joint for metal pipes. 9th December, 1903.

No. 9131.—J. Hall, treating skins, hides, &c. 15th December, 1903.

F. WALDEGRAVE,
Registrar.

Notice of Requests to amend Applications for Letters Patent.

Patent Office,
Wellington, 7th January, 1903.

REQUESTS for leave to amend the specifications relating to the undermentioned application and specification for Letters Patent have been received, and are open to public inspection at this office. Any person may, at any time within one month from the date of this *Gazette*, give me notice in writing of opposition to the amendments in either case. Such notice must set forth the particular grounds of objection, and be in duplicate. A fee of 10s. is payable thereon.

No. 15241.—6th August, 1902.—Leah Roberts, of Carterton, New Zealand, Teacher of Dress-cutting. Improvements in charts for dress-cutting.

The nature of the proposed amendments is as follows:—

1. To strike out lines 12 and 13 on page 1, and insert instead the following: "Its leading features are as follows: It gives the exact number of pieces required for a bodice without calculation, and each part of the charts and each curve suggests the drafting. Again, throughout the charts the lines correspond by putting one point on one line opposite one point on the line required to correspond, whereas in other systems a number of points are required to correspond for a similar purpose. The invention consists of these features, and of the arrangement of parts, all hereinafter described."

2. At bottom of page 2, to add: "I am aware of Mrs. Langer's Patent, No. 14058, and I expressly declare that I do not claim in the specification any part of the said invention."

3. To cross out lines 5, 6, 7, 8, and 9 on page 3 constituting the claim, and insert the following: "(1.) Chart for dress-cutting, which gives the exact number of pieces required for a bodice without calculation, and each part of and each curve in which suggests the drafting, substantially as described. (2.) Charts for dress-cutting, in which throughout the lines correspond by putting one point on one line opposite one point on the line required to correspond, substantially as described. (3.) The improvements in charts for dress-cutting, all substantially as and for the purposes set forth."

The applicant states: "My reasons for making these amendments are to more clearly define the novel features of my invention."

No. 16666.—21st July, 1903.—Robert Latimer Adams and David Adams, Wellington, New Zealand, Builders. A wall-plaster and boiler-covering used for and in connection with the erection and completion of buildings, and the covering of boilers and pipes to retain heat.

The nature of the proposed amendment is as follows:—

1. To alter the word "nominees" to "assignees," line 12 in the application; and

2. To add the following words after "America," line 13 in the application: "he being the assignee of William Coale, of Warren Trumbull County, Ohio, the actual inventor thereof."

The applicants state: "Our reason for the amendment is that the actual inventor, then unknown to us, should be made known to the Patent Office."

F. WALDEGRAVE,
Registrar.

Request to amend Specification allowed.

THE request to amend specification and drawing No. 15940—Shely, breaking and cleaning fibrous material—advertised in Supplement to *New Zealand Gazette* No. 63, of the 6th August, 1903, has been allowed.

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. 12819.—Ross and Glendining, Limited, of High Street, Dunedin, New Zealand, Merchants, pocket-cutting appliance. [P. Palmer.] 18th December, 1903.

No. 15312.—Plaissetty Mantle Syndicate, Limited, of 6, Old Serjeant's Inn, London, England, incandescent filament and mantle. [J. T. Hunter—Plaissetty Mantle Syndicate, Limited—A. M. Plaissetty.] 24th November, 1903.

F. WALDEGRAVE,
Registrar.

Applications for Letters Patent abandoned.

LIST of applications for Letters Patent, with which provisional specifications only have been filed, abandoned (*i.e.*, complete specifications not lodged) from the 10th December, 1903, to the 6th January, 1904, inclusive:—

No. 15923.—R. Walker, liquid aerator and cooler.
No. 15959.—W. H. Brooks, generating gas.
No. 15961.—J. Somer, duplicate rubber tire-bladder for cycle.
No. 15966.—R. M. Murie, igniting gas in gas-engine.
No. 15967.—N. H. Whisker, J. Wilson, and A. Smart, jun., fire-escape.
No. 15969.—C. A. Johnson, railway-truck coupling.
No. 15970.—J. D. Florant, skylight.
No. 15977.—G. Stafford and A. C. S. French, dressing and washing flax.
No. 15979.—W. McKenzie, mounting billiard-table in ship.
No. 15986.—H. F. Mander and F. Lewis, bicycle and other air pump.
No. 15987.—H. F. Mander and F. Lewis, securing ends of machinery belting together.
No. 15988.—E. M. McLauchlan, cycling-machine.
No. 15993.—Artistic Woodwork Proprietary, Limited, decorating woodwork. (H. Smith.)
No. 16001.—C. Corr, gold-saving apparatus.
No. 16002.—W. S. Lawson, coriaceous material.
No. 16003.—S. G. Plucknett, reflecting view of vehicle to front facing driver of tram-car.
No. 16004.—H. Ashworth, utilising waste light from shop for advertising.
No. 16009.—J. Findlay, destroying noxious plants and weeds.
No. 16014.—W. Lyons, *indicating position to be taken in* line by racehorse. (J. G. Deeble.)
No. 16018.—H. Ham, cover for haystack.
No. 16021.—A. W. Giles, drop-latch gate-fastening.
No. 16024.—D. W. Macdonald, drawing-compasses.
No. 16025.—E. M. McLauchlan, cycle-driving mechanism.
No. 16026.—R. J. Moore, milk-aerator.
No. 16028.—J. Waymouth, ship's raft.
No. 16031.—S. Shuker, connecting ends of rails.
No. 16032.—B. Crawford, toe-piece for water-meter.
No. 16038.—A. S. Hasell, securing front of animal-cover.
No. 16046.—J. Stuart, lowering, &c., boat-chocks, &c.
No. 16047.—C. J. Cooze, self-fastening hairpin.
No. 16052.—H. E. Wilson, *kettle or pan bottom.*
No. 16053.—A. Busch, cultivator.
No. 16058.—W. Beamish, mooring-apparatus.
No. 16059.—J. M. Twomey, newspaper-folding machine.
No. 16060.—D. L. Turner, match or torch.
No. 16061.—F. W. Crowther, spirit-level.
No. 16062.—T. Stephens, retaining necktie in position on collar.
No, 16063.—T. M. Hickson, preparation for destroying blackberry-bushes.
No. 16064.—G. Meldrum, filter for taps.
No. 16070.—W. Brierly and G. Fraser, road-sweeper and collector.

ERRATUM.—No. 15922, R. L. Lockerbie, hanging sash, door, &c., was inadvertently advertised as abandoned in *Gazette* No. 94, of the 10th December, 1903.

F. WALDEGRAVE,
Registrar.

Applications for Letters Patent lapsed.

LIST of applications lapsed, owing to Letters Patent not being sealed, from 10th December, 1903, to 6th January, 1904, inclusive:—

No. 15007.—W. A. Land, seed and manure sower.
No. 15032.—T. Herbert, ping-pong bat.
No. 15053.—R. A. Morgan and C. S. Johnston, non-refillable bottle.
No. 15063.—A. McFarlane, butter-box.
No. 15064.—C. Slemitz, washing-copper.
No. 15074.—J. S. Rutherfurd, medicated biscuit.

F. WALDEGRAVE,
Registrar.

Letters Patent void.

LIST of Letters Patent void through non-payment of renewal fees from the 10th December, 1903, to the 6th January, 1904, inclusive:—

THROUGH NON-PAYMENT OF SECOND-TERM FEES.

No. 11981.—R. F. Marsh, rotary fluid-pressure motor.
No. 11982.—W. Hosking, automatic ore-feeder.
No. 11988.—A. J. Metzler, gelatinising brewing-grain.
No. 11989.—J. Gibson, loading coal, &c., in ship's holds.
No. 11997.—A. Sinclair, keg- or cask-stave jointing machine.
No. 12006.—P. Woods, horse-cover attachment.
No. 12012.—W. Cutten, replacing buckets on lower tumbler of dredger.
No. 12020.—The British Westinghouse Electric and Manufacturing Company, Limited, single-phase alternating-current generator. (W. E. Hughes—B. G. Lamme.)
No. 12022.—The Globe Cashier (British and Foreign), Limited, till and means for registering cash receipts. (W. Evans.)
No. 12024.—J. A. Secor, marine propulsion.
No. 12030.—The British Westinghouse Electric and Manufacturing Company, Limited, alternating-current induction motor. (J. P. Campbell—B. G. Lamme.)
No. 12044.—R. P. Fincham, knife-cleaner.
No. 12047.—G. B. Webb, measuring-faucet.
No. 12048.—C. C. Paltridge, treating paper.
No. 12056.—R. M. Gatenby, petty-account book.
No. 12067.—A. M. Rust, regulating and controlling marine engines.

THROUGH NON-PAYMENT OF THIRD-TERM FEES.

No. 8910.—T. Boyd, cycle-bearing.
No. 8921.—J. Gray, disc harrow.

F. WALDEGRAVE,
Registrar.

Design registered.

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

No. 197.—The Brett Printing and Publishing Company, Limited, of Auckland, New Zealand. Class 5. 10th December, 1903.

F. WALDEGRAVE,
Registrar.

Applications for Registration of Trade Marks.

Patent Office,
Wellington, 6th January, 1904.

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: 4175.
Date: 24th April, 1903.

TRADE MARK.

The word

PHEROPHONE.

NAME.

WALDBERG AND Co., Gesellschaft mit Beschraenkter Haftung, of Spandauer Strasse, 62-63, Berlin, Germany, Merchants.

No. of class: 8.
Description of goods: Telephones.

No. of application: 4435.
Date: 29th October, 1903.

TRADE MARK.

The essential particulars of the trade mark are as follow—the words "Benedictine" and "Munk" across, with the letters "D O M," and the combination of devices; and the applicants disclaim any right to the exclusive use of the added matter, save and except the words "Abbaye de Fecamp," which form a portion of their name.

NAME.

SOCIÉTÉ ANONYME DE LA DISTILLERIE DE LA LIQUEUR BENEDICTINE DE L'ABBAYE DE FÉCAMP, of Fecamp, in France, Distillers.

No. of class: 43.
Description of goods: A liqueur.

No. of application: 4436.
Date: 29th October, 1903.

TRADE MARK.

The word

Bénédictine

NAME.

SOCIÉTÉ ANONYME DE LA DISTILLERIE DE LA LIQUEUR BENEDICTINE DE L'ABBAYE DE FÉCAMP, of Fecamp, in France, Distillers.

No. of class: 43.
Description of goods: A liqueur.

No. of application: 4450.
Date: 16th November, 1903.

TRADE MARK.

The essential particulars of this trade mark are the device of a yacht and the word "Shamrock"; and the applicants disclaim any right to the exclusive use of the added matter, except as regards their name.

NAME.

MCNEILL BROS., of Wanganui, New Zealand, Milk-suppliers, trading as "The Fresh Food and Ice Company."

No. of class: 42.
Description of goods: Dairy-produce.

No. of application: 4456.
Date: 25th November, 1903.

TRADE MARK.

NAME.

JESSEP AND ELMSLEY, of Temuka, in the Colony of New Zealand, Bicycle-manufacturers.

No. of class: 22.

Description of goods: Bicycles.

No. of application: 4460.
Date: 1st December, 1903.

TRADE MARK.

NAME.

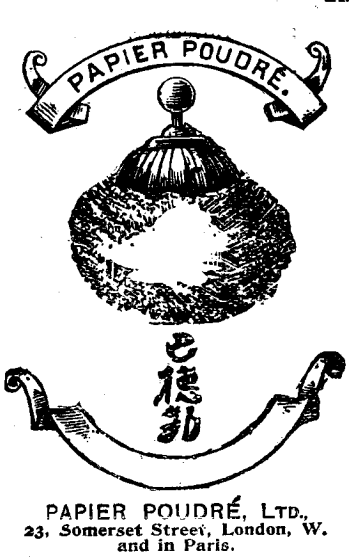
FRANK WILKINSON, of Main South Road, Caversham, Dunedin, New Zealand, Chemist and Druggist.

No. of class: 3.

Description of goods: Medicinal preparations for internal and external use.

No. of application: 4467.
Date: 7th December, 1903.

TRADE MARK.



The essential particulars of the trade mark are the combination of devices, consisting of the head and bust of a lady in evening dress, the representation of a powder-puff between two ornamental bands; and applicant disclaims any right to the exclusive use of the added matter, except in so far as it consists of her own name and address.

NAME.

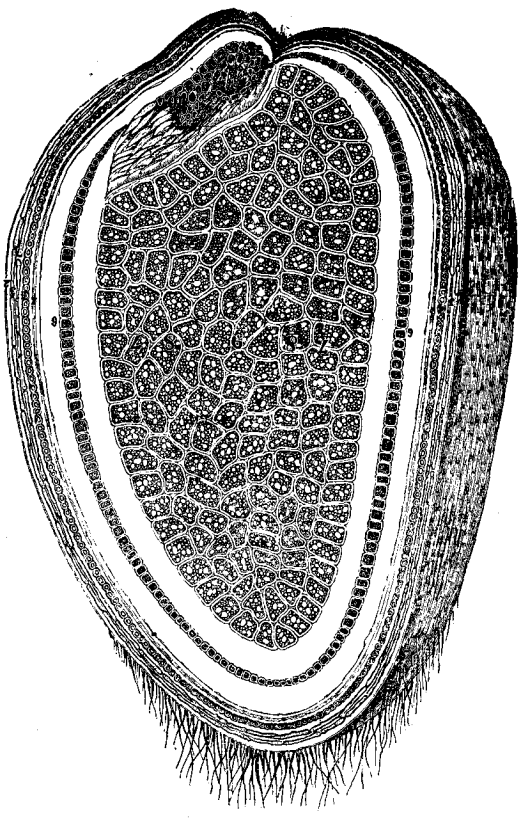
ANNIE SARAH BUTLER, trading as "The Papier Poudré, Limited," of 23, Somerset Street, in the County of London, England, Vendor of Toilet Preparations.

No. of class: 48.

Description of goods: A toilet article, being of the nature of a powder for the skin.

No. of application: 4470.
Date: 8th December, 1902.

TRADE MARK.



NAME.

CORNELIUS LOT WHEELER, of Sydenham, Christchurch, New Zealand, Flour-millers' Engineer.

No. of class: 42.

Description of goods: Wheaten flour and wheaten groats.

No. of application: 4471.
Date: 9th December, 1903.

TRADE MARK.

NAME.

RAIMES AND CO., LIMITED, of 24, Prince Regent Street, Stockton-on-Tees, England, Merchant.

No. of class: 50.

Description of goods: Metal and other polishes included in this class.

No. of application: 4472.
Date: 9th December, 1903.

TRADE MARK.

The word

Westrumite.

NAME.

LEONARD SCHADE VAN WESTRUM, of 90, Wilhelmstrasse, Berlin, Germany, Merchant.

No. of class: 50.

Description of goods: A preparation for use when mixed with water for sprinkling streets or mines for preventing the formation of dust.

No. of application: 4473.
Date: 9th December, 1903.

TRADE MARK.

The word

VIYELLA.

NAME.

WILLIAM HOLLINS AND CO., LIMITED, of Pleasley Works, near Mansfield and Warser Gate, Nottingham, and 2 and 3, Blue Boar Court, 55A, Friday Street, London, England, Spinners and Manufacturers.

No. of class: 33.

Description of goods: Yarns of wool, worsted, or hair.

No. of application: 4474.
Date: 9th December, 1903.

TRADE MARK.

The word

VIYELLA.

NAME.

WILLIAM HOLLINS AND CO., LIMITED, of Pleasley Works, near Mansfield and Warser Gate, Nottingham, and 2 and 3, Blue Boar Court, 55A, Friday Street, London, England, Spinners and Manufacturers.

No. of class: 38.

Description of goods: Articles of clothing.

No. of application: 4475.
Date: 9th December, 1903.

TRADE MARK.

The word

FRUITELINE.

NAME.

DUTTON AND CO., of View Road, Mount Eden, Auckland, New Zealand.

No. of class: 42.

Description of goods: Fruit preservative.

No. of application: 4477.
Date: 11th December, 1903.

TRADE MARK.

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: 4478.
Date: 14th December, 1903.

TRADE MARK.

Imperial
ITC

NAME.

THE IMPERIAL TOBACCO COMPANY (OF GREAT BRITAIN AND IRELAND), LIMITED, registered office East Street, Bedminster, Bristol, England, Tobacco-manufacturers.

No. of class: 50.

Description of goods: Tobacco-pipes and cigar and cigarette holders.

No. of application: 4479.
Date: 14th December, 1903.

TRADE MARK.

The word

IMP

NAME.

THE IMPERIAL TOBACCO COMPANY (OF GREAT BRITAIN AND IRELAND), LIMITED, registered office East Street, Bedminster, Bristol, England, Tobacco-manufacturers.

No. of class: 50.

Description of goods: Tobacco-pipes and cigar and cigarette holders.

No. of application: 4481.
Date 14th December, 1903.

TRADE MARK.

NAME.

THE CENTRAL CYCLONE COMPANY, LIMITED, of 343 and 345, Cable Street, London, England, Manufacturers.

No. of class: 6.

Description of goods: Grinding, mixing, shifting, feeding, and all kinds of machinery included in this class.

No. of application: 4484.
Date: 18th December, 1903.

TRADE MARK.

The word

"KURIT."

NAME.

FREDERICK JOHN COOPER, of Victoria Street, Auckland, New Zealand, Chemist.

No. of class: 3.

Description of goods: All articles in the class.

[NOTE.—*Class 3 is for chemical substances* prepared for use in medicine and pharmacy.]

No. of application: 4485.
Date: 18th December, 1903.

TRADE MARK.

The word

"ACME."

NAME.

FREDERICK NATHANIEL ROBERTON MEADOWS, of 9, Johnson Street, Wellington, New Zealand.

No. of class: 42.

Description of goods: Stock foods and cattle foods.

No. of application: 4486.
Date: 21st December, 1903.

TRADE MARK.

THE AWAHURI DAIRY

RED ROSE

BRAND

FACTORY COMPANY, LTD.

The essential particulars of this trade mark are the words "Red Rose"; and any right to the exclusive use of the word "Brand" is disclaimed.

NAME.

THE AWAHURI DAIRY FACTORY COMPANY, LIMITED, of Awahuri and Palmerston North, New Zealand.

No. of class: 42.

Description of goods: Butter.

No. of application: 4489.
Date: 23rd December, 1903.

TRADE MARK.

The word

VIDANA.

NAME.

MACKERRAS AND HAZLETT, of Dunedin and Invercargill, New Zealand.

No. of class: 42.
Description of goods: Tea, in packets and packages.

No. of application: 4490.
Date: 24th December, 1903.

TRADE MARK.

The word

"FLEXILE."

NAME.

THE AUCKLAND CO-OPERATIVE BOOT AND SHOE COMPANY, LIMITED, a company registered under the Companies Acts of New Zealand, whose address is Albert Street, Auckland, New Zealand, Boot and Shoe Manufacturers.

No. of class: 38.
Description of goods: Boots and shoes.

No. of application: 4491.
Date: 23rd December, 1903.

TRADE MARK.

The words

MONKEY BRAND

The essential particular of this trade mark is the word "Monkey"; and any right to the exclusive use of the added matter is disclaimed.

NAME.

LEVER BROS., LIMITED, of Balmain, near Sydney, State of New South Wales, Manufacturers.

No. of class: 48.
Description of goods: Perfumed soap and all other articles in class 48.

F. WALDEGRAVE,
Registrar.

Trade Marks registered.

LIST of Trade Marks registered from the 8th December, 1903, to the 6th January, 1904, inclusive:—

No. 3414; 4020.—H. S. Brothwood. Class 3. (*Gazette* No. 102, of the 11th December, 1902.)

No. 3415; 4248.—Kempthorne, Prosser, and Co.'s New Zealand Drug Company, Limited. Class 2. (*Gazette* No. 66, of the 20th August, 1903.)

No. 3416; 4249.—Kempthorne, Prosser, and Co.'s New Zealand Drug Company, Limited. Class 3. (*Gazette* No. 66, of the 20th August, 1903.)

No. 3417; 4250.—Kempthorne, Prosser, and Co.'s New Zealand Drug Company, Limited. Class 3. (*Gazette* No. 50, of the 25th June, 1903.)

No. 3418; 4251.—Kempthorne, Prosser, and Co.'s New Zealand Drug Company, Limited. Class 47. (*Gazette* No. 66, of the 20th August, 1903.)

No. 3419; 4252.—Kempthorne, Prosser, and Co.'s New Zealand Drug Company, Limited. Class 50. (*Gazette* No. 66, of the 20th August, 1903.)

No. 3420; 4291.—Kempthorne, Prosser, and Co.'s New Zealand Drug Company, Limited. Class 48. (*Gazette* No. 63, of the 6th August, 1903.)

No. 3421; 4317.—W. T. Murray and Co., Limited. Class 42. (*Gazette* No. 70, of the 3rd September, 1903.)

No. 3422; 4383.—British-American Tobacco Company, Limited. Class 45. (*Gazette* No. 78, of the 1st October, 1903.)

No. 3423; 4384.—British-American Tobacco Company, Limited. Class 45. (*Gazette* No. 78, of the 1st October, 1903.)

No. 3424; 4385.—British-American Tobacco Company, Limited. Class 45. (*Gazette* No. 78, of the 1st October, 1903.)

No. 3425; 4373.—Kynoch, Limited. Class 19. (*Gazette* No. 78, of the 1st October, 1903.)

No. 3426; 4374.—Kynoch, Limited. Class 20. (*Gazette* No. 78, of the 1st October, 1903.)

No. 3427; 4375.—Kynoch, Limited. Class 19. (*Gazette* No. 78, of the 1st October, 1903.)

No. 3428; 4376.—Kynoch, Limited. Class 20. (*Gazette* No. 78, of the 1st October, 1903.)

No. 3429; 4377.—Kynoch, Limited. Class 20. (*Gazette* No. 78, of the 1st October, 1903.)

No. 3430; 4285.—J. B. Thornley and T. H. Hassall. Class 39. (*Gazette* No. 74, of the 17th September, 1903.)

No. 3431; 4089.—Beattie, Lang, and Co. Class 42. (*Gazette* No. 13, of the 19th February, 1903.)

No. 3432; 4092.—Beattie, Lang, and Co. Class 42. (*Gazette* No. 18, of the 5th March, 1903.)

No. 3433; 4244.—Beattie, Lang, and Co. Class 42. (*Gazette* No. 50, of the 25th June, 1903.)

No. 3434; 4315.—The Austral-American Mercantile Company, Limited. Class 47. (*Gazette* No. 78, of the 1st October, 1903.)

No. 3435; 4100.—R. A. Dutton. Class 3. (*Gazette* No. 18, of the 5th March, 1903.)

No. 3436; 4101.—E. Dutton. Class 47. (*Gazette* No. 18, of the 5th March, 1903.)

No. 3437; 4153.—R. A. Dutton. Class 3. (*Gazette* No. 47, of the 11th June, 1903.)

No. 3438; 4347.—The Nugget Polish Company, Limited. Class 50. (*Gazette* No. 78, of the 1st October, 1903.)

No. 3439; 4348.—The Nugget Polish Company, Limited. Class 50. (*Gazette* No. 78, of the 1st October, 1903.)

No. 3440; 4349.—The Nugget Polish Company, Limited. Class 50. (*Gazette* No. 78, of the 1st October, 1903.)

No. 3441; 4380.—W. Teacher and Sons. Class 43. (*Gazette* No. 78, of the 1st October, 1903.)

No. 3442; 4381.—Allan and Co. Proprietary, Limited. Class 9. (*Gazette* No. 78, of the 1st October, 1903.)

No. 3443; 4331.—J. B. King and Co. Class 17. (*Gazette* No. 78, of the 1st October, 1903.)

No. 3444; 4332.—J. B. King and Co. Class 17. (*Gazette* No. 78, of the 1st October, 1903.)

No. 3445; 4333.—J. B. King and Co. Class 17. (*Gazette* No. 78, of the 1st October, 1903.)

No. 3446; 4395.—Neill and Co., Limited. Class 47. (*Gazette* No. 78, of the 1st October, 1903.)

No. 3447; 4208.—Ardath Tobacco Company. Class 45. (*Gazette* No. 70, of the 3rd September, 1903.)

No. 3448; 4341.—Douglas Manufacturing Company. Class 3. (*Gazette* No. 81, of the 15th October, 1903.)

No. 3449; 4204.—D. H. Burrell and Co. Class 8. (*Gazette* No. 78, of the 1st October, 1903.)

No. 3450; 4393.—E. Reynolds. Class 40. (*Gazette* No. 78, of the 1st October, 1903.)

No. 3451; 4390.—Union Oil, Soap, and Candle Company, Limited. Class 47. (*Gazette* No. 78, of the 1st October, 1903.)

No. 3452; 4399.—Sargood, Son, and Ewen. Class 38. (*Gazette* No. 84, of the 29th October, 1903.)

No. 3453; 4401.—Sargood, Son, and Ewen. Class 38. (*Gazette* No. 81, of the 15th October, 1903.)

No. 3454; 4335.—J. Bell and E. W. I. Collins. Class 43. (*Gazette* No. 81, of the 15th October, 1903.)

No. 3455; 4402.—A. G. Kenderdine. Class 2. (*Gazette* No. 81, of the 15th October, 1903.)

No. 3456; 4394.—Cifuentes Fernandez and Co. Class 45. (*Gazette* No. 81, of the 15th October, 1903.)

No. 3457; 4396.—Neill and Co., Limited. Class 47. (*Gazette* No. 81, of the 15th October, 1903.)

No. 3458; 4352.—J. E. Watson, J. Graham, and J. Gilkison. Class 2. (*Gazette* No. 78, of the 1st October, 1903.)

No. 3459; 4353.—J. E. Watson, J. Graham, and J. Gilkison. Class 47. (*Gazette* No. 70, of the 3rd September, 1903.)

No. 3460; 4356.—J. E. Watson, J. Graham, and J. Gilkison. Class 42. (*Gazette* No. 70, of the 3rd September, 1903.)

No. 3461; 4389.—Thomson, Bridger, and Co., Limited. Class 6. (*Gazette* No. 78, of the 1st October, 1903.)

No. 3462; 4404.—The Morgan Crucible Company, Limited. Class 16. (*Gazette* No. 81, of the 15th October, 1903.)

No. 3463; 4405.—Palmer and Co., Limited. Class 47. (*Gazette* No. 81, of the 15th October, 1903.)

No. 3464; 4410.—W. D. Laing. Class 3. (*Gazette* No. 81, of the 15th October, 1903.)

No. 3465; 4403.—R. A. and E. Dutton. Class 3. (*Gazette* No. 84, of the 29th October, 1903.)

No. 3466; 4422.—Dudgeon and Arnell Proprietary, Limited. Class 45. (*Gazette* No. 84, of the 29th October, 1903.)

No. 3467; 4423.—Dudgeon and Arnell Proprietary, Limited. Class 45. (*Gazette* No. 84, of the 29th October, 1903.)

No. 3468; 4426.—R. A. and E. Dutton. Class 3. (*Gazette* No. 84, of the 29th October, 1903.)

F. WALDEGRAVE,
Registrar.

Trade Mark Renewal Fees paid.

FEES paid for the renewal of the registration of the undermentioned trade marks for fourteen years from the 1st January, 1904:—

No. 68/420.—J. Hennessy and Co., of Cognac, France. 30th December, 1903.

No. 74/2340.—Mendelsohn, Levinsohn, and Co., of Dunedin, New Zealand. 29th December, 1903.

No. 75/731.—Tennent and Laird, of Glasgow, Scotland. (Two trade marks.) 17th December, 1903.

No. 75/3550.—E. H. Crease, of Wellington, New Zealand. (Two trade marks.) 30th December, 1903.

No. 76/3620.—J. Wertheim, of Frankfort on the Main, Germany. (Two trade marks.) 17th December, 1903.

No. 77/370.—A. F. Sise, of Boston, United States of America. 31st December, 1903.

No. 77/6891.—Perry Davis and Son, of Providence, United States of America. 23rd December, 1903.

No. 78/373.—Udolpho Wolfe Company, of New York, United States of America. 11th December, 1903.

No. 78/1745.—The Nostrand Trading Company, of New York, United States of America. 11th December, 1903.

No. 79/2852.—W. Barrows and Sons, of Tipton, England. (Two trade marks.) 23rd December, 1903.

No. 79/3735.—Lanman and Kemp, of New York, United States of America. (Three trade marks.) 10th December, 1903.

No. 79/4362.—Southall Bros. and Barclay, of Birmingham, England. 29th December, 1903.

No. 80/1387.—Bell and Black, Limited, of Stratford, England. 17th December, 1903.

No. 80/2850.—R. Porter and Co., of London, England. 15th December, 1903.

No. 80/4253.—American Watch Company, of Waltham, United States of America. 29th December, 1903.

No. 81/2221.—N. Hingley and Sons, of Dudley, England. 24th December, 1903.

No. 81/3459.—S. Manning and Co., of Christchurch, New Zealand. (Two trade marks.) 23rd December, 1903.

No. 81/5072.—E. H. Crease, of Wellington, New Zealand. 30th December, 1903.

No. 81/5181.—J. C. Gostling and Co., of London, England. 10th December, 1903.

No. 82/823.—Blackwall Galvanised Iron Company, Limited, of London, England. (Six trade marks.) 23rd December, 1903.

No. 82/1248.—J. Russell and Co., Limited, of Walsall, England. 10th December, 1903.

No. 82/1521.—T. P. Griffin and Co., of London, England. 23rd December, 1903.

No. 82/2837.—J. Service and Co., of Melbourne, Victoria. 17th December, 1903.

No. 82/3991.—Lea and Perrins, of Worcester, England. 30th December, 1903.

No. 82/2907.—J. and R. Tennent, Limited, of Glasgow, Scotland. 17th December, 1903.

No. 82/4000.—J. and J. Baldwin and Partners, Limited, of Halifax, England. 17th December, 1903.

No. 82/4583.—Thom and Cameron, of Glasgow, Scotland. 10th December, 1903.

No. 82/4762.—W. Mitchell, of Birmingham, England. (Two trade marks.) 10th December, 1903.

No. 82/4758.—Phosphor Bronze Company, Limited, of London, England. 10th December, 1903.

No. 82/5017.—J. Walker and Sons, Limited, of Kilmarnock, Scotland. 18th December, 1903.

No. 82/5119.—J. Service and Co., of Melbourne, Victoria. 17th December, 1903.

No. 83/186.—Ansar, Harford, and Co., of London, England. 29th December, 1903.

No. 83/1073.—T. P. Griffin and Co., of London, England. 23rd December, 1903.

No. 83/1745.—Welsh and Lea, of Philadelphia, United States of America. 30th December, 1903.

No. 83/2314.—W. and G. Turnbull and Co., of Wellington, New Zealand. 11th December, 1903.

No. 83/3046.—H. S. Chipman, of Melbourne, Victoria. 17th December, 1903.

No. 83/3457.—Maconochie Bros., of Lowestoft, England. 11th December, 1903.

No. 83/4271.—H. Pain, of Westport, New Zealand. 29th December, 1903.

No. 83/5365.—H. S. Chipman, of Melbourne, Victoria. 17th December, 1903.

No. 84/893.—The National Starch-manufacturing Company, of Covington, United States of America. 24th December, 1903.

No. 84/1743.—H. M. Johnston, of Brooklyn, United States of America. 30th December, 1903.

No. 84/2379.—Dynamit Actién Gesellschaft, of Hamburg, Germany. 23rd December, 1903.

No. 84/2611.—Nelson, Moate, and Co., of Christchurch, New Zealand. (Eight trade marks.) 9th December, 1903.

No. 84/2431.—Goodall, Backhouse, and Co., of Leeds, England. 10th December, 1903.

No. 84/2431.—Anglo-Swiss Condensed Milk Company, of London, England, and Cham, Switzerland. (Two trade marks.) 29th December, 1903.

No. 84/2431.—T. W. Rust and Co., of Leicester, England. 10th December, 1903.

No. 84/2431.—A. Mathieson and Sons, Limited, of Glasgow, Scotland. 10th December, 1903.

No. 84/2431.—R. S. Hudson, of Liverpool, England. (Two trade marks.) 17th December, 1903.

No. 84/2431.—J. Gillott and Sons, of Birmingham, England. (Fifty-two trade marks.) 23rd December, 1903.

No. 84/2641.—J. Haslam and Co., Limited, of Bolton and Manchester, England. 10th December, 1903.

No. 84/2641.—Morris Little and Son, of Doncaster, England. 10th December, 1903.

No. 84/2958.—F. Falkner, of Dublin, Ireland. 10th December, 1903.

No. 84/3177.—W. Parkinson, of Auckland, New Zealand. 23rd November, 1903.

No. 84/3571.—Nelson, Moate, and Co., of Christchurch, New Zealand. 9th December, 1903.

No. 84/3496.—J. T. Davenport, of London, England. 10th December, 1903.

No. 84/4503.—H. S. Chipman, of Sydney, New South Wales. 17th December, 1903.

No. 84/4629.—W. C. Fitzgerald, of Wellington, New Zealand. (Two trade marks.) 30th December, 1903.

No. 84/4994.—Nubian Manufacturing Company, of London, England. 10th December, 1903.

No. 85/263.—Evans, Sons, Lescher, and Webb, Limited, of Liverpool, England. 9th December, 1903.

No. 85/785.—T. Kennedy Macdonald and Co., of Wellington, New Zealand. 17th December, 1903.

No. 85/954.—Chesebrough Manufacturing Company, of New York, United States of America. 10th December, 1903.

No. 85/1807.—J. C. Frese and Co., of Hamburg, Germany. 29th December, 1903.

No. 85/3874.—McLeod Bros., Limited, of Dunedin, New Zealand. (Three trade marks.) 31st December, 1903.

No. 85/2911.—Dr. J. G. B. Siegert and Hijos, of Port of Spain, Trinidad. 30th December, 1903.

No. 85/4197.—J. Newton, of Kaiwarra, New Zealand. 21st December, 1903.

No. 86/456.—T. B. Hall and Co., Limited, of Liverpool, England. 11th December, 1903.

No. 86/680.—Wells and Richardson Company, of Burlington, United States of America. (Three trade marks.) 30th December, 1903.

No. 86/735.—Wells and Richardson Company, of Burlington, United States of America. 30th December, 1903.

No. 86/1085.—Church and Co., of Northampton, England. 23rd December, 1903.

No. 86/1227.—J. Jameson and Son, of Dublin, Ireland. 10th December, 1903.

No. 86/1874.—White Sewing-machine Company, of Cleveland, United States of America. 21st December, 1903.

No. 86/2114.—Aktiebolaget Separator, of Stockholm, Sweden. 31st December, 1903.

No. 86/2115.—Stollwerck Bros., of Cologne, Germany. 23rd December, 1903.

No. 86/2190.—T. Hubbuck and Sons, Limited, of London, England. 10th December, 1903.

No. 86/208.—W. Attenborough (attorney under power for Dr. J. G. B. Siegert). 30th December, 1903.

No. 86/2398.—Busbridge and Co., of Kent, England. (Three trade marks). 10th December, 1903.

No. 86/2489.—Goodall, Backhouse, and Co., of Leeds, England. 10th December, 1903.

No. 86/2616.—B. Good, of New York, United States of America. (Three trade marks.) 10th December, 1903.

No. 86/2697.—Waterbury Watch Company, of Connecticut and New York, United States of America. 17th December, 1903.

No. 86/3045.—J. Adams, of Sheffield, England. 10th December, 1903.

No. 86/3364.—J. H. Hickman, of Christchurch, New Zealand. 30th December, 1903.

No. 86/3852.—T. Quinn and Co., of Invercargill, New Zealand. 29th December, 1903.

No. 87/370.—J. Newton, of Kaiwarra, New Zealand. 21st December, 1903.

No. 87/381.—Bryant and May, Limited, of London, England. 17th December, 1903.

No. 87/898.—E. H. Crease, of Wellington, New Zealand. 30th December, 1903.

No. 87/925.—J. Buchanan and Co., of London, England. 17th December, 1903.

No. 87/926.—G. T. Congreve, of London, England. 10th December, 1903.

No. 87/1037.—Leonard and Ellis, of New York, United States of America. 23rd December, 1903.

No. 87/1256.—J. Sinclair and Son, of London, England. 23rd December, 1903.

No. 87/1488.—D. Rosenberg and Sons, of New York, United States of America. 10th December, 1903.

No. 87/2043.—E. Blakey and Sons, of Leeds, England. 10th December, 1903.

No. 87/2196.—Hayman and Co., of London, England. 21st December, 1903.

No. 87/2336.—F. Whitehead, of Auckland, New Zealand. 24th December, 1903.

No. 87/2536.—W. F. Barraud, of Wellington, New Zealand. 22nd December, 1903.

No. 87/3243.—T. C. Williams and Co., of Richmond, United States of America. 23rd December, 1903.

No. 87/3569.—The Dublin Distillers Company, Limited, of Dublin, Ireland. 10th December, 1903.

No. 87/4009.—Nelson, Moate, and Co., of Christchurch, New Zealand. (Two trade marks.) 9th December, 1903.

No. 87/4039.—McLeod Bros., Limited, of Dunedin, New Zealand. 31st December, 1903.

No. 87/4328.—Dr. Tibbles's Vi-Cocoa, Limited, of London, England. 10th December, 1903.

No. 87/4465.—T. Symington and Co., of Edinburgh, Scotland. 10th December, 1903.

No. 88/56.—Dyason and Son, of Collingwood, Victoria. 30th December, 1903.

No. 88/129.—G. T. Congreve, of London, England. 10th December, 1903.

No. 88/1019.—Sperry and Co., of Stockton, United States of America. 30th December, 1903.

No. 88/1207.—Great Tower Street Tea Company, Limited, of London, England. 10th December, 1903.

No. 88/1675.—Turner and Co., of Wellington, New Zealand. 29th December, 1903.

No. 88/1824.—Masefield Bros., of Batley, Auckland, New Zealand. 31st December, 1903.

No. 88/1981.—T. Kingsford and Son, of Oswego, United States of America. (Two trade marks.) 24th December, 1903.

No. 88/2475.—C. D., A. C., and L. B. del C. Siegert, of Port of Spain, Trinidad. 30th December, 1903.

No. 88/2628.—C. Henderson, of Auckland, New Zealand. 10th December, 1903.

No. 88/3002.—J. Power and Son, Limited, of Dublin, Ireland. 30th December, 1903.

No. 88/2706.—A. Guinness, Son, and Co., Limited, of London, England. 10th December, 1903.

No. 88/2709.—A. Bishop, Limited, of London, England. 17th December, 1903.

No. 88/3285.—Timaru Milling Company, Limited, of Timaru, New Zealand. 15th December, 1903.

No. 88/3150.—Compania General de Tabacos de Filipinas, of Barcelona, Spain. (Two trade marks.) 10th December, 1903.

No. 88/3151.—D. Leonardt and Co., of Birmingham, England. 10th December, 1903.

No. 88/3588.—J. C. George, of New Plymouth, New Zealand. 9th December, 1903.

No. 89/369.—W. Handley, of Auckland, New Zealand. 30th December, 1903.

No. 89/399.—A. G. Spalding and Bros., of Chicago and New York, United States of America. 10th December, 1903.

No. 89/1047.—Hancock Bros., of Christchurch, New Zealand. 31st December, 1903.

No. 89/1089.—T. Ballinger, of Wellington, New Zealand. 10th December, 1903.

No. 89/1511.—Nelson, Moate, and Co., of Christchurch, New Zealand. 9th December, 1903.

No. 89/1555.—Butler Bros., of Dunedin, New Zealand. 8th December, 1903.

No. 89/2004.—McLeod Bros., Limited, of Dunedin, New Zealand. (Three trade marks.) 31st December, 1903.

No. 89/2241.—H. Williams, of Greymouth, New Zealand. 21st December, 1903.

No. 89/2223.—Mason, Struthers, and Co., of Christchurch, New Zealand. 11th December, 1903.

No. 89/1958.—J. Robertson and Son, of Dundee, Scotland. 10th December, 1903.

No. 89/2299.—G. A. Coles, of Auckland, New Zealand. 15th December, 1903.

No. 89/3348.—J. R. Neave and Co., of Fordingbridge, England. 17th December, 1903.

No. 89/3352.—Nobel's Explosives Company, Limited, of Glasgow, Scotland. 23rd December, 1903.

*No. 11–10.—J. Lamont, of Glasgow, Scotland. 23rd December, 1903.

*No. 38–32.—The Distilleries Company, Limited, of Edinburgh, Scotland. 29th December, 1903.

*No. 39–30.—F. M. Clements, of Sydney, New South Wales. 30th December, 1903.

*No. 46–34.—The American Tobacco Company, of New York, United States America. 17th December, 1903.

* Fees in these cases paid for renewal of registration for fourteen years from 4th March, 1904, 21st April, 1904, 24th April, 1904, 2nd June, 1904, respectively.

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. 78/1398.—George Hartley Bonnington, Joseph Bonnington, Leonard Bonnington, executors of the late George Bonnington (deceased). [G. Bonnington.] 15th December, 1903.

No. 82/2907.—J. and R. Tennent, Limited, of Wellpark Brewery, Glasgow, N.B., Brewers. [J. and R. Tennent.] 17th December, 1903.

Nos. 84/2431 (three marks), 88/3381 (two marks), 635/504, 967/770, 2735/2168, 2736/2169, 2737/2170, 3403/2655.—British-American Tobacco Company, Limited, whose registered office is situate at Cecil Chambers, 86, Strand, London, England, Tobacco-manufacturers. [W. D. and H. O. Wills, Limited.] 17th December, 1903.

No. 375/277.—Benger's Food, Limited, a company duly registered under the Companies Acts, whose registered office is Otter Works, Mary Street, Strangeways, Manchester, Lancashire, England, Pharmaceutical and Manufacturing Chemists. [F. B. Benger and Co., Limited.] 16th December, 1903.

Nos. 519/422, 571/471.—British-American Tobacco Company, Limited, whose registered office is situate at Cecil Chambers, 86, Strand, London, England, Tobacco-manufacturers. [The Richmond-Cavendish Company, Limited.] 17th December, 1903.

Nos. 1040/785, 975/799, 976/800, 977/801, 2052/1752, 2711/2164, 2712/2165, 3084/2412, 3178/2496, 3199/2508, 3211/2521, 3212/2522, 3213/2523, 3214/2524, 3215/2525, 3405/2643, 3719/2908, 3784/2949, 3770/2962, 3921/3343.—British American Tobacco Company, Limited, whose registered office is situate at Cecil Chambers, 86, Strand, London, England, Tobacco-manufacturers. [Ogden's, Limited.] 17th December, 1903.

Nos. 1037/895, 1038/896, 1039/897.—British-American Tobacco Company, Limited, whose registered office is situate at Cecil Chambers, 86, Strand, London, England, Tobacco-manufacturers. [J. Hignett.] 17th December, 1903.

Nos. 964/939, 965/940.—R. White and Sons, Limited, whose registered office is situate at Neale Street, Camberwell, London, England, Mineral- and Aerated-water Manufacturers and Brewers of Non-alcoholic Ale and Stout [R. J. and J. G. White.] 18th December, 1903.

No. 3873/3125.—British-American Tobacco Company Limited, whose registered office is situate at Cecil Chambers, 86, Strand, London, England, Tobacco-manufacturers. [The Imperial Tobacco Company (of Great Britain and Ireland), Limited.] 17th December, 1903.

F. WALDEGRAVE,
Registrar.

Trade Mark Registrations cancelled.

NO. 4274; 3317.—Edwin Grove (advertised in Supplement to *New Zealand Gazette* No. 57, of the 9th July, 1903).

No. 4036; 3168.—S. Hoffnung and Co., Limited (advertised in Supplement to *New Zealand Gazette* No. 9, of the 5th February, 1903).

F. WALDEGRAVE,
Registrar.

By Authority: JOHN MACKAY, Government Printer.

ILLUSTRATIONS OF INVENTIONS.

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

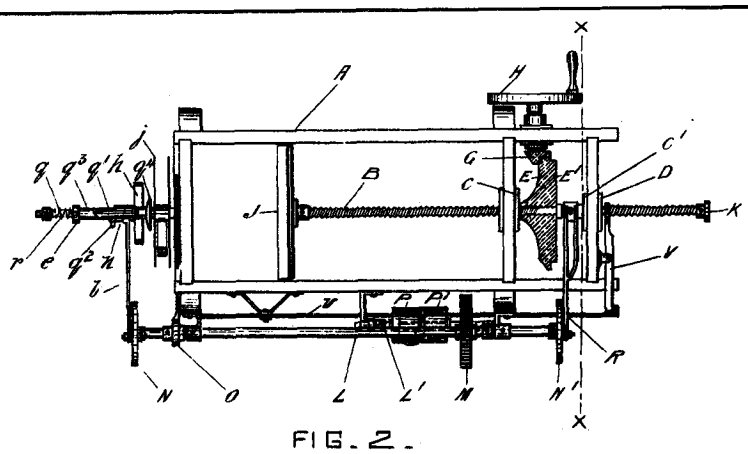
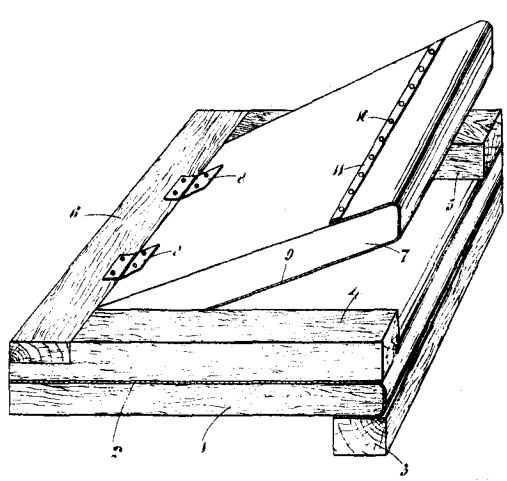
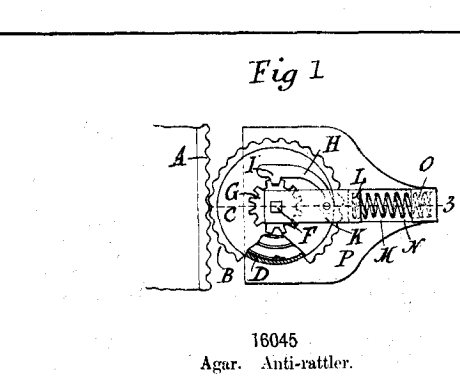


FIG. 2.

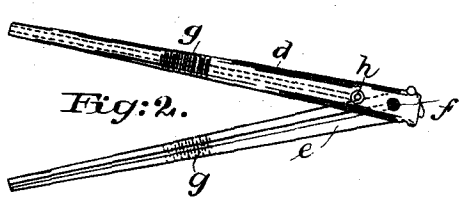
15543
Boxall and Robinson.
Butter Tinning and Printing Machine.



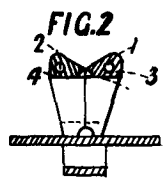
16023
Wilkins. Knife-cleaner.



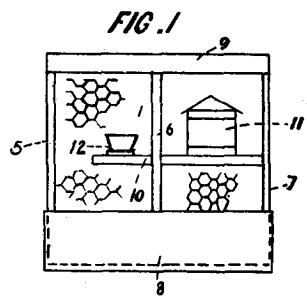
16045
Agar. Anti-rattler.



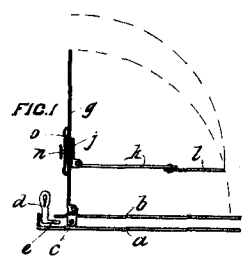
16055
Morgan. Tobacco-pipe.



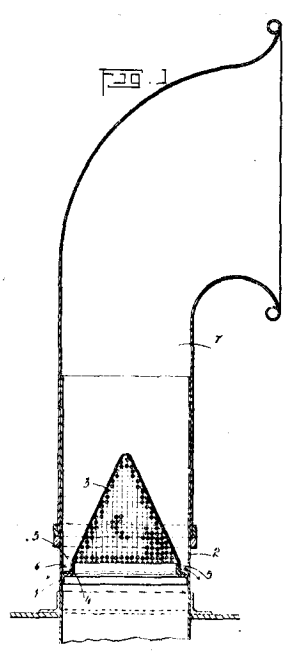
15978
Barton. Animal-trap.



16034
Webb. Luring Birds.

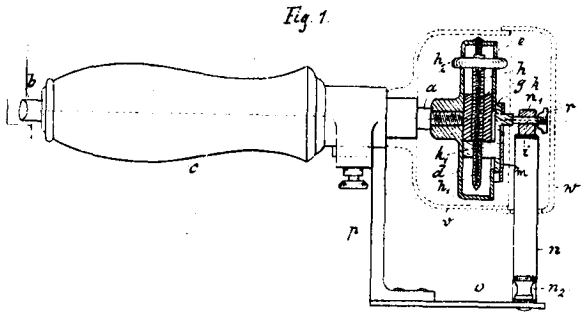


16065
Budge. Book-leaf Holder.



16225
East. Ship's Ventilator

Fig. 1.



16358
Bunz. Medical Instrument. (Rottman.)

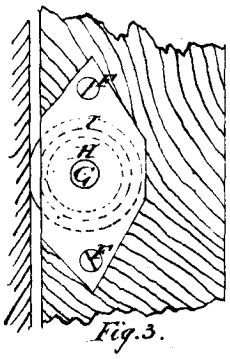


Fig. 3.

16648
Davis. Sash-regulator.

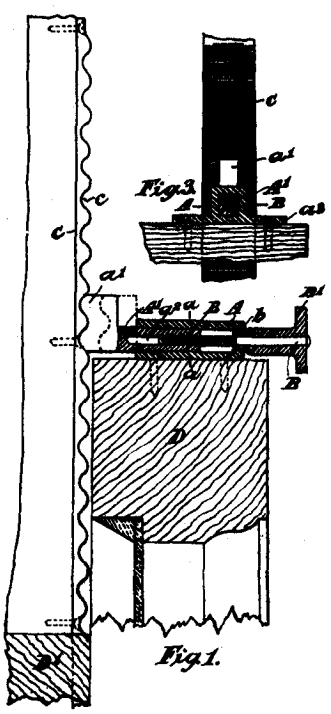
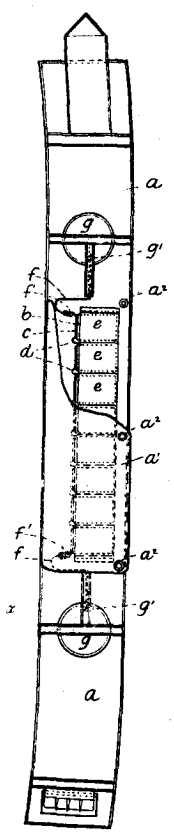


Fig. 1.

16372
Macintosh. Sash-fastener.



16476
Crump Electro-medical Belt.

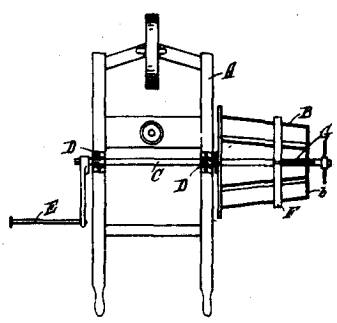


Fig. 2

16635
Gamble. Wire-winder.

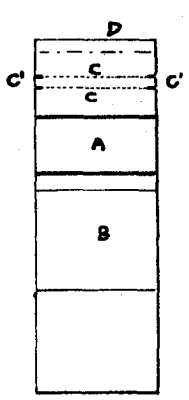


FIG 1

16733
Miller. Wrapper.

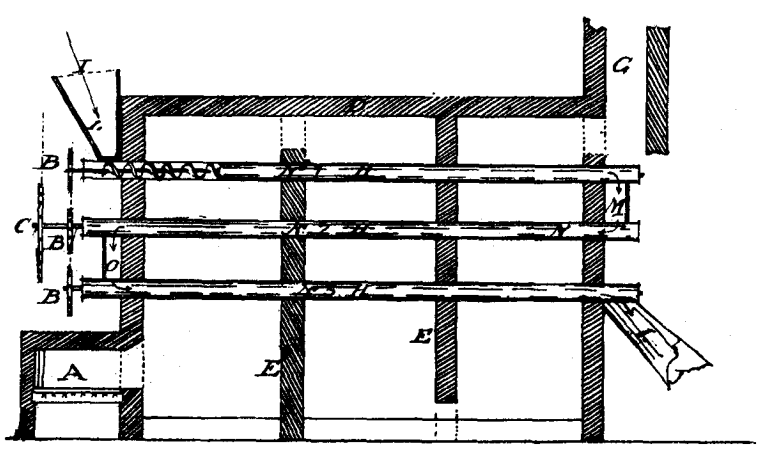


Fig. 2.

16800
Barnsdale. Sterilising-device.

FIG.5 FIG.6

16393
Collins. Toe-protector.

Fig. 1

16538
Babcock and Wilcox, Limited, and McLaren.
Chain-grate Stoker.

Fig. 1

16869
Thomas. Coupling and Buffer.

Fig. 2

Fig. 2.

17041
Hughes. Alternating-current Watt Meter.
(The British Westinghouse Electric and Manufacturing Company, Limited—Conrad.)

Fig 2

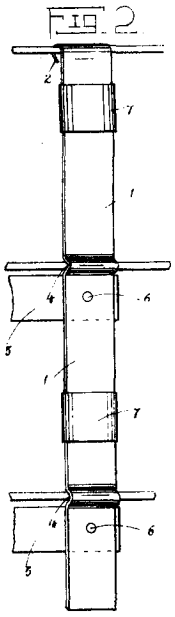
16888
Crosbie. Flax-stripper Chute.

FIG.1

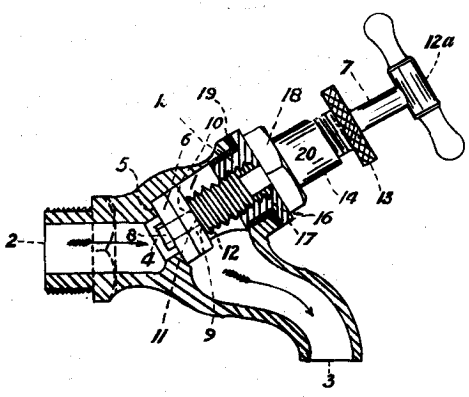
17198
Lamson Store Service Company, Limited.
Pneumatic-tube Despatch-carrier. (Estienne.)

FIG.1.

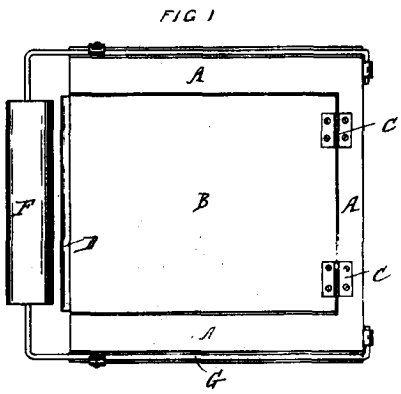
16987
North. Electricity-meter.



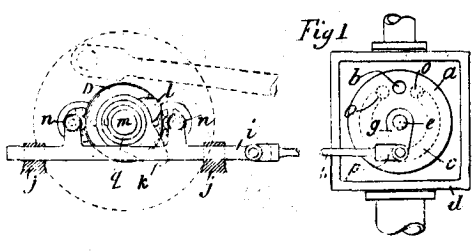
17109
McPherson. Fencing-dropper.



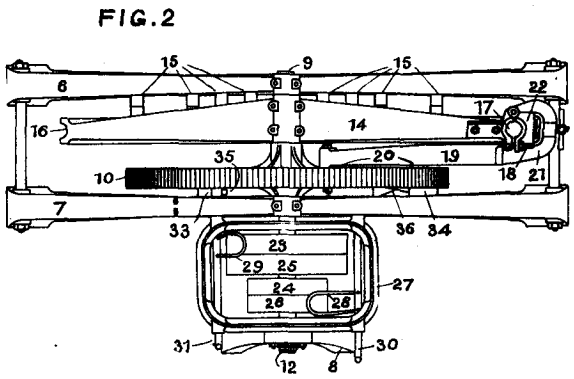
17169
Ramage. Tap.



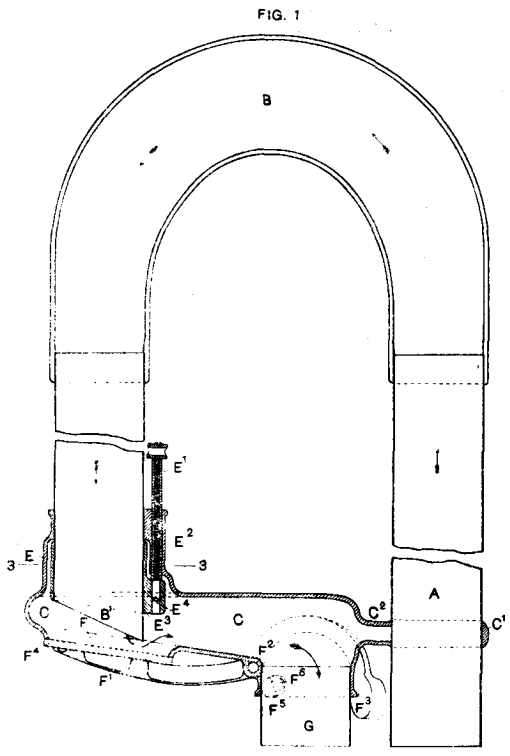
17213
Best. Knife-cleaner.



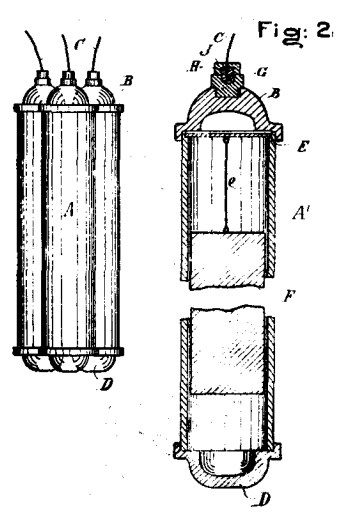
17266
Alexander. Valve-mechanism.



17194
Lamson Store Service Company, Limited.
Tube-bending Machine. (Giles.)



17195
Lamson Store Service Company, Limited.
Receiving-terminal for Pneumatic-tube Despatch-system.
(Giles.)



17267
Richmond. Therapeutic Apparatus.

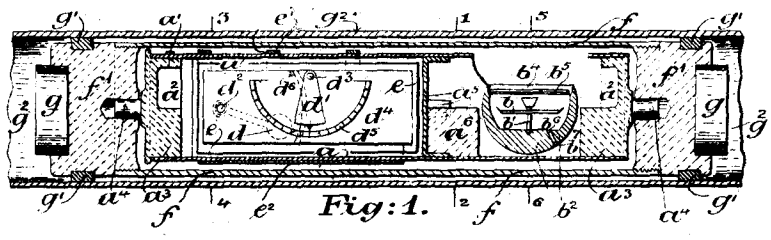
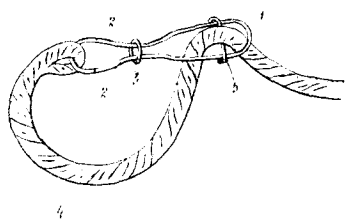


Fig: 1.

17268
Bawden. Clinostat.



17272
Morgan. Rope-buckle.

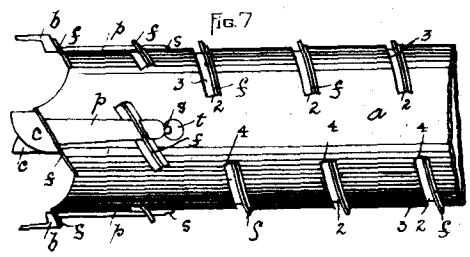


Fig. 7

17302
Tonge. Mining-drill.

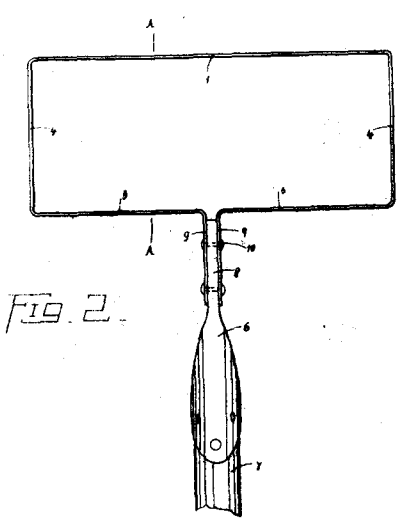


Fig. 2.

17281
Greig and Ward. Hoe.

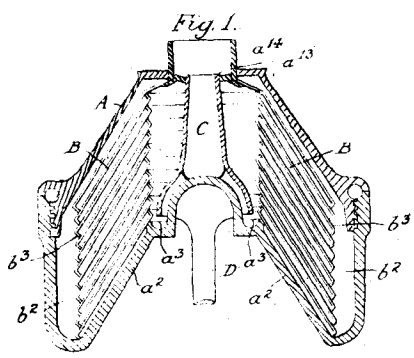


Fig. 1.

17314
Pedersen. Cream-separator.

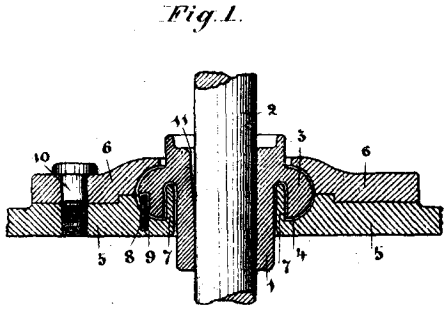


Fig. 1.

17294
Holm. Box-bearing.

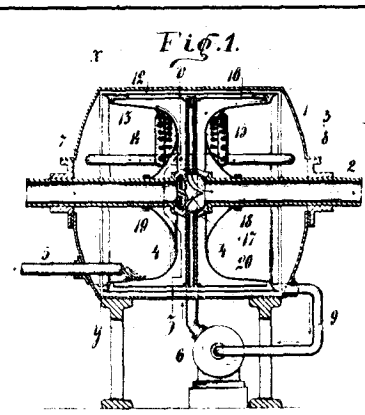
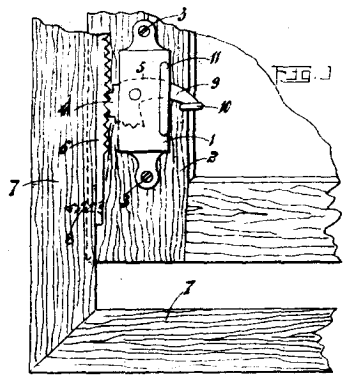
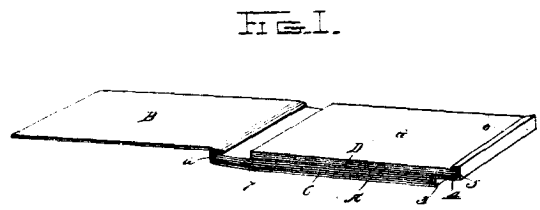


Fig. 1.

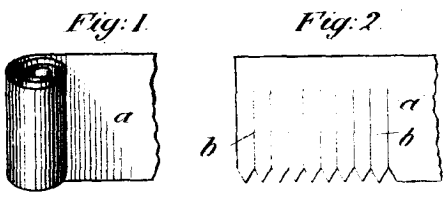
17320
Ekenberg. Liquid-concentrator.



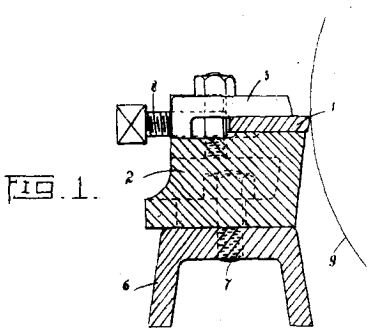
17329
Goodwin. Sash Operator and Sustainer.



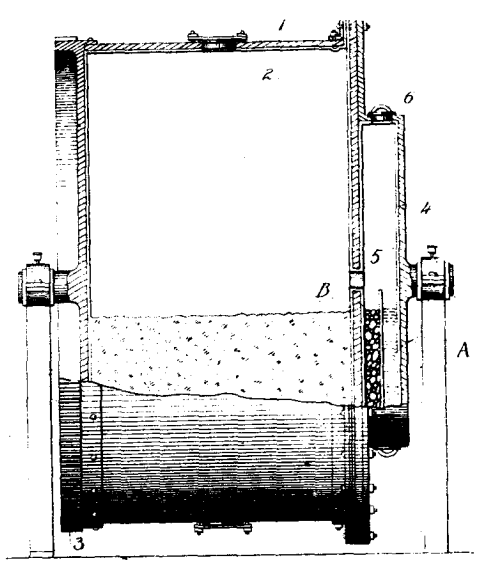
17349
Basley. Account-book.
(National Cash Register Company.)



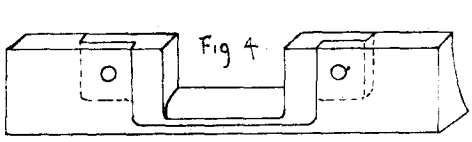
17334
Du Buit. Manufacture of Explosive Charge.



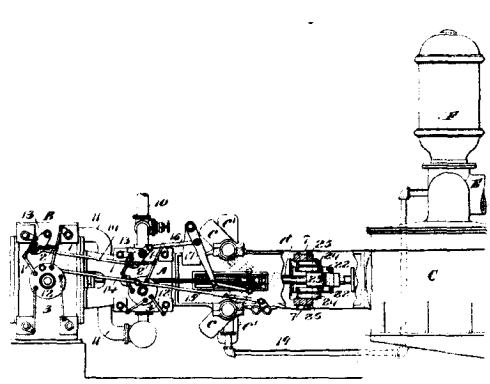
17339
Andrews and Anderson. Truing up Flax-drum.



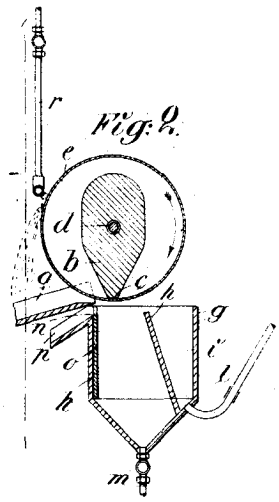
17352
Armbruster and Morton. Chlorination-barrel.



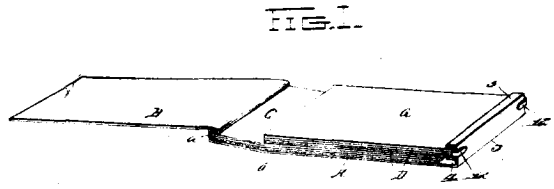
17347
Dunbar. Ribber for Flax-stripper.



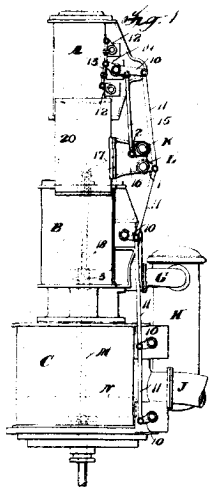
17353
Henry R. Worthington. Engine. (Brown.)



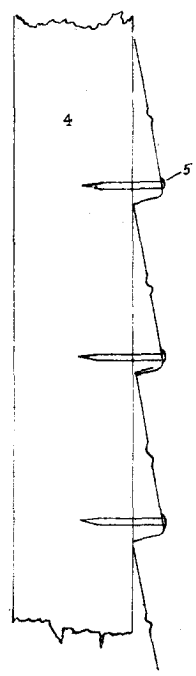
17344
Grondal. Iron-ore Separator



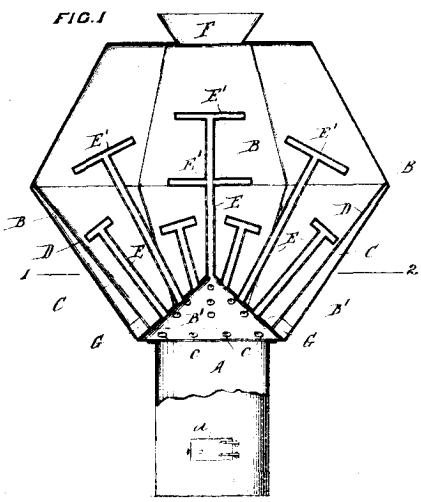
17348
Basley. Account-book.
(National Cash Register Company.)



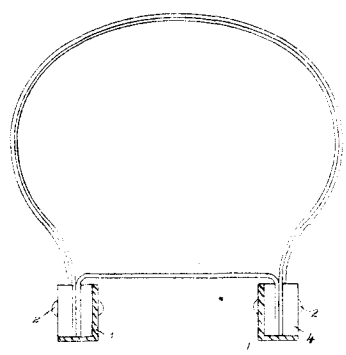
17354
Henry R. Worthington. Valve-movement. (Brown.)



17389
Watt. Covering of Walls.



17370
Macdonald. Grain-treating Means.



17372
Gillespie. Dredge-link Shoe.

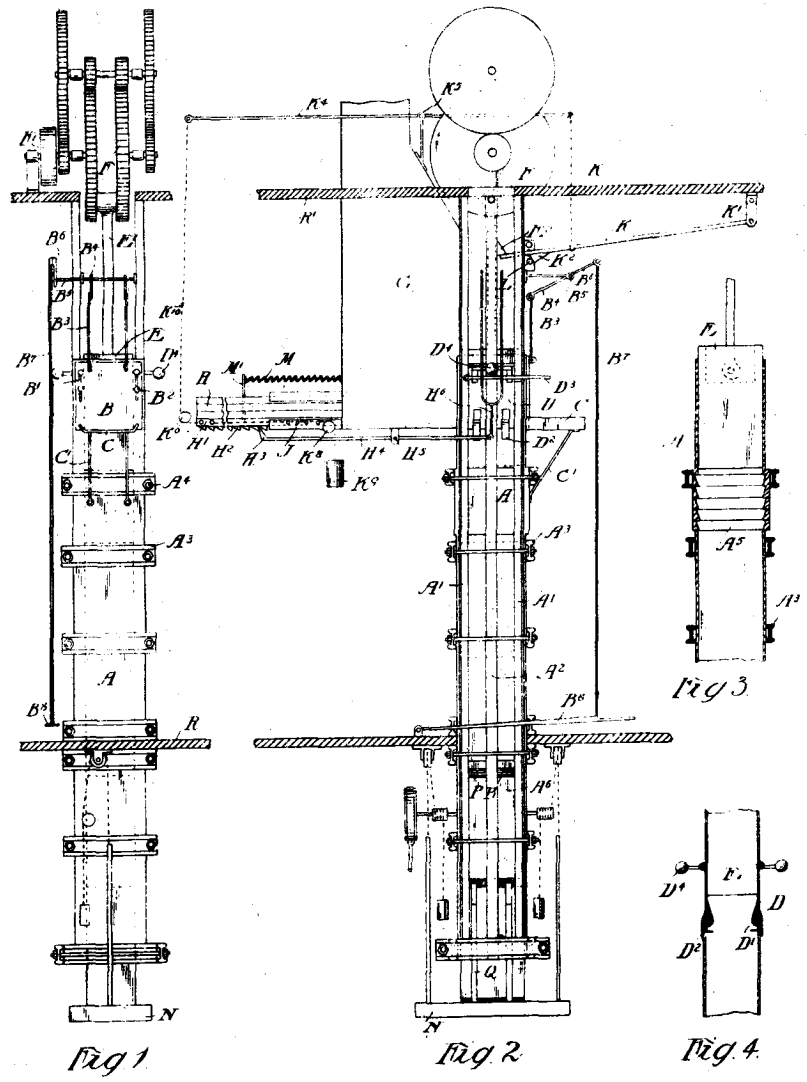
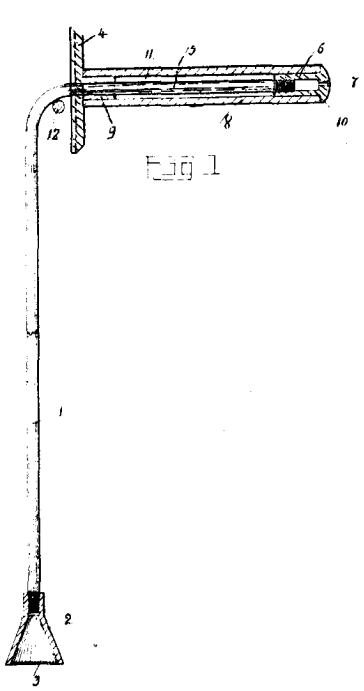
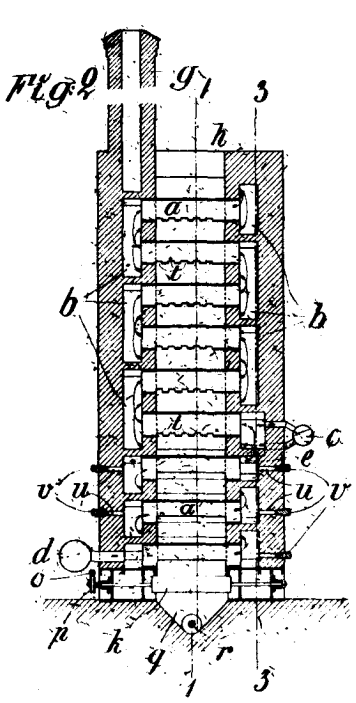


Fig 1 Fig 2 Fig 3 Fig 4

17284
Holden. Grain-compressor.



17369
Cook. Calf-feeder.



17343
Grondal. Iron-ore Furnace.