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CONTENTS

Notice of Acceptance of Complete Specifications.

Patent Office,
Wellington, 21st January, 1903.

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

No. 14559.—25th February, 1902.—DONALD DONALD, of Masterton, Wairarapa, New Zealand, Settler. Improvements in hand-power punching, shearing, and stamping machines.*

Claims.—As applied to hand-punching machines,—(1.) A fork for holding the top dies, such as B. (2.) An adjustable plate for holding the bottom dies, such as E. (3.) The method of adjusting the power and range by means of holes and pins. (4.) The method of either punching or shearing on either side of the principal fulcrum L by shifting the connecting-rod J to the opposite side of the second fulcrum I. (5.) The general arrangement and combination of parts as shown and described for the purposes set forth.

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

No. 14568.—28th February, 1902.—HENRY OSBORNE CASSELS, Saddler, and HAROLD PRESTON, Chairmaker, both of Invercargill, New Zealand. Improvements in horse-collars.*

Claims.—(1.) The general construction, arrangement, and combination of parts composing our improvements in horse-collars, all substantially as and for the purposes described with reference to the drawings. (2.) A horse-collar consisting of two sections loosely secured together at the top and bottom, each section being provided with a hook adapted to receive and hold traces, substantially as described. (3.) A horse-collar consisting of two hollow sections loosely secured together at top and bottom, each section being provided with a hook adapted to receive and hold traces, substantially as described.

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

No. 14595.—7th March, 1902.—RODERICK MCLEAN, of Ranfurly, Otago, New Zealand, Farmer. Improvements in animal-traps.*

Claims.—(1.) An animal-trap comprising in combination a back thereto, brackets thereon adapted to receive the ends of two serrated jaws, a flat spring secured to said back provided at one end with a loop encircling said jaws at one end, a pair of leaves hinged to said jaws, each provided with a laterally projecting lug, one of said leaves being provided with a tongue in the middle of its bottom edge and the other leaf having a corresponding piece cut out of its bottom edge, leaving two tongues, said tongues being adapted to be joggled under said leaves, substantially as described. (2.) An animal-trap comprising in combination a back thereto, brackets thereon adapted to receive the ends of two serrated jaws, a flat spring secured to said back provided at one end with a loop encircling said jaws at one end, a pair of leaves hinged to said jaws, one of said leaves being provided with a tongue in the middle of its bottom edge and the other leaf having a corresponding piece cut out of its bottom edge, leaving two tongues, said tongues being adapted to be joggled under said leaves, substantially as described. (3.) The general construction, arrangement, and combination of parts composing my improvements in animal-traps, all substantially as and for the purposes described with reference to the drawings.

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

No. 14637.—15th March, 1902.—JAMES VINCENT FAHEY, of Roslyn Bush, Southland, New Zealand, Farmer. Improvements in the sheaf-carriers of harvesters.*

Claims.—(1.) The general construction, arrangement, and combination of parts composing my improvements in the sheaf-carriers of harvesters, all substantially as and for the purposes described with reference to the drawings. (2.) An improved sheaf-carrier for harvesters, consisting of means for holding one or more sheaves, mechanism for automatically releasing same and simultaneously discharging another sheaf from the discharge-arm, and gearing connected with the harvester for operating said mechanism, substantially as described.

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

No. 14686.—1st April, 1902.—DONALD ROBERTSON, of General Post Office, Wellington, New Zealand, Civil Servant. Improvements in mail-marking machines.*

[NOTE.—The title in this case has been altered. See list Provisional Specifications, *Gazette* No. 30, of the 17th April, 1902.]

Claims.—(1.) A mail-marking machine to feed, post-mark, and stack letters while the said letters are on one of their narrow edges, substantially as described and explained. (2.) In mail-marking machines, a continuously revolving feeding-wheel adapted to operate upon letters for a portion of its revolution only, substantially as described and set forth in the drawings. (3.) A continuously revolving feeding-wheel as in claim No. 2, in combination with a spring-controlled plunging separator, substantially as described and set forth in the drawings. (4.) A continuously revolving feeding-wheel as in claim No. 2, in combination with a continuously revolving marking-wheel with rubber-covered flanges, with means to make each alternatively operative, substantially as described and set forth.

(Specification, 4s.; drawings, 3s.)

No. 14688.—1st April, 1902.—JOHN FREDERICK COOKE FARQUHAR, of the Grand Pacific Hotel, Watson's Bay, Vaucluse, near Sydney, New South Wales, Engineer. Improvements in certain descriptions of oil-lamps.*

Claims.—(1.) In an oil-lamp of the class set forth, the combination with a chimney closed except to an up-draught through the body of the lamp, of a wind-guard comprising a cylinder overlapping the edge of the said chimney and supporting a disc above the top of the same, substantially as described. (2.) In an oil-lamp of the class set forth, the combination with a central up-draught passage, of a base having perforated side walls, which are flat or preferably concave, and partitions leading from the said side walls to the said up-draught passage, substantially as described. (3.) A lamp of the class set forth wherein means are provided for preventing down-draught of air at the flame when the lamp is exposed to air-currents, comprising a wind-guard at the upper end of the chimney, means for closing the lower end of the chimney except to a passage or passages through the body of the lamp, and means for baffling air on its way to the inlet end or ends of the said passage or passages, substantially as described. (4.) In an oil-lamp of the class set forth, the combination with a hollow pedestal, of a base therefor comprising concave side walls 1 having orifices 2 and partitions 3, the said side walls and partitions being arranged to form chambers 4 communicating with the said hollow pedestal, substantially as described and shown. (5.) In an oil-lamp of the class set forth, the combination with the oil-reservoir of an annular wick-tube arranged to leave an air-space between it and the said oil-reservoir, and surrounding or forming a central up-draught passage, substantially as described. (6.) An oil-lamp of the class set forth, comprising a reservoir 7, a wick-tube 9, connecting-pipes 10, a sheath 13, a rack 14, a wick-holder 15 and 16, a pinion 17, a spindle 18 with a milled thumb-piece 21, and a stuffing-box and gland 20, substantially as described and shown. (7.) In an oil-lamp of the class set forth, the combination with the wick-tube of a spreader the depth of the insertion of which into the said wick-tube is arbitrarily fixed by a stop on such spreader, substantially as described. (8.) A spreader for an oil-lamp of the class set forth, comprising a top plate 23, a perforated body 24, and a collet or cylinder 25 having a slightly flanged or burred edge 26, substantially as described and shown. (9.) The combination and arrangement of parts set forth forming an improved central-draught oil-lamp, substantially as described and shown.

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

No. 14703.—4th April, 1902.—ANNIE FRANCES WALL, of High Street, Dunedin, New Zealand, Boardinghouse-keeper. Improved shield for the ends of the busks of stays and the like.*

Claims.—For the purpose indicated, a sheath having a cavity adapted to receive the end of a strip of stiffening-medium employed in a corset or the like, and having holes near its edges to receive stitches, by which it is secured in position as specified.

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

No. 14716.—7th April, 1902.—THOMAS OLIVER TURNBULL, of Kawhia, Auckland, New Zealand, Settler. A device for carrying children.*

Claims.—(1.) A device for carrying children, the same consisting of a neck or shoulder band, adjustable in length, the bottom ends of which are narrowed down and secured together so as to form a frame, and a small hammock of any suitable material suspended upon such frame, as specified. (2.) A device for carrying children, the same consisting of a neck or shoulder band, adjustable in length, the bottom ends of which are narrowed down and secured together so as to form a frame, a small hammock suspended upon such frame, and a restraining-strap the two ends of which are respectively attached to the two dependent parts of the neck or shoulder band, as specified.

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

No. 14721.—8th April, 1902.—THOMAS WILLIAM MESSENGER, of Quorn, South Australia, Engineer. Improvements in ear-trumpets.*

Claims.—(1.) In ear-trumpets, the combination with one or more trumpets having downwardly projecting ear-pieces of a framework for supporting the same adapted to form the crown of a hat, cap, or other head-gear. (2.) In ear-trumpets, the combination with one or more trumpets having downwardly projecting ear-pieces, and provided with open, bell-shaped mouths arranged to bear upon the top of the forehead, of a framework adapted to form the crown of a hat, cap, or other head-gear. (3.) In ear-trumpets, the combination with a framework adapted to form the crown of a hat, cap, or other head-gear, of two trumpets supported within the same having bell-shaped open mouths extending towards the front in such manner that they bear upon the front bones of the forehead, said trumpets extending to the rear portion of the framework, then doubling upon themselves, and having downwardly projecting ear-pieces, the front portion being made to fit telescopically upon the rear portion, substantially as described. (4.) In ear-trumpets, the combination with a framework adapted to form the crown of a hat, cap, or other head-gear, of one or more trumpets having downwardly projecting ear-pieces, and connected by plates such as E, having slots such as E^1 whereby they may be adjusted as may be required, substantially as described. (5.) In ear-trumpets in which one or more trumpets are arranged within a framework adapted to form the crown of a hat, cap, or other head-gear, ear-pieces such as D having downwardly projecting pieces such as D^1 arranged upon the underneath side, substantially as described.

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

No. 14727.—7th April, 1902.—MALCOLM MCCORMICK, of Upper Waitohi, Temuka, New Zealand, Farmer. Improvements in seed-sowing apparatus.*

Claims.—(1.) The general construction, arrangement, and combination of parts composing my improvements in seed-sowing apparatus, all substantially as and for the purposes described with reference to the drawings. (2.) In combination, a canister divided by a vertical partition into two unequal portions, a disc supported by a spindle in said canister and provided with a ring of perforations, an aperture in the bottom of the smaller portion of said canister opening into a tube leading to a coulter, a brush secured to said partition and adapted to sweep the disc when revolving in the larger portion of said canister, a second brush adapted to press into said aperture, a bracket provided with thumb-screws adapted to secure said canister to any suitable machine, and means for driving said spindle from said machine, substantially as and for the purposes set forth.

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

No. 14774.—19th April, 1902.—EDWARD TRAHERNE TOWGOOD, YERBURY STEPHEN TOWGOOD, and JAMES ALLISON, all of Wanganui, New Zealand, Settlers. An improved tobacco-pipe.*

Claim.— In tobacco-pipes, a hollow stem and a hollow removable mouthpiece, in combination with blocks of pumice shaped to fit within the hollows of the stem and mouthpiece and in the bottom of the bowl of the pipe, the blocks of pumice within the stem and mouthpiece being each pierced

longitudinally with a draw-hole, and provided with means whereby they may be handled, as set forth.
(Specification, 2s. 6d.; drawings, 1s.)

No. 14827. — 25th April, 1902. — ARCHIBALD MERTON WHITE, of Bolivia Station, Bolivia, New South Wales, Grazier (assignee of Joseph Ainsworth, of Bolivia aforesaid, Selector). Improvements in plough-shares.*

Claims.—(1.) A plough-share, whether its face be hollowed or otherwise, having grooves in said face, substantially as described and explained. (2.) A plough-share, whether its face be hollowed or otherwise, having a ridge on the land side formed by a groove on the face of said share, substantially as described and explained.
(Specification, 2s.; drawings, 1s.)

No. 14932.—29th May, 1902.—CORNELIUS JOHN SHIPWAY and HENRY MAY, both of Meningie, South Australia, Inventors. Improvements in sheep-shears.*

Claims.—(1.) In a sheep-shearing tool, either with separable blades or otherwise, drivers secured on and to the handles, as described, and for the purposes set forth. (2.) In a sheep-shearing tool, either with separable blades or otherwise, drivers adapted to form a rest for the shearer's hand, and having on their ends screw-threaded parts adapted to engage and secure together the handles and blade-tangs, substantially as described. (3.) A sheep-shearing tool comprising a bow with internally concave handles, separable and adjustable blades with backwardly extended tangs adapted to fit neatly within the concave handles, holes through the handles and through the tangs corresponding with each other, bolts passing through such holes and secured by nuts and washers bearing upon the tangs, substantially as and for the purposes described. (4.) A sheep-shearing tool comprising a bow with internally concave handles, separable and adjustable blades with backwardly extended tangs adapted to fit neatly within the concave handles, holes through the handles and through the tangs corresponding with each other, and drivers passing through such holes and secured by nuts and washers bearing upon the tangs, substantially as described. (5.) A sheep-shearing tool comprising a bow with internally concave handles, separable and adjustable blades with backwardly extended tangs adapted to fit neatly within the concave handles, and drivers secured upon the handles and through the tangs, as and for the purposes set forth.
(Specification, 5s.; drawings, 1s.)

No. 14962.—6th June, 1902.—AUGUST LYELL, of Palmerston North, New Zealand, Inventor. An improved portable race-starting gate.*

Claims.—(1.) In apparatus for the purpose described, a barrier-line separable at the centre of the track and provided with springs by which the separated parts when released are withdrawn clear of the track, substantially as set forth. (2.) In apparatus for the purpose described, in combination, a barrier-line having a fastening at the centre of the track, a starting-line for operating the fastening, and springs for withdrawing the separated barrier-line clear of the track, substantially as set forth. (3.) In apparatus for the purpose described, a fastener comprising a hook having a sheath containing a spring-operated bolt, a loop pivoted to the hook and normally engaging the said bolt, and an eye-piece engaging the said hook and retained by the said loop, the hook and eye-piece being attached to the separated ends of the barrier line, substantially as set forth. (4.) In apparatus for the purpose described, in combination, a barrier-line having a fastening at the centre of the track, a starting-line for operating the fastening, posts at the sides of the track, and springs attached to the posts for withdrawing the separated barrier-line clear of the track, substantially as set forth. (5.) In apparatus for the purpose described, in combination, a barrier-line having a fastening at the centre of the track, a starting-line for operating the same, hollow posts at the sides of the track, blocks within the posts and around which the barrier and starting-lines are reeved, one block being attached to a centre spring and the other block being attached to the post, substantially as set forth. (6.) In apparatus for the purpose described, in combination, a barrier-line having a fastening at the centre of the track, a starting-line for operating the same, hollow posts at the sides of the track, blocks within the posts and around which the barrier and starting-lines are reeved, one block being attached to the post and the other block being attached to a rubber spring, pulleys near the top of the posts over which the rubber spring passes, blocks outside the posts, one of which blocks is attached to the rubber spring and the other block to a bracket upon the posts, and a rope reeved round the said blocks, the free end of which is secured upon a cleat, substantially as set forth. (7.) The combination and arrangement of parts comprising the improved starting-apparatus, substantially as and for the purposes set forth, and illustrated on the drawing.
(Specification, 2s. 6d.; drawings, 1s.)

No. 15101.—10th July, 1902.—ELIAS DIMANT, of Watson's Chambers, Flinders Lane, Melbourne, Victoria, Warehouseman. Improved divided tread or sole for boots and shoes.*

Claims.—(1.) An improved divided tread or sole for boots and shoes made up of two layers, the inner having an approximately longitudinal and slantingly cut slit therein with overlapping edges, and the outer having a number of longitudinal cuts therethrough, substantially as set forth and illustrated. (2.) An improved compound divided tread for boots and shoes having a plurality of longitudinal cuts through the outer layer, substantially as set forth and illustrated. (3.) In a divided tread or sole for boots and shoes, an inner layer having an approximately longitudinal and slantingly cut slit therein with overlapping edges, substantially as set forth and illustrated. (4.) In a divided tread or sole for boots and shoes, an inner layer made in two parts with overlapping edges and a nail at the toe to hold same together, substantially as set forth and illustrated.
(Specification, 2s.; drawings, 1s.)

No. 15222.—5th August, 1902.—EDWARD REGINALD LUDBROOK, ALFRED BENJAMIN JACKSON, and GILBERT CRANE JACKSON, all of Tuparoa, New Zealand. Improved means for preventing dust, draught, and rain from entering beneath doors.*

Claims.—(1.) In dust, draught, and rain excluders, a flat plate extending horizontally across the width of the door, and pivoted at each end within a depression formed in the floor, and means whereby such plate shall be tipped up when the door is closed so as to engage with the bottom edge of the door, as specified. (2.) In dust, draught, and rain excluders, a flat plate extending horizontally across the width of the door, and pivoted at each end within a depression formed in the floor, and an upwardly projecting pin upon the plate with which the front face of the door is adapted to engage when such door is closed, as specified.
(Specification, 3s.; drawings, 1s.)

No. 15506.—13th October, 1902.—GEORGE ADCOCK, of Lichfield Street, Christchurch, New Zealand, Tinsmith. Apparatus for straining milk and other fluids.

Claim.—In a conical or bucket-shaped vessel A, a tube B having a strainer C and a cone D, and a collar F to hold a textile or calico disc to strain milk or other fluids, as described and set forth.
(Specification, 1s. 3d.; drawings, 1s.)

No. 15540.—22nd October, 1902.—ALFRED GODFREY, of 14, Havergal Villa, Green Lanes, Wood Green, London N., England, Engineer. An improved machine for wrapping and packing cigarettes and like goods.

Claims.—(1.) A combined machine for packing cigarettes and like goods in an inner tray or slide, and an outer case or shell of cardboard, paper, or like material, consisting of automatic devices, all operated from a single first-motion shaft, so arranged as to accurately cut and feed the material for the shells from a reel or to receive the same in rectangular-cut blanks, to press and form the same into an open rectangular shell, to glue and close the same, and to deliver them in succession to a successive series of packed and closed inner slides or trays, to pack the tray or shell with a definite quantity of cigarettes or the like, naked or wrapped, in one or two layers, to feed the same when packed and closed into the firmly glued rectangular shell, and to deliver the completely packed tray and case with the cigarettes closely packed therein ready for market, substantially as described and illustrated. (2.) In a machine for packing cigarettes and the like as claimed in claim 1, a feeding-apparatus for the material for the shells from a continuous roll, having a device for clamping the sheet before and whilst shearing and unwinding from the reel, a device by which a feed-finger first closes down and engages with a perforation in the material and then draws it a required distance to the shears, and means for adjustment of the operating-levers of the feed motion to alter the length and position of the feed, substantially as described, and illustrated in Figs. 5 and 6. (3.) In a machine for packing cigarettes and the like as claimed in claim 1, a reciprocating die for folding up a blank piece of paper or card into a containing

case or shell, characterized by the table under the die being formed of two spring shutters, one of which is so spring-pressed as to be drawn away from the die when in lowest position, and is provided with a trigger action from the die so as to be brought back again to the horizontal position, the matrix below the die having on two faces detent springs to prevent the folded card from rising in the die, substantially as described, and illustrated in Figs. 7 and 8. (4.) In a machine for packing cigarettes and the like as claimed in claim 1, the arrangement of the reciprocating bed and the sides of the channel with face-springs let in at definite intervals for causing the shell to advance with the reciprocating bed in one direction, and to be prevented from returning with the said bed, in combination with spring-pressed hinged fingers on each side of the channel to bend over both flaps of the card case or shell ready for glueing, substantially as described, and illustrated in Figs. 7A and 8A. (5.) In a machine for packing cigarettes and the like as claimed in claim 1, the arrangement of a horizontal reciprocating rod or rods for pressing down the top folds of the shell, with a vertical plate depending therefrom acting as an anvil to resist the pressure of the glueing-roller upon the inside edge of the open flap, and serving thereafter to press down the glued flap upon the other one, substantially as described, and illustrated in Figs. 1 and 2. (6.) In a machine for packing cigarettes and like goods as claimed in claim 1, a reciprocating glue-box moving to and away from the shells as they pass before it, with revolving roller taking up the glue, and having two adjustable knives adapted to such roller, one to adjust the required film of glue allowed to issue on the roller, and the other to scrape and remove the hardened film of glue from the roller before taking up a fresh charge, substantially as described, and illustrated in Figs. 4 and 9A. (7.) In a machine for packing cigarettes and like goods as claimed in claim 1, a heating-block adapted to be heated by small gas-jet or other means, and fitted to a vertically descending bar so as to press upon the glued joint of the shell or case and dry it, substantially as described, and illustrated in Figs. 1 and 2. (8.) In a machine for packing cigarettes and like goods as claimed in claim 1, the arrangement upon intermittently moving and locked pressing-rolls of studs slightly projecting from their periphery whereby the formed shell or case is stripped from an internal mandril or "former," in combination with levers depressing the top of the shell after being removed from the mandril or "former," so that the mandril upon its return stroke may push the shell before it to meet the internal packed slide, substantially as described, and illustrated in Figs. 1, 2, and 3. (9.) In a machine for packing cigarettes and like goods as claimed in claim 1, a reciprocating plate for receiving cigarettes and like goods from sloping shute, and for conveying the same under a reciprocating packer-head, and leaving the same suspended under the packer-head until released into a tray or slide situated under said packer-head, substantially as described, and illustrated in Figs. 11 and 18. (10.) In a machine for packing cigarettes and like goods as claimed in claim 1, the arrangement of the receiver or hopper with a moving pivoted front end above the orifice of egress, having stroking-brushes attached thereto, in combination with a fixed step on the floor of the hopper to permit small quantity of goods only to roll over towards the orifice of egress, substantially as described, and illustrated in Figs. 19 and 20. (11.) In a machine for packing cigarettes and like goods as claimed in claim 1, the arrangement on a reciprocating packing plunger of spring-pressed plates with inwardly turned edges for supporting the cigarettes or goods in one layer or two, and adapted to lower the same towards the tray or slide until released by further downward movement of the plunger laying the goods in the tray or slide, substantially as described, and illustrated in Figs. 12, 13, and 14. (12.) In a machine for packing cigarettes and like goods as claimed in claim 1, a spring-pressed additional head to the packer plunger so arranged with vertical rack and spring bell that the said additional head on meeting an undue accumulation of cigarettes or other obstruction will indicate the same audibly by ringing the bell, substantially as described, and illustrated in Figs. 12 and 13. (13.) In a machine for packing cigarettes or like goods as claimed in claim 1, the arrangement of duplicate shutes and hoppers for the delivery of the cigarettes or goods on either side of the packer, and a duplicate pushing-plate to push a second layer of cigarettes or goods upon the first layer already deposited under the packer-head from the other side, substantially as described, and illustrated in Figs. 10 and 11. (14.) In a machine for packing cigarettes or like goods as claimed in claim 1, the arrangement of the side delivery levers discharging the completely packed shells and internal slides so that they will gauge the exact condition of the perfectly formed boxes, and in case of irregularity will indicate the same by ringing a mechanical spring bell, substantially as described, and illustrated in Figs. 10 and 11. (15.) In a machine for packing cigarettes or like goods as claimed in claim 1, the adaptation to the foot of the inclined shute delivering cigarettes from the hopper or receiver, of a brush having a rocking motion so as to move upwards at one time the layer of cigarettes lying in the open shute to relieve the downward pressure, and on the return stroke to accelerate the movement of the lower portion of the cigarettes on to the tray or slide, substantially as described, and illustrated in Figs. 16 and 17. (16.) In a machine for packing cigarettes and like goods as claimed in claim 1, the arrangement of additional delivery boards or shutes for feeding a mouthpiece or photograph with the cigarettes into the open trays and slides, and automatic mechanism to determine the feed of such photograph or article at the exact time when each shell is stationary and in proper position to receive it, substantially as described, and illustrated in Figs. 17 and 18. (17.) In a machine for packing cigarettes and like goods as claimed in claim 1, the application of an automatically operated trigger adapted to bend out the leading flap of the open tray or slide to permit easy access of the cigarettes and pusher-head, substantially as described, and illustrated in Figs. 16, 17, and 18. (18.) The combination with a shell or case making and cigarette-packing machine as claimed in claim 1 of means for automatically wrapping the packets of cigarettes with tinfoil or other suitable material. (19.) In a cigarette-packing machine as claimed in claim 1, a wrapping-apparatus comprising gravity feed-devices for the cigarettes or like goods, a sheet-wrapper feed integral with a die-plate reciprocating under a packing and folding plunger, fingers and tuckers automatically operated in succession to fold and adapt such tinfoil or other wrap closely to the internal packet of cigarettes or like goods, and means for delivering the same when wrapped to trays or slides for further packing in cardboard boxes, substantially as described. (20.) In a cigarette-packing machine as claimed in claim 1, the combination with a reciprocating die-plate carrying upon it grippers adapted to seize a sheet of tinfoil from a sloping feed-board and to carry the same disposed over the aperture of the said die-plate, under a vertically reciprocating plunger having a chamber therein for the reception of the cigarettes, from transverse feed-pushers on either side, the said plunger carrying the cigarettes through the aperture of the die-plate, thus forming the first fold of the tinfoil or similar wrapper, substantially as described. (21.) In a packing and wrapping machine for cigarettes as claimed in claim 1, a pivoted flapper operated by the die-plate to make the second upper fold of tinfoil over the packet of cigarettes, in combination with a plunger integral with the reciprocating die-plate adapted to push the cigarette packet into a closed tunnel, thus effecting the third upper fold of the wrapper over the packet, substantially as described. (22.) In a packing and wrapping machine for cigarettes as claimed in claim 1, a tunnel receiving a succession of partially wrapped packets of cigarettes, moved therein intermittently by a plunger integral with a reciprocating die-plate, in combination with two vertically descending rocking tucker-plates folding in the top ends of the wrapper to the packet, a pair of simultaneously side-closing fingers at either end forming the ends of the wrapper into triangular points, and two rising plungers, one at either end, setting up and creasing against the resistance of aforesaid tucker-plate and side fingers the said triangular wrapper-ends, substantially as described. (23.) In a packing and wrapping machine for cigarettes as claimed in claim 1, a tunnel receiving a succession of partially wrapped packets of cigarettes moved therein intermittently by a plunger integral with a reciprocating die-plate, such tunnel having end tucker-plates and pairs of closing-fingers, in combination with upwardly ascending rocking tucker-plates to complete the upward fold of the triangular ends of the wrapper, substantially as described.

(Specification, £1 18s.; drawings, 9s.)

No. 15572.—30th October, 1902.—THE METALLIC COMPOUNDS SEPARATION SYNDICATE, LIMITED, of 3, Church Passage, Guildhall, London, England (assignee of William Walker Fyfe, of 13, Stanley Villas, Westbury Avenue, Wood Green, Middlesex, England, Engineer). Improvements in apparatus for producing and depositing fumes from ores.

Claims.—(1.) For producing and depositing fumes from ores, apparatus consisting of a set of furnaces and a set of flues communicating with each other, all built in one structure, each flue terminating in a chamber at each end provided with a tightly closing door, substantially as described. (2.) In apparatus such as is above referred to, tightly closing doors constructed substantially as described with reference to Fig. 4. (3.) A fuel hopper and lid of approximately elliptical form, and apparatus for moving the lid, constructed and operating substantially as described with reference to Figs. 5 and 6.

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

No. 15766.—15th December, 1902.—THOMAS ANDERSON, Sailmaker, and WILLIAM NICHOLS, Saddler, both of Devon Street, New Plymouth, New Zealand. Horse-cover fastenings.

Claims.—In a horse-cover, a breast-strap fixed on the off side, laced through squares, and fastened by a buckle on the near side. In a horse-cover, a back-strap having a ring sliding upon it, and a girth fixed on the off side, and passing through the sliding ring on the back-strap, fastened with a spring hook to a ring and buckle on the near side, substantially as shown and described.

(Specification, 1s.; drawings, 1s.)

No. 15812.—23rd December, 1902.—HENRY DIXON, of Mataura, New Zealand, Farmer. Improved trap for catching rats and the like.

Claims.—(1.) The general construction, arrangement, and combination of parts composing my improved trap for catching rats and the like, all substantially as and for the purposes described with reference to the drawings. (2.) An improved trap for rats and the like, consisting of a base, a recess therein, a covered platform hinged in said recess, a box-lid adapted to fall over said platform, a cord connected at one end with said box-lid and running over pulleys on a frame above said box-lid and weighted at the other end, a stop on said cord, a pawl secured to an overhead lever and adapted to engage said stop when the trap is set, a cord connecting one end of said overhead lever and a corresponding end of said platform, and a holdfast adapted to engage said box-lid when fallen, substantially as described.

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

No. 15813.—23rd December, 1902.—HENRY DIXON, of Mataura, New Zealand, Farmer. Improved trap for catching rats, birds, and the like.

Claims.—(1.) The general construction, arrangement, and combination of parts composing my improved trap for catching rats, birds, and the like, all substantially as and for the purposes described with reference to the drawings. (2.) A trap consisting of a base partly recessed, a platform hinged at one end and supported at the other end by a partly protected cord depending from an overhead lever, a box-lid adapted to fall over said platform hinged at one end and supported at the other end by a cord depending from one end of a second overhead lever, the other end of said last-mentioned lever being connected by a cord to the end of a hinged platform in a second chamber, a hinged race leading from said box-lid to said second hinged platform, hinged stops between said race and said second platform, and a self-closing passage from said second chamber into a third removable chamber, substantially as and for the purposes set forth.

(Specification, 5s. 9d.; drawings, 1s.)

No. 15819.—30th December, 1902.—GEORGE HENRY DUNLOP, of 17, Dundas Place, South Melbourne, Victoria, Civil Engineer. Improvements in the construction of walls or linings for tunnels and shafts.

Claims.—(1.) In tunnelling and in shaft-sinking, a wall or lining consisting of rings built in sections or segments, each composed essentially of ribs as *a* and laggings as *b*, substantially as described, and shown in the drawings. (2.) A wall or lining for tunnelling or shaft-sinking composed of ribs as *a* and laggings as *b*, and struts as *c* having, if necessary, a strengthening "sett" as *e*, e^1, e^2, flanges as *f* and segments as *d*, all secured together and arranged substantially as described, and shown in the drawings. (3.) In tunnelling and in shaft-sinking, a wall or lining consisting of ribs *a*, laggings *b*, and masonry *x* and struts as *c* when requisite, built substantially as described, and shown in the drawings. (4.) A wall or lining for tunnelling or shaft-sinking of the type specified, having the laggings as *b* (Fig. 4) so arranged as that they overlap, as and for the purpose described. (5.) A wall or lining for tunnelling or shaft-sinking of the type specified, having the whole of the outer surface of the lagged segments or the joints thereof covered with sheet metal, tarred felt, or other material lapped at its meeting edges to make a good joint, as and for the purpose described. (6.) In tunnelling and in shaft-sinking, a wall or lining consisting of wooden ribs as *a* used continuously in rings in contact, and either with or without laggings, the joint throughout being packed as specified and all arranged substantially as described. (7.) A tunnel or a shaft lining as described, having three-ply rib-rings as described and shown. (8.) A tunnel or a shaft lining as described, consisting of a preliminary lining as of wood with a final lining as of concrete or other similar material, with a waterproof lining supported from within as by masonry of sufficient strength to bear the outer water-pressure, substantially as described and shown. (9.) The erection of the last section of each lining-ring with rib segments having radial joints, within a closely fitting shield, in the manner described.

(Specification, 11s. 6d.; drawings, 1s.)

No. 15820.—30th December, 1902.—MURRAY CORRINGTON, of 40, Wall Street, New York, United States of America, Counsellor-at-Law. Improvements in variable-speed safety-valves.

Claims.—(1.) In a safety-valve device, the combination of a piston in a chamber open on one side to fluid under pressure, a load on the other side of said piston balancing a given or normal pressure on the opposite side, and means arranged in the wall of the piston-chamber and controlled by said piston for permitting a considerable excess of pressure to escape past the piston at a continuously varying rate of speed as the load returns the piston towards its normal position. (2.) In a safety-valve device, the combination of a piston in a chamber open on one side to fluid under pressure, a load on the other side of said piston adapted to balance a given definite pressure on the opposite side, and means arranged in the wall of the piston-chamber and controlled by the movement of said piston for permitting a considerable excess of pressure to escape past said piston, slowly at first and then at an increasing rate of speed as the load returns said piston towards its normal position. (3.) In a fluid-pressure brake system, the combination, with a brake-cylinder, of a piston-chamber, a passage for permitting the pressure to escape from said cylinder through said piston-chamber, a piston in said chamber carrying a load adapted to hold it in position to close said passage when a given or normal pressure is admitted to said cylinder, and means arranged in the wall of the chamber and controlled by said piston so constructed that when an extraordinary pressure is suddenly admitted into said cylinder it will escape, slowly at first and then at an increasing rate of speed as the piston is returned by the load toward its normal position. (4.) In a fluid-pressure brake system, the combination, with a brake-cylinder, of a piston-chamber, a passage for permitting the pressure to escape from said cylinder through said piston-chamber, a piston in said chamber, a spring bearing on said piston and adjusted to hold it in position to close said passage against a given definite pressure admitted to said cylinder, and means so arranged in the wall of the chamber and controlled by said piston that when a considerable excess pressure is admitted into said cylinder the spring yields and the piston permits the pressure to escape slowly, and as the pressure falls and the spring returns the piston towards normal position the pressure escapes at an increasing rate.

(Specification, 7s.; drawings, 1s.)

No. 15821.—30th December, 1902.—JOSEPH MOSS, of Apollo Chambers, 326, Flinders Lane, Melbourne, Victoria, Indentor. Improvements in window sashes and frames.

Claims.—(1.) The improved combination top and bottom window sash and frame consisting of a top and bottom sash in the styles of which are pivot-pins, said pivot-pins turning in slides, said slides having a wedge-shaped vertical surface on the inside of the building, and capable of moving vertically between the parting-beads of a window frame and a box frame having an upward extension above the lower or inner sash, said slides being lifted by a sash-line passing over a pulley and supporting a weight, in combination with a fastener secured above the meeting-rail of the inner sash, and a catch on the meeting-rail of the bottom sash, and a combination dust-excluding strip and lock on the inside of each style, said strip and lock having a series of oblong holes and a finger-hold, and held to the style by screws, all as and for the purposes described, and as illustrated in the drawings. (2.) The improved combination top and bottom window sashes and frames consisting of sashes having integral with or attached to the outer surface of the styles dust- and draft-excluding strips, pivot-pins attached near the middle of said styles, slides sliding between parting-beads outside said styles, a hole through each slide to accommodate a pivot-pin, dust- and draft-excluding strips on the meeting surfaces of each slide with its style, each slide being supported by a sash-line passing over a pulley and hung by a weight, a box frame having an upward extension above the lower or inner sash, in combination with a catch on the meeting-rail of the bottom sash, a fastener on the meeting-rail of the upper sash, and a casing containing a holding-pin forced outwardly by a spring secured to the meeting surface of each slide, said pin engaging with a hole in a holding-plate attached to each style, all as and for the purposes described, and as illustrated in the drawings.

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

No. 15822. — 30th December, 1902. — JAMES PALMER CAMPBELL, of Wellington, New Zealand, Patent Agent (nominee of Henry Chitty, of Itala, 2, Clifton Road, South Norwood, Surrey, England, Electrical Engineer). Improvements in dynamo-electrical machinery.

Claims.—(1.) For a dynamo-electric machine, a pole-piece provided with a plurality of ventilation-passages parallel with the direction of rotation of the machine, of diminishing area in the direction outward from the polar face, each such passage communicating in such a manner with an outwardly expanding transverse channel dividing the pole-piece into substantially equal parts, the narrowest part of which channel is in the polar face, that the combined effective area of all the passages and the transverse channel at the point where they merge into one is either equal to or preferably somewhat greater than the combined effective area of all the passages and the transverse channel taken at the polar face. (2.) A dynamo-electric machine having ventilation-passages and channels in its field magnet, arranged substantially as described with reference to the drawings.

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

No. 15823.—30th December, 1902.—HUGH GORDON MACWILLIAM, of Thurston Place, New Rochelle, Westchester, New York, United States of America, Gentleman. Improvements in braces or trouser-suspenders.

Claims.—(1.) In a pair of suspenders, the combination with the shoulder-straps and a pair of mutually independent rear trouser-connectors, of a back member consisting of a cord centrally connected at top and bottom only to form two closed loops, each loop being unconfined at the outer side, the cord of each loop having a running or other suitable connection with the end of the adjacent shoulder-strap and running connection with the adjacent trouser-connector. (2.) In a pair of suspenders, the combination with the shoulder-straps, of a back member comprising a cord centrally connected at top and bottom only to form two closed loops, each loop being unconfined at the outer side and having running engagement with the adjacent shoulder-strap, and means for independently connecting each of the loops with the rear of the trousers. (3.) In a pair of suspenders, in combination, a pair of shoulder-straps, a pair of rear trouser-connectors adapted at one end to be attached to the trousers and having an eye at the other end, a central device, and a cord which has both a running engagement and a fast engagement with the central device, thus forming two loops, each loop having suitable connection with the adjacent shoulder-strap and running connection with the adjacent rear trouser-connector, substantially as described. (4.) In a pair of suspenders, the construction comprising, in combination, a pair of shoulder-straps, a pair of mutually independent trouser-connectors adapted at one end to be attached to the rear of the trousers and having an eye at the other end, a central device comprising an eye and a clamp suitably connected, the eye being positioned above the clamp, and a cord running loosely through the eye of the central device, and having its ends held fast in the clamp to form two closed loops, each loop having suitable running or fixed connection with the adjacent shoulder-strap and running connection with the eye of the adjacent rear trouser-connector, the outer side of each loop between said connections being unconfined and unengaged. (5.) In a pair of suspenders, the construction comprising, in combination, a pair of shoulder-straps, a central device provided with clamps, a pair of trouser-connectors independent of each other and of the central device and adapted at one end to be attached to the rear of the trousers and having an eye at the other end, and a cord or cords having its or their ends held fast in one of said clamps, and being also firmly engaged intermediately of its ends at one point only by the other clamp of the central device to form two closed loops, each loop having running engagement with the eye upon the adjacent shoulder-strap and the eye upon the adjacent trouser-connector and being unconfined at the outer side. (6.) In the improved suspenders described, the construction of the central device consisting of an eye and a clamp suitably connected together, the clamp being adapted to hold the ends of a cord side by side in a position perpendicular to the axis of the eye, for the purpose set forth.

(Specification, 5s. 6d.; drawings, 2s.)

No. 15831.—5th January, 1903.—JONATHAN HARRIS, of 550, East Madison Avenue, Cleveland, Ohio, United States of America, Machinist. Improvements in wire fences.

Claims.—(1.) The combination with a wire fence of line and stay wires, and clamps upon the wire-crossings arranged to reciprocally lock one another, comprising metal rings diagonally placed thereon, the rings upon adjacent joints being reversed in position in relation to one another, substantially as described. (2.) The combination in a wire fence of line and stay wires, clamps upon the wire-crossings comprising rings diagonally placed thereon, the rings upon one set of joints being reversed in angular position relatively to the rings upon the adjacent joints, and finished smooth edges to the fence comprising upper and lower line wires and the extremities of the stay-wires wrapped thereon, substantially as described. (3.) The combination with the line-wires of a fence waved in one plane and the stay-wire therefor, of means for securing the wires together comprising ring clamps diagonally placed on the wire-crossings, the rings in alternate joints being reversed in angular position, and wrapped extremities to the stay-wires, substantially as described. (4.) The combination in a wire fence, of line-wires waved in only one plane, stay-wires secured thereto, and means for securing the stay-wires to the line-wires consisting of the wrapped extremities of the stay-wires and rings diagonally encircling the wire-crossings, the rings on adjacent joints being reversed in position in relation to one another, and means for preventing the rings from slipping on the line-wires consisting of a head on each side of the ring and closely adjacent thereto, the wire being twice bent in the same direction, substantially as described.

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

No. 15834. — 7th January, 1903. — UNITED SHOE-MACHINERY COMPANY, of Paterson, State of New Jersey, United States of America, a corporation duly organized under the laws of the said State of New Jersey, and having a place of business at 205, Lincoln Street, in Boston, Massachusetts, United States of America aforesaid (assignees of Frederick Lyman Alley, of San Francisco, California, United States of America aforesaid, now commorant at Sydney, New South Wales, Manager). Improvements in shoe-sewing machines.

Claims.—(1.) A chain-stitch shoe sewing machine having, in combination, a looper, a curved hook needle, and actuating-mechanism for the needle having provision for yieldingly controlling said needle during its loop-drawing stroke, substantially as described. (2.) A chain-stitch shoe-sewing machine having, in combination, a looper, a curved hook needle, and means for actuating the needle having provision for positively controlling the same during its work-piercing stroke and yieldingly controlling the same during its loop-drawing stroke, substantially as described. (3.) A chain-stitch shoe-sewing machine having, in combination, a looper, a curved hook needle acting to exert a yielding pull on the thread to tighten the stitch, and a stitch-setting take-up, substantially as described. (4.) A chain-stitch shoe-sewing machine having, in combination, a looper, a curved hook needle, a take-up, and actuating-mechanism for the needle comprising a spring acting to cause the needle to exert a yielding pull on the thread during its loop-drawing stroke, substantially as described. (5.) A chain-stitch shoe-sewing machine having, in combination, a looper, a curved hook needle, and a spring acting during the tightening of the stitch to exert a yielding strain on the thread on the needle side of the work, substantially as described.

(Specification, 5s. 6d.; drawings, 2s.)

No. 15836.—7th January, 1903.—HIRAM WHEELER BLAISDELL, of 2716, South Grand Avenue, Los Angeles, California, United States of America. System of handling material.

Extract from Specification.—This invention relates to a system for handling material, and particularly to such a system constructed to convey and mix material, and some of the objects of the invention are to provide such a system which is simple in construction and positive and effective in operation. It is also an object of this invention to provide a mixing-apparatus for the purpose of moistening the dry material handled, in order to prevent the loss of the lighter particles of the material during the handling of the same, and to effect the moistening of the material in a thorough and complete manner throughout the entire mass of material handled. Another object of the invention is to provide a mixing-apparatus which can be located within the line of travel of the material treated, and which will operate so rapidly that the travel or progress of the material will not be retarded. A further object of the invention is to provide a mixing-apparatus wherein the fluid is distributed uniformly and regularly throughout the material as the same is being mixed. Furthermore, an object of the invention is to introduce a drying fluid or agent throughout the moist material while the same is being agitated or mixed, to facilitate the drying thereof in the case when moist material is being handled. Another object of the invention is to provide a conveyer system wherein the main conveyer occupies a plane normally below that of the auxiliary conveyer, upon which the main conveyer discharges, and to provide such a system wherein a portion thereof is constructed to discharge at

various elevations. It is also an object of this invention to provide an endless main conveyer arranged to discharge upon a superimposed auxiliary conveyer constructed to be transported above the line of travel of said main conveyer, and provided with means travelling therewith to effect said discharge. Still another object of the invention is to provide an auxiliary conveyer driven by a main conveyer normally occupying a plane below that of said auxiliary conveyer.

[NOTE.—The number and length of the claims in this case preclude them from being printed, and the foregoing extract from the specification is inserted instead.]

(Specification, £1; drawings, 5s.)

No. 15839.—8th January, 1903.—JOHN THOMAS YOUNG, of 120, Bay View Street, Williamstown, Victoria, Coachbuilder, and JOHN WREN, of Studley House, Studley Park, Kew, Victoria, Financier (assignees of the said John Thomas Young and Charles Meredith Young, of Kew Street, North Bendigo, Victoria, Carpenter and Joiner). Improved automatic spring catch for sliding sashes of windows, louvres, &c.

Claims.—(1.) An improved automatic spring catch for sliding sashes of windows, louvres, &c., consisting in a spring bolt mounted within a casing on the frame and having a bevelled head, in combination with a metallic wearing or catch plate on the stile of the sash, said plate having a series of bevelled recesses, substantially as set forth, and illustrated in the drawings. (2.) In an automatic spring catch for sliding sashes of windows, louvres, &c., a bolt having a bevelled head provided with an anti-friction roller and rubber packing, a spiral spring around the shank of said bolt and an adjusting nut thereon, substantially as and for the purposes specified, and as illustrated.

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

No. 15840. — 8th January, 1903. — THOMAS JOHNSON BRITTEN, residing on the property of the Wolhuter Gold-mining Company, Limited, Witwatersrand Goldfields, Transvaal, Mine-manager. Improvements in apparatus for laying or settling the dust or pulverised rock created in the boring and blasting of holes in mining.

Claims.—(1.) Apparatus of the nature indicated, constructed, arranged, and operating for the purposes specified substantially as described, and illustrated in the drawings. (2.) An apparatus for laying or settling the dust or pulverised rock created in the boring and blasting of holes in mining, comprising, in combination, a water-container, a nozzle of the construction described formed with a water-supply branch placed in communication with the water-container and with an air supply branch placed in communication with a source of supply of air under pressure, constructed and operating substantially as described and shown. (3.) In apparatus of the nature specified, a nozzle comprising an air-supply branch and a water-supply branch, the air-supply branch constructed with an air-passage fitted with a valve for regulating the air-supply, and formed with a flat bottom and rounded top at the outlet orifice, and the water-supply branch constructed with a water-passage opening into the air-passage near the outlet orifice, inclined to the flat base of the air-passage, and elongated in the direction of said air-passage, substantially as described, and shown in Figs. 1 to 3 of the drawings. (4.) In apparatus of the nature indicated, and intended for use when blasting, the nozzle consisting of air- and water-supply branches, the air-branch being constructed with an air-passage formed flat at the bottom and rounded at the top, and splayed outwards, or constructed with divergent walls at the outlet orifice, and the water-branch with a water-passage communicating with the air-passage near the outlet orifice, inclined to the flat base of the air-passage, and elongated in the direction of said passage, substantially as described and shown with reference to Figs. 2 and 3 of the drawings. (5.) In apparatus such as specified, the combination with the rock-drill and the water-container of the nozzle, constructed substantially as described, connected with the rock-drilling machine in such a way that the apparatus is brought into operation when the air-admission or throttle valve is operated to supply air to the machine, and means for fixing the nozzle to the water-container at any required angle to direct the spray on to the rock face, substantially as described with reference to Fig. 4 or Figs. 6 and 7 of the drawings. (6.) An apparatus for use when blasting for the purposes specified, having its several parts constructed, arranged, and operating substantially as described, and illustrated in Figs. 1 to 3 and Fig. 5 of the drawings.

(Specification, 7s.; drawings, 1s.)

No. 15842.—6th January, 1903.—THE PERFECTION BLIND- AND LOCK-STITCH SEWING-MACHINE COMPANY, of care of Nevin John Loos, of 113, East State Street, Trenton, Mercer, New Jersey, United States of America, Manufacturers (assignees of Charles Francis Filor, of care of Nevin John Loos aforesaid, Inventor). Blind-stitching sewing-machines.

Claims.—(1.) A blind-stitch sewing-machine characterized by a reciprocating presser-foot, a spring-pressed work-carrying lever fulcrumed upon the bed-plate under the presser-foot, and having a straight edge extending in both directions laterally beyond the presser-foot, about which edge the material to be worked upon may be folded and fed by the feed-dog from above the lever where the material is under and against the presser-foot, around the straight edge thereof and below the lever, and then between the lever and said dog, whereby the needle of the machine may penetrate the fold of the material at the straight edge and form stitching invisible from one side of the material. (2.) A blind-stitch sewing-machine characterized by a straight-edged work-carrying lever, about which the material is folded to form a fold at the straight edge, a notched plate adjustably mounted upon the lever, said notches being spaced for the various widths of stitches provided for by the different amplitudes of lateral vibrations of the needle of the machine, whereby blind-stitching of different lengths or depths may be produced. (3.) A blind-stitching sewing-machine characterized by a straight-edged work-carrying lever, about which the material is folded to form a fold at the straight edge, a notched plate adjustably mounted upon the lever, said notches being spaced for the various widths of stitches provided for by the different amplitudes of lateral vibrations of the needle of the machine, whereby blind-stitching of different lengths or depths may be produced, the said plate having also a single notch at one portion, and the needle being adapted to have no lateral vibration, whereby the stitching may be varied to produce the stitches all in substantially the same straight line, lying perpendicular to said straight edge during the operation of sewing. (4.) A blind-stitch sewing-machine characterized by a lever provided with various notched adjustable passages for the needle, the notches having index numbers, mechanism for varying the lateral vibrations of the needle from zero to a predetermined maximum, and index numbers arranged in conjunction with said mechanism to correspond with the aforementioned numbers, whereby the notches may be adjusted to suit the amplitude of the vibrations of the needle. (5.) A blind-stitch sewing-machine characterized by a work-carrying lever provided with notches arranged in pairs and a single notch, a needle and laterally vibratory needle-bar, and a pitman and regulator for determining the amplitude of the vibrations. (6.) A blind-stitch sewing-machine characterized by a work-carrying lever for holding the cloth folded from the top to under the same, a knee-operated mechanism arranged to engage the underside of said work-carrying lever to raise the same from the feed-dog of said machine, and a spring partially resisting the raising of the lever. (7.) A blind-stitch sewing-machine characterized by a fulcrumed spring-pressed work-carrying lever, a reciprocating needle-bar, a presser-foot bearing upon said lever, and means for communicating motion intermittently from the needle-bar to the presser-foot, whereby said lever may intermittently rise for permitting the easy feeding of the material by the feed-dog. (8.) A blind-stitch sewing-machine having a feed-dog, a spring-pressed fulcrumed work-carrying lever, a projection on the lever bearing against said feed-dog, the bed of the machine having a depression under said lever. (9.) A blind-stitch sewing-machine consisting of elements in combination substantially as shown and described, whereby the stitching or threads forming the stitches are invisible upon one side of the material sewed. (10.) A blind-stitch sewing-machine having a work-carrier over which the work is folded so that the needle may pass through the material and just escape the carrier, and means for varying the lateral throw of the needle whereby the character of the stitching may be varied.

(Specification, 9s. 6d.; drawings, 3s.)

No. 15843.—7th January, 1903.—JAMES SAMUEL BROWNELL, of 132, Market Street, San Francisco, California, United States of America, Merchant. Concentrator.

Claims.—(1.) In a vanner or concentrator, including an endless travelling belt and a worm gear, the members of which are movable one relative to the other and through which motion is transmitted, an eccentric from the strap of which the worm is suspended, and by the turning of which the worm and gear may be engaged or disengaged, and a swivelled journal-box suspended from said strap and in which the shaft of the worm is mounted. (2.) In a worm-gear driving-device for endless-belt concentrator, an eccentric turnable upon the gear-shaft, and a strap within which it is also turnable, a hanger dependent from the strap, a journal-box carried by said hanger, in which box the worm-shaft is turnable, and a means by which the eccentric may be turned to raise or lower the worm and engage or disengage it with the gear. (3.) A

concentrator with an endless belt, a drum at either end over which the belt passes, a worm gear the members of which are movable one relative to the other and through which motion is transmitted to the belt, a swivelled bearing supported from the movable member of the worm gear and receiving the shaft of the other member of said gear, elastic legs fixed at the bottom and having the upper ends formed to support the frame, and means connected with the legs to raise or lower and adjust the frame. (4.) In an endless-belt concentrator, a belt, and drums over which it passes, a driving-gear and a worm the shaft of which is parallel with the machine frame, a swivelled bearing for the outer end of said shaft, and means whereby the worm is moved relative to the said gear, cone-pulleys one of which is carried by the worm-shaft and the other on the driving-shaft, a belt around said cone-pulleys, a belt-shifting yoke and a guided rod by which it is carried, and means located at the head end of the machine by which the rod is moved to shift the belt. (5.) In a concentrator, a frame, and endless belt and drums over which it passes, a power-transmitting mechanism, including a worm gear, the members of which are movable one relative to the other, elastic supports upon the upper ends of which the frame is carried, fixed angular slotted brackets, and clamps to which the lower ends of the elastic supports are fixed, said clamps being adjustable upon the brackets, and holding-nuts for the clamps. (6.) In a concentrator having an endless travelling belt, and a frame with drums at each end around which the belt passes, elastic supports for the frame, and means located at the upper ends of the supports by which the frame may be vertically adjusted.

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

No. 15844.—7th January, 1903.—THE CLAYTON FIRE-EXTINGUISHING AND VENTILATING COMPANY, LIMITED, of 22, Craven Street, London, W.C., England, Manufacturers (assignees of Thomas Adam Clayton, of 212, West Coulter Street, Germantown, Philadelphia, United States of America, also of 22, Craven Street aforesaid, Accountant). Improved apparatus for the generation and delivery of hot or cold gas for fumigation, sterilisation, the extinguishing of fires, and the like.

Claims.—(1.) An apparatus for the generation and discharge of sterilising or non-flame-supporting gas, so arranged that the gases, whether delivered in a hot or cold condition, are first cooled before entry into the aspirating-fan, and if required hot are afterwards reheated by circulating-tubes in the combustion-chamber, thus effecting maximum efficiency as regards weight of sulphur sublimed per grate-area, substantially as described. (2.) An apparatus as claimed in claim 1, comprising, in combination, a sulphurous-acid-gas generating-chamber, a controllable entry of air to the same, baffle-plates in said generator, supplementary air-inlets above and below said baffle-plates, a surface-condenser in gas-outlet from generating-chamber, and an aspirating-fan or blower beyond said condenser, as and for the purposes substantially as described. (3.) An apparatus as claimed in claim 1, comprising, in combination, a sulphur-combustion chamber or gas-generator, an aspirating-fan or blower withdrawing and discharging gas from the generator, a condenser introduced into the main between the generator and the aspirating-fan or blower, and an alternative delivery from said blower controlled by a cock passing through reheating-tubes in the upper part of the combustion-chamber, substantially as and for the purposes described. (4.) The arrangement, construction, and combination of parts forming an apparatus for the generation and discharge of sterilising or non-flame-supporting gas, substantially as described, and illustrated in the drawings.

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

No. 15845.—7th January, 1903.—MAITLAND LUMLEY, of 1, America Square, London, England, Bottlers' Engineer, and JEAN BAPTISTE BOURSEAU, of 141, Avenue Parmentier, Paris, France, Engineer. An improved reducing-valve.

Claims.—(1.) The improved valve comprising a casing formed in two parts, the upper of which is divided by means of a partition into two parts, and the lower of which is chambered and is provided with a means of adjustment for a regulating spring, caps at the respective ends of the casing, the upper of which is provided upon its under surface with a conical projection forming the termination of the inlet, and which inlet is normally closed by means of a disc or block of rubber upon the upper end of a hollow spindle down which the gas or fluid passes to the discharge-orifice, springs located within the chambers formed in the upper portion of the casing, and suitable washers to prevent any leakage between the said chambers, and also means to permit of the escape of any gas or fluid that may pass from one chamber to the other, all arranged, constructed, and operating substantially as described, and illustrated by the drawings. (2.) In a valve of the kind described, a means whereby the pressure at which the valve works may be regulated by means operable from the exterior of the valve, substantially as described, and illustrated by the drawings. (3.) The general combination and arrangement of parts constituting the improved valve, substantially as described, and illustrated by the drawings.

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

No. 15846. — 7th January, 1903. — REGINALD AUBREY FESSENDEN, of Manteo, North Carolina, United States of America, Electrical Engineer. Selective signalling by electro-magnetic waves.

Claims.—(1.) In a system of signalling by electro-magnetic waves, the combination at the sending station of means for generating electro-magnetic waves of the same character, means for causing the emission of such waves in two or more groups at different emission-rates, and at the receiving station an indicating-mechanism operative by the conjoint action of the respectively responsive devices. (2.) In a system of signalling by electro-magnetic waves, the combination of means at the sending station for generating electro-magnetic waves of the same character, means for causing the emission of such waves in two or more groups at different emission-rates, means at the receiving station responsive respectively to the groups of waves, and an indicating-mechanism operative by the conjoint action of the respectively responsive devices. (3.) In a system of signalling by electro-magnetic waves, the combination of means at the sending station for generating electro-magnetic waves of the same character, means for causing the emission of such waves in two or more groups at different emission-rates, means at the receiving station electrically tuned to respond to electro-magnetic waves of the character emitted, means mechanically tuned to respond respectively to the groups of waves in operative relation to the receiving-means, and an indicating-mechanism operative by the conjoint action of the mechanically tuned respectively responsive devices. (4.) In a system of signalling by electro-magnetic waves, the combination at the sending station of means for generating electro-magnetic waves of the same character, and means of causing the emission of sets of groups of waves, each set consisting of two or more groups of different emission-rates. (5.) In a system of signalling by electro-magnetic waves, the combination of a plurality of devices at the receiving station responsive respectively to groups of waves of different emission-rates, and indicating-mechanisms operative by the action of sets of the respectively responsive devices, each set consisting of two or more respectively responsive devices acting conjointly. (6.) In a system of signalling by electro-magnetic waves, the combination of means at the receiving station electrically tuned to respond to electro-magnetic waves of a single periodicity, means mechanically tuned to respond respectively to groups of different emission-rates, in operative relation to the receiving-means, and indicating-mechanisms operative by the action of sets of the mechanically tuned respectively responsive devices, each set consisting of two or more respectively responsive devices, acting conjointly. (7.) In a system of signalling by electro-magnetic waves, the combination of means at the sending station for generating electro-magnetic waves of the same character, means for causing the emission of sets of groups of waves, each set consisting of two or more groups of different emission-rates, means at the receiving station responsive respectively to the groups of waves, and indicating-mechanisms operative by the action of corresponding sets of the respectively responsive devices, the components of each set acting conjointly. (8.) In a system of signalling by electro-magnetic waves, the combination of means at the sending station for generating electro-magnetic waves of the same character, means for causing the emission of sets of groups of waves, each set consisting of two or more groups of different emission-rates, means at the receiving station electrically tuned to respond to electro-magnetic waves of the character emitted, means mechanically tuned to respond respectively to the groups of waves in operative relation to the receiving-means, and indicating-mechanisms operative by the action of corresponding sets of mechanically tuned respectively responsive devices, the components of each set acting conjointly. (9.) In a system of signalling by electro-magnetic waves, a receiver responsive to electro-magnetic waves received at the station while at the same time unresponsive to effects produced by the generation of electro-magnetic waves at the station. (10.) In a system of signalling by electro-magnetic waves, a receiver more sensitive to electro-magnetic waves received at the station than to effects produced by the generation of electro-magnetic waves of the same frequency at the station at the same time. (11.) In a system of signalling by electro-magnetic waves, the combination at a station of a receiver

for electro-magnetic waves, and means for generating electro-magnetic waves, said elements being adapted to perform their functions simultaneously without interference one with the other. (12.) In a system of signalling by electro-magnetic waves, the combination at a station of a generator of electro-magnetic waves, two conductors, a receiver for electro-magnetic waves in operative relation to said conductors, said conductors being adapted to oppose the effects on the receiver produced by the generation of electro-magnetic waves at the station and to conjoin the effects on the receiver produced by electro-magnetic waves received at the station. (13.) In a system of signalling by electro-magnetic waves, the combination at the receiving station of a wave-responsive device, a circuit containing a microphonic contact controlled thereby, a conductor adapted to be heated by currents in said circuit, and an indicating-mechanism controlled by heat effects in said conductor. (14.) In a system of signalling by electro-magnetic waves, the combination at a station of two conductors and a receiver for electro-magnetic waves in operative relation to said conductors, said conductors being adapted to oppose the effects on the receiver produced by disturbing electrical impulses, while permitting waves of the desired periodicity to affect the receivers. (15.) In a system of signalling by electro-magnetic waves, a receiver so connected as to be unresponsive to effects produced by the generation of electro-magnetic waves at the same station as the receiver, but responsive to electro-magnetic waves received at the station, substantially as set forth. (16.) In a system of signalling by electro-magnetic waves, a receiver more sensitive to electro-magnetic waves received at the station than to effects produced by the generation of electro-magnetic waves of the same frequency at the station at the same time, substantially as set forth.

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

No. 15847.—7th January, 1903.—REGINALD AUBREY FESSENDEN, of Manteo, North Carolina, United States of America, Electrical Engineer. Improvements in current-operated receiver for electro-magnetic waves.

Claims.—(1.) In a system for signalling by electro-magnetic waves, the combination at the receiving station of a magnetic circuit, means for producing a magnetic flux in said circuit, and means operative by currents produced by electro-magnetic waves to change the direction of the flux, substantially as set forth. (2.) In a system for signalling by electro-magnetic waves, the combination at the receiving station of a magnetic circuit, means for producing in said circuit a magnetic flux practically constant in amount and normally varying in direction with practical uniformity, and means operative by electro-magnetic waves for changing the direction of the magnetic flux, substantially as set forth. (3.) In a system for signalling by electro-magnetic waves, the combination of a rotating magnetic field, means for producing a rotating magnetic flux, and means operative by currents produced by electro-magnetic waves for changing the angle between the direction of the field and that of the flux, substantially as set forth. (4.) In a system for signalling by electro-magnetic waves, the combination at the receiving station of a magnetic circuit, means for producing a magnetic flux in said circuit, means operative by currents produced by electro-magnetic waves to change the direction of the flux, and a circuit adapted to be energized by such change of direction of the flux, substantially as set forth. (5.) In a system for signalling by electro-magnetic waves, the combination of a rotating magnetic field, means for producing a rotating magnetic flux, means operative by currents produced by electro-magnetic waves for changing the angle between the direction of the field and that of the flux, and a circuit adapted to be energized by such change of angle between the field and the flux, substantially as set forth. (6.) In a system for signalling by electro-magnetic waves, the combination at the receiving station of a magnetic circuit, means for producing a magnetic flux in said circuit, means operative by currents produced by electro-magnetic waves to change the direction of the flux, and a circuit adapted to be energized by such change of direction of the flux, said circuit being arranged so as to be energized by the change of direction of the flux, but not by the normal rotations of the flux, substantially as set forth. (7.) In a system of signalling by electro-magnetic waves, the combination at the receiving station of a magnetic circuit, means for producing in said circuit a magnetic flux practically constant in amount and normally varying in direction with practical uniformity, means operative by electro-magnetic waves for changing the direction of the magnetic flux, and means for mechanically producing an indication by said change in direction of flux, substantially as set forth. (8.) In a system for signalling by electro-magnetic waves, the combination at the receiving station of a magnetic circuit, means for producing a magnetic flux in said circuit, and means operative by currents produced by electro-magnetic waves to change the position of the flux, substantially as set forth. (9.) In a system of signalling by electro-magnetic waves, the combination at the receiving station of a magnetic circuit, means for producing in said circuit a magnetic flux practically constant in motion and normally varying in position with practical uniformity, and means operative by the electro-magnetic waves for changing the position of the magnetic flux, substantially as set forth. (10.) In a system of signalling by electro-magnetic waves, the combination at the receiving station of a magnetic circuit, means for producing a magnetic flux in said circuit, means operative by currents produced by electro-magnetic waves to change the position of the flux, and a circuit adapted to be energized by such change of position of the flux, substantially as set forth.

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

No. 15848.—7th January, 1903.—WILLIAM ERIC REYNOLDS, of Dunedin, New Zealand, Merchant. Improvements in ploughs.

Extract from Specification.—This invention relates to double- and treble-furrow ploughs and the like. It consists in improving the bearings of the land wheel and furrow wheel so as to render them dust-proof. The arbor is also secured in my plough by means of a pin to the crank-axle, instead of by projecting casting, as heretofore. The spacing-bar is also improved by rendering it more readily adjustable and making it more rigid than the one heretofore in use, in which considerable play resulted after adjustment. I also place a clip collar on the crank-axle between the main beams against the bearing, for the purpose of preventing a lateral movement of the crank-axle. The lever for adjusting the furrow wheel is now provided with a solid boss and set-screw, instead of being in halves as heretofore, for the purpose of preventing slip on the shaft, due to wear of the appliances heretofore used. The rear axle-gear is similarly provided, with the same object in view.

Claim.—The general construction, arrangement, and combination of parts composing my improvements in ploughs, all substantially as and for the purposes described with reference to the drawings.

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

No. 15851.—9th January, 1903.—HENRY ALBERT SEYMOUR, of 913, F Street, North-west Washington, Columbia, United States of America, Solicitor of Patents and Counsellor in Patent Causes. Apparatus for generating steam from hot slag.

Claims.—(1.) The combination with a steam-generator of a reciprocating and rotary plunger provided with a slag-receptacle, and adapted to feed charges of hot slag into the generator and to discharge them into the body of water contained therein, substantially as set forth. (2.) The combination with a steam-generator of a reciprocating and rotary plunger provided with two or more slag-receptacles, and adapted to feed charges of hot slag into the generator and discharge them into the body of water contained therein, substantially as set forth. (3.) The combination with a steam-generator and hoppers, one or more, of a plunger provided with one or more slag-receptacles, and suitable means for reciprocating and rotating the plunger, substantially as set forth.

(Specification, 5s. 6d.; drawings, 2s.)

No. 15853.—9th January, 1903.—FRANCIS JOHN NEWBERRY and ALFRED WALKER, both of corner of James and Virginia Streets, Geelong West, Victoria, General Iron-founders. An improved combination cast-metal combustion-chamber and fire-box for washing and other coppers.

Claim.—An improved combination cast-metal combustion-chamber and fire-box for a washing or other copper, consisting of a combustion-chamber having a flange around its top, a spiral or other circulating rib, a smoke-discharge hole with a dampered smoke-pipe, said pipe being bolted to the chamber or dropping into vertical grooves thereon, wrought-iron handles cast into bosses, said chamber having a contracted bottom in which are bolts securing it to the top of a fire-box having convex outer top sides, an ash-pit hole, a fire-door having stops beneath it, and protuberances supporting a fire-bar ring upon which rest the fire-bars, all as and for the purposes described and as illustrated in the drawings.

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

No. 15854.—9th January, 1903.—HENRY TRADWELL DAVIS, of 115, Lewisham Road, Lewisham, Kent, England, Engineer, and ERNEST PERRETT, of 103, George Lane, Lewisham

aforesaid, Engineer. Method and apparatus for separating oily or similar impurities from water.

Claims.—(1.) The method of separating oily and similar parts from water containing the same, consisting in subjecting the water, with the addition thereto, as required, of a small regulated quantity of conducting-liquid, to the action of electric current between metallic electrodes. (2.) In a method as firstly claimed, the employment of a tank *a* which may have an inlet compartment *b* and is provided with metallic electrodes *d*, which the oily water passes in a circuitous path, said water being admitted at one end of the tank by a valve *j*, which is regulated by hand or automatically by the current, while the conducting-liquid is admitted by a valve *r*, which may also be regulated by hand or automatically by the current, the water passing off by an overflow *h* at the other end of the tank. (3.) Separating oily and similar parts from water containing the same by the method firstly claimed, and then removing the separated oily particles by filtration or settling.

(Specification, 5s. 6d.; drawings, 2s.)

No. 15857.—8th January, 1903.—WALTER CUTTEN, of Dunedin, New Zealand, Consulting Engineer. Improved form of compound winches, especially for dredges.

Claims.—(1.) In compound winches, especially the sort used for the work that is needed on dredges and suchlike, the form and general arrangement of the winch and the gearing thereof whereby the main shaft is arranged to be capable of being revolved in either direction, the said shaft having some barrels geared to same singly, so that said barrels are only capable of revolving in the same direction as the main shaft, and also having some barrels geared to same doubly, so that said barrels are capable of revolving in either direction, no matter which way the main shaft is revolving, all substantially as set forth and for the purposes indicated. (2.) In compound winches, especially that class of winch used for dredges, the form and general arrangement of the winch and its gearing to the barrels so that while all the barrels can remain at rest with their brakes on, some of the said barrels need the reversing of the main shaft when they need reversing, while others are provided with double clutches so as to be independent of the direction of revolution of the main shaft for their working in either direction, substantially as set forth and as shown on the drawing and described and explained.

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

No. 15858.—9th January, 1903.—WALTER SCOTT HARKNESS, of Timaru, New Zealand, Contractor. Device for holding a cow's leg while milking.

Claim.—The special-shaped shackle, in combination with a collar adapted to slide upon it and an encircling spring, as described and shown, and for the purposes specified.

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

No. 15863.—13th January, 1903.—HANS CHRISTENSEN, of 28, Godthaabsvej, Copenhagen, Denmark, Mill-builder. Improvements in matches and machinery for their manufacture.

Claims.—(1.) Rectangular or wedge-shaped matches the head ends of which are cut in on all four sides, so that the composition will not protrude beyond the sides of the match. (2.) In the manufacture of splints for the match-bodies referred to in claim 1, a vertically movable carriage for the knives, lancets, or gouges, substantially as described. (3.) In the manufacture of splints for the match-bodies referred to in claim 1, the use of knives made up of a number of short knives and gouges arranged either in a straight or zig-zag line, the gouges being carried by the short knives, substantially as described. (4.) In the manufacture of splints for the match-bodies referred to in claim 1, the use of gouges with inclined or rounded corners, which, whilst forming a groove in the underside of the splint, cut away the projection that remains on the surface of the log from the cut made by the gouges, that cut a groove on the inner side of the splint, substantially as described. (5.) In the manufacture of splints for the match-bodies referred to in claim 1, the use of knives made up of short knife-pieces whose ends are sharpened in such a way as to form gouges, substantially as described. (6.) In the manufacture of splints for the match-bodies referred to in claim 1, a stationary double holder for the gouges and lancets having two cross-bars, one of which carries gouges and the other the lancets, and which are placed at such a distance apart that the wood can pass between them, substantially as described. (7.) In the manufacture of splints for matches, the arrangement in the machines for cutting the splints of gouges and lancets movable in blocks that are carried in holes in a stationary supporting-bar and urged by springs towards the surface of the log, substantially as described. (8.) In the manufacture of splints for matches, the arrangement in the splint-cutting machines of holders which, whilst they are moved regularly during the operation of the machine towards the axis of the log of wood, are constructed in such a way that they are forced automatically towards the surface of the log, from which they are held by means of adjustable distance-blocks, substantially as described. (9.) In the manufacture of the match-bodies referred to in claim 1, the use in the chopping-off machines of gouges arranged to cut in the third side of the head ends of the matches, substantially as described. (10.) In the manufacture of the match-bodies as referred to in claim 1, the use in the chopping-off machine of a horizontally moving compound knife, which at the same time that it cuts off the match-bodies cuts in the fourth side of the match-heads, substantially as described. (11.) In machines for manufacturing wedge-shaped matches, as referred to in claim 1, the arrangement of a storage-box which moves one-match length to the side each time it moves forward at every stroke of the knives, substantially as described.

(Specification, 10s.; drawings, 7s.)

No. 15865.—14th January, 1903.—ERNEST SMITH BALDWIN and HENRIE HAMPTON RAYWARD, carrying on business as "Baldwin and Rayward," Wellington, New Zealand, Patent Agents (nominees of Stanislas Morner Barre, of Montreal, Canada, Inventor). Improvements in apparatus for sterilising milk and the like, and for ripening cream, and for other like purposes.

Claims.—(1.) A pasteuriser comprising an outer vessel adapted to contain a water-bath and having bearing-supports therein, a closed interior drum adapted to contain the liquid to be pasteurised and having trunnions resting in said supports, a spur gear mounted on one of said trunnions, a manually rotatable shaft journalled in the wall of said vessel and longitudinally displaceable in its bearings, and a spur gear mounted on said shaft and adapted to mesh with said first-mentioned gear when said shaft is pushed inwardly, and to be withdrawn out of the way of said gear when drawn outwardly, whereby said drum may be raised out of said vessel. (2.) A pasteuriser comprising an outer vessel adapted to contain a water-bath and having bearing-supports therein, a closed interior drum adapted to contain the liquid to be pasteurised and having trunnions resting in said supports, a spur gear mounted on one of said trunnions, a manually rotatable shaft journalled in the wall of said vessel and longitudinally displaceable in its bearings, a spur gear mounted on said shaft and adapted to mesh with said first-mentioned gear when said shaft is pushed inwardly, and to be withdrawn out of the way of said gear when drawn outwardly, said drum having a charging-opening in one end thereof, and a closure-plate adapted to seal said opening. (3.) A pasteuriser comprising an outer vessel adapted to contain a water-bath and having bearing-supports therein, a closed interior drum adapted to contain the liquid to be pasteurised and having trunnions resting in said supports, a spur gear mounted on one of said trunnions, a manually rotatable shaft journalled in the wall of said vessel and longitudinally displaceable in its bearings, a spur gear mounted on said shaft and adapted to mesh with said first-mentioned gear when said shaft is pushed inwardly, and to be withdrawn out of the way of said gear when drawn outwardly, said drum having a charging-opening formed in one end thereof, and a closure plate adapted to seal said opening, and carrying one of the trunnions of said drum. (4.) A pasteuriser comprising an outer vessel adapted to contain a water-bath and having bearing-blocks mounted therein, a closed interior drum adapted to contain the liquid to be pasteurised and having trunnions removably mounted in said blocks, a gear mounted on one of said trunnions, a crank-shaft mounted in the wall of the vessel, a gear mounted on said crank-shaft and intermeshing with said first gear, and a crank mounted on the outer end of said crank-shaft. (5.) A pasteuriser comprising a vessel adapted to contain a water-bath, bearing-blocks mounted on the inner walls of said vessel, a cylindrical drum having axial trunnions adapted to rotate in said bearing-blocks, one of said trunnions being formed with an axial bore, a tube extending through said bore and having its ends bent at right angles thereto, and means for holding said tube in a stationary position while said drum is being rotated. (6.) A pasteuriser comprising a vessel adapted to contain a water-bath, bearing-blocks mounted on the inner walls of said vessel, a cylindrical drum having axial trunnions adapted to rotate in said bearing-blocks, one of said trunnions being formed with an axial bore, a tube extending through said bore and having its ends bent at right angles thereto, means for holding said tube in a stationary position while said drum is being rotated, a shaft journalled in the wall of the outer vessel, means connecting

said shaft with said drum to turn the same, and means for turning said shaft. (7.) A pasteuriser comprising a vessel adapted to contain water, a cylindrical drum having axial trunnions mounted to rotate on a horizontal axis within said vessel, a closure-plate closing one head of said drum, a radial paddle extending from the wall of said drum internally, a plug closing an aperture in the side of said drum, a gear-wheel mounted on one of the trunnions of said drum, a second gear-wheel meshing with said first gear-wheel, a shaft on which said second gear-wheel is mounted and which is journalled in the wall of said vessel, and means for rotating said shaft. (8.) A pasteuriser comprising an outer vessel adapted to contain a water-bath, a closed drum having axial trunnions rotatably mounted on a horizontal axis within said outer vessel, a closure-plate adapted to close one head of said vessel and having one of the trunnions forming a part thereof and formed with an axial bore, a doubly bent tube extending through said bore and having its ends bent into upwardly extending vertical position, means for rotating said drum, and means for securing the outer end of said doubly bent tube in upright vertical position. (9.) A pasteuriser comprising an outer vessel adapted to contain a water-bath, a closed drum having axial trunnions rotatably mounted on a horizontal axis within said outer vessel, a closure-plate adapted to close one head of said vessel and having one of the trunnions forming a part thereof and formed with an axial bore, a doubly bent tube extending through said bore and having its end bent into upwardly extending vertical position, means for rotating said drum, and means for securing the outer end of said doubly bent tube in upright vertical position, the bearing-blocks supporting said trunnions being arranged to release the latter to permit said drum to be removed. (10.) A pasteuriser comprising an outer vessel adapted to contain water, a pair of bearing-blocks mounted on the inner walls of said vessel and having pivoted caps, an inner sterilising-drum having axial trunnions adapted to be removably mounted in said blocks and secured in position by said caps, means for securing said caps in position and for releasing the same, a tube extending through one of the trunnions of said drum and having its ends bent into upright vertical position, means for holding said tube in such position while the drum is being rotated, a gear-wheel mounted on the other trunnion, a crank-shaft having a gear meshing with said first-mentioned gear, means for preventing the longitudinal motion of said shaft to keep said gears in mesh, said means being releasable to permit the shaft to be pulled out of the way so that said drum may be taken out of said vessel, and a closure-plate adapted to cover an aperture in said drum through which material to be sterilised is inserted, substantially as described. (11.) A pasteuriser comprising an outer vessel adapted to contain water, a pair of bearing-blocks mounted on the inner walls of said vessel and having pivoted caps, an inner sterilising-drum having axial trunnions adapted to be removably mounted in said blocks and secured in position by said caps, means for securing said caps in position and for releasing the same, a tube extending through one of the trunnions of said drum and having its ends bent into upright vertical position, means for holding said tube in such position while the drum is being rotated, a gear-wheel mounted on the other trunnion, a crank-shank having a gear meshing with said first-mentioned gear, means for preventing the longitudinal motion of said shaft to keep said gears in mesh, said means being releasable to permit the shaft to be pulled out of the way so that said drum may be taken out of said vessel, a closure-plate adapted to cover an aperture in said drum through which material to be sterilised is inserted, and a radial paddle or blade extending inwardly from the inner wall of said drum. (12.) In a pasteuriser, in combination, an outer vessel adapted to contain a bath, a vessel within the same and adapted to contain the liquid to be sterilised, and a removable pipe-connection leading from said inner vessel through the wall of said outer vessel. (13.) In a pasteuriser, in combination, an outer vessel adapted to contain a water-bath, a drum rotatably mounted therein and adapted to contain a liquid to be sterilised, and friction rollers beneath said drum. (14.) In a pasteuriser, in combination, an outer vessel adapted to contain a water-bath, a drum within the same and mounted on trunnions, friction rollers beneath said drum, bands around said drum and resting upon said friction rollers, and a removable pipe-connection leading from said drum through the wall of said outer vessel.

(Specification, 15s.; drawings, 3s.)

No. 15867.—14th January, 1903.—FRANK HENRY AUSSEL, of Wellington, New Zealand, Coal-lumper. Improved means for securing the legs of cows while being milked.

Claims.—(1.) The improved means for securing the legs of cows and other animals, substantially as described, and illustrated in Figs. 1 and 2 of the drawings. (2.) The improved rope-retaining device in combination with a device for securing the legs of cows and other animals, substantially as set forth.

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

F. WALDEGRAVE,
Registrar.

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.

Provisional Specifications.

Patent Office,
Wellington, 21st January, 1903.

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

No. 15700.—29th November, 1902.—WILLIAM VARCOE HOSKING, of Cross Road, Midhirst, Taranaki, New Zealand, Farm-hand. An improved mode of and apparatus for bailing and unbailing cows.

No. 15796.—19th December, 1902.—SAMUEL WHITE, of Dunedin, New Zealand, Coachbuilder. Improvements in drills.

No. 15810.—23rd December, 1902.—JOHN ARTHUR, Jun., of Orepuki, New Zealand, Blacksmith. Improvements in shovels and the like.

No. 15814.—22nd December, 1902.—HENRY DROUTLEGE, of Hobson Street, Auckland, New Zealand, Engineer. An improved registering machine and totalisator.

No. 15816.—29th December, 1902.—JOHN MCKINNON, of Whareora, near Whangarei, Auckland, New Zealand, Farmer. Improved means for indicating the distance travelled by railway-trains and other like vehicles.

No. 15817.—30th December, 1902.—DONALD MCKENZIE, of Dunedin, New Zealand, School Teacher. Finger-guide for penholders and the like.

No. 15818.—30th December, 1902.—ROBERT LENDER SUTTIE, of Onehunga, New Zealand, Tanner. Improved means for oiling axles of vehicles.

No. 15825.—31st December, 1902.—WILLIAM MUNRO WHISHAW, Farmer, and WILLIAM EDINBOROUGH CHAMBERLAIN, Engineer, both of Feilding, New Zealand. An improved appliance for cooling cream and milk.

No. 15826.—5th January, 1903.—DANIEL WEBSTER BALCH, of 2400, Fillmore Street, San Francisco, California, United States of America, Mining Engineer (assignee of Albert Alonzo Honey, of 644, Rialto Building, Chicago, Illinois, United States of America aforesaid, Electrical Engineer). Improvements in electro-magnetic railway traction.

No. 15827.—5th January, 1903.—UNITED SHOE-MACHINERY COMPANY, of Paterson, 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 aforesaid (assignees of Sanford Daniels Leland, of Winchester, Middlesex, Massachusetts aforesaid, Mechanical Engineer). Improvements in or relating to machines for compressing heels.

No. 15828.—5th January, 1903.—UNITED SHOE-MACHINERY COMPANY, of Paterson, 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 aforesaid (assignees of Charles Levi Allen, of Winchester, Middlesex, Massachusetts aforesaid, Draftsman). Improvements in or relating to machines for compressing heels.

No. 15829.—5th January, 1903.—JOHN HENRY HUSBAND, of 718, Drummond Street, Carlton, Bourke, Victoria, Cordial-manufacturer. A machine which, on the depositing of the proper coins in the receptacles prepared to receive them, automatically stamps letters, newspapers, and packets for transmission through the post.

No. 15830.—5th January, 1903.—HENRY MOORE SUTTON, WALTER LIVINGSTON STEELE, EDWIN GOODWIN STEELE, and WILLIAM FOLSETTER, all of Dallas, Texas, United States of America, Manufacturers. Improvements in electrostatic-magnetic separators.

No. 15832.—6th January, 1903.—JAMES ORMISTON, of 47, Elm Row, Dunedin, New Zealand, Marine Engineer. Improvements relating to ships' telegraphs for immediately indicating by alarm the wrong carrying-out of orders, and continuing the alarm until the mistake is rectified.

No. 15833.—6th January, 1903.—PERCY ALBERT WALKER, of Patea, New Zealand, Chemist. Improvements in and relating to candlesticks.

No. 15835.—7th January, 1903.—WILLIAM JOHN MCCULLOUGH HARVEY, of Rata, Rangitikei, New Zealand, Engine-driver. Improvements in or relating to governors for engines.

No. 15837.—5th January, 1903.—JOHN EDWIN PALMER, of Otokia, New Zealand, Gentleman. An improved branding-compound.

No. 15838.—6th January, 1903.—JULIUS DECIMUS TRIPE, of Guyton Street, Wanganui, New Zealand, Surgeon. Improvements in apparatus for securing doors, windows, casements, and other similar purposes.

No. 15841.—8th January, 1903.—JOHN DUNCAN, of care of Messrs. Cutten Bros., Greymouth, New Zealand, Engineers. An improvement in bottom tumblers of dredgers.

No. 15849.—5th January, 1903.—JOHN THOMSON, of Invercargill, New Zealand, Draper. An improved method of withdrawing continuously from a sluice-box when in operation a comparatively small quantity of water and material with which is carried the bulk of the gold.

No. 15855.—7th January, 1903.—KATE RAYMOND, wife of Frank Victor Raymond, of Invercargill, New Zealand, Solicitor. Improvements in tea-infusers.

No. 15859.—9th January, 1903.—THOMAS NAPIER, of Hororata, Canterbury, New Zealand, Carpenter. A combined boot-cleaning machine and knife-polisher.

No. 15860.—8th January, 1903.—JOHN BROCKIE KING, of Parnell, Auckland, New Zealand, Plumber. An improved filter-bed, with automatic discharge.

No. 15861.—12th January, 1903.—JAMES MALCOLM MAY, of 35, Cambridge Terrace, Wellington, New Zealand, Clothier's Assistant (nominee of William McKenzie, of Wellington aforesaid, Cabinetmaker). Improvements in boot and shoe heels, and in the manner of securing the same to boots and shoes.

No. 15862.—12th January, 1903.—EDWIN BASIL-JONES, of Wellington, New Zealand, Manager of Company. Improvements in or relating to cans and the like.

No. 15866.—14th January, 1903.—HAROLD JAMES BETTANY, of Nelson, New Zealand, Carpenter. Improvements in revolving chairs, tables, and the like.

No. 15868.—14th January, 1903.—WILLIAM JAMES HOPKIRK and GEORGE GILPIN, of Wellington, New Zealand, Railway Employees, New Zealand Railways. An improvement in the triple valves of the Westinghouse brake.

F. WALDEGRAVE,
Registrar.

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

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

Letters Patent sealed.

LIST of Letters Patent sealed from the 8th January to the 20th January, 1903, inclusive:—

No. 13772.—J. F. R. Gwatkin, seed-sowing apparatus.

No. 13937.—J. Trapski and S. Clarke, means for securing pins, &c.

No. 14052.—D. J. Kelleher, fire-detecting apparatus.

No. 14103.—J. Rose, horse-starting machine.

No. 14106.—G. C. Palmer, bandoleer.

No. 14128.—G. W. Shailer and A. Burges, hoe.

No. 14290.—W. Andrews and A. W. Beaven, chaff-cutter.

No. 14405.—J. Hylard and E. G. H. Bingham, gun.

No. 14514.—J. Greenacre, machine for sawing logs.

No. 14567.—J. F. McNeill, attachment to agricultural machine.

No. 14612.—Inverted Incandescent Gas-lamp Syndicate (Limited), gas-burner. (W. W. Hare.)

No. 14863.—F. A. Jones, O. Bowman, G. McMullen, and A. Rankin, tram-rail cleaning.

No. 15124.—Flameless Gaslight Company Limited, apparatus for gas-lighting. (W. Hooker.)

No. 15225.—H. E. Dade, binder.

No. 15327.—Foreign McKenna Process Company, reshaping rolled products. (D. H. Lentz.)

No. 15329.—W. Brady, rock-drill.

No. 15337.—G. Simpson, sash-fastener.

No. 15383.—Sir O. J. Lodge, D.Sc., F.R.S., A. Muirhead, D.Sc., and E. E. Robinson, telegraphic receiver.

No. 15384.—W. A. Ede-Clendinnen, nicotine-trap.

No. 15414.—Linotype Company, Limited, printing in gold, &c., powders. (T. Hooley.)

No. 15442.—Fairbanks, Morse, and Co., gas-generator. (F. G. Hobart.)

No. 15443.—The Shedd Electric and Manufacturing Company, ventilator. (T. R. Weyant.)

No. 15467.—J. Winepress, appliance for opening oysters.

No. 15479.—G. Westinghouse, metallurgical vessel-lining. (W. J. Knox.)

No. 15482.—D. W. Healy, military kit.

No. 15490.—F. L. Whitney, wool-scouring machinery.

No. 15491.—G. S. Duncan, can-body-making machine. (R. D. Hume.)

No. 15494.—T. S. C. Lowe, manufacture of coke.

No. 15541.—W. C. Forbes, course-recorder for ships.

No. 15542.—The Clancy White-lead Company Proprietary, Limited, manufacture of white-lead. (J. C. Clancy.)

No. 15515.—J. P. Wiens, sweeping-brush.

No. 15516.—W. A. Maddern, ore-roasting furnace.

No. 15522.—The Toledo Glass Company, gathering and shaping glass. (M. J. Owens.)

F. WALDEGRAVE,
Registrar.

Letters Patent on which Fees have been paid.

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

SECOND-TERM FEES.

NO. 11314.—D. Donald, eccentric journal lever. 13th January, 1903.

No. 11319.—W. M. Turner, horserace-starting machine. 9th January, 1903.

No. 11392.—D. McGill and F. W. Tannet-Walker, refrigerating machinery. 15th January, 1903.

No. 11678.—The British Westinghouse Electric and Manufacturing Company, Limited, electrical distribution. (B. G. Lamme.) 9th January, 1903.

No. 11690.—The British Westinghouse Electric and Manufacturing Company, Limited, regulation of electro-motive force. (N. Rowe.) 9th January, 1903.

No. 11691.—The British Westinghouse Electric and Manufacturing Company, Limited, starting-mechanism for electric motor. (T. S. Perkins.) 9th January, 1903.

No. 11695.—The British Westinghouse Electric and Manufacturing Company, Limited, fuse-block for electric circuit. (W. E. Hughes—H. P. Davis.) 9th January, 1903.

No. 11696.—The British Westinghouse Electric and Manufacturing Company, Limited, synchronous motor. (B. G. Lamme.) 9th January, 1903.

No. 11731.—The British Westinghouse Electric and Manufacturing Company, Limited, controller for electric motor. (H. P. Davis, G. Wright, and A. J. Wurts.) 9th January, 1903.

THIRD-TERM FEE.

No. 8377.—E. J. Preston and A. B. Gill, electric-lighting, &c., and ventilating of railway-carriages. 9th January, 1903.

F. WALDEGRAVE,
Registrar.

Subsequent Proprietors of Letters Patent registered.

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

NO. 9397.—James Shiel, James Hugh Nimmo, and George William Gibson, trading together as Grain and Seed Merchants, in Dunedin, in the Provincial District of Otago, in New Zealand, under the style or firm of "Nimmo and Blair," blight and insect killer. [G. H. Hicks.] 19th January, 1903.

No. 10157.—The Thunderbolt Patent Governor Company (Limited), of 70, Cornhill, in the City of London, England, governor. [E. Thunderbolt.] 20th December, 1902.

No. 10711.—Alfred Carter Broad, of Dunedin, New Zealand, Brush-manufacturer, broom, brush, &c. [L. G. Abrams—J. Matherson.] 12th January, 1903.

No. 11278.—Edmund Osborne, of Foxton, in the Provincial District of Wellington, New Zealand, Storekeeper, hoe. [J. King.] 18th December, 1902.

No. 13647.—John Frederick Kuch, of 35A, Cuba Street, in the City of Wellington, New Zealand, Pork Butcher, and Richard James McKenzie, of 67, Taranaki Street, in the said city, Dealer, medicinal plaster. [D. Cleary.] 9th January, 1903.

F. WALDEGRAVE,
Registrar.

Request for Correction of Clerical Errors.

NO. 15779.—J. G. F. Lund, improvements in walls (advertised in Supplement to *New Zealand Gazette*, No. 2, of the 8th January, 1903).

To strike out the words "of that of," and substitute "upon," line 6, page 2.

To strike out the words "alternately placed," and substitute "layers acting alternately as," line 14, page 2.

To strike out "with," and substitute "against," line 15, page 2.

To strike out "adjacent layers," and substitute "side supports," line 4, page 3.

To strike out the figure "6," and substitute "5," line 18, page 3.

F. WALDEGRAVE,
Registrar.

Applications for Letters Patent abandoned.

LIST of applications for Letters Patent (with which provisional specifications only have been filed) abandoned from the 8th January, 1903, to the 21st January, 1903, inclusive:—

No. 14592.—J. F. Donnelly, preparation for the hair.
No. 14598.—T. S. Philpott and R. Hutchinson, fire-escape.
No. 14599.—T. S. Philpott and R. Hutchinson, fire-alarm.
No. 14602.—H. P. Brasell, braking vehicle.
No. 14603.—E. T. Towgood, Y. S. Towgood, and J. Allison, tent.
No. 14608.—G. T. Heppell, gold-saving screen and table for dredge.
No. 14610.—E. G. Rawnsley, table tennis.
No. 14613.—H. Tas, bedstead.
No. 14621.—J. Purkiss, safety match-box.
No. 14622.—A. C. Murray, tap.
No. 14626.—J. J. Macky and G. H. Bigelow, nut-lock.
No. 14630.—J. H. Grattan, saw stripper and regulator.
No. 14631.—F. H. W. Cowper, ping-pong.
No. 14632.—J. Jay, steam-boiler furnace.
No. 14633.—C. E. Hodge, spark-arrester.
No. 14640.—R. R. Donaldson, trap for street drainage.
No. 14650.—I. Harrison and E. L. Kirkland, fire-escape.
No. 14651.—J. E. Langstone, F. McLeod, and T. J. Broome, compressed fuel.
No. 14653.—J. W. Jones, racquet for table games.
No. 14655.—F. Recht and C. L. Curtis, bottle-closure.
No. 14657.—J. Shepherd, dredging machinery.
No. 14658.—J. F. Mackley, sole for boot, &c.
No. 14659.—A. L. B. F. Struthers, folding towel-rack.
No. 14663.—J. D. Smith, hair-curler.
No. 14665.—J. Salinger, operating air-brake on train.
No. 14666.—K. C. Jackson and N. E. Jackson, stock mark.

F. WALDEGRAVE,
Registrar.

Applications for Letters Patent lapsed.

LIST of applications for Letters Patent (with which complete specifications have been lodged) lapsed from the 8th January to the 21st January, 1903, inclusive:—

No. 13803.—I. Harrison, drawing off contents of beer-barrels.
No. 13810.—E. J. Butterworth, fire-alarm.

F. WALDEGRAVE,
Registrar.

Letters Patent void.

LIST of Letters Patent void through non-payment of renewal fees from the 8th January to the 21st January, 1903, inclusive:—

THROUGH NON-PAYMENT OF SECOND-TERM FEES.

No. 11053.—R. V. Thompson, C. A. Horton, and W. Murphy, bicycle-driving gear.
No. 11054.—J. H. Moore, bottle and seal. (R. A. McWilliams—C. W. Davison.)
No. 11056.—The Austral Incandescent Lighting Company, Limited, incandescible subjects. (J. L. Schmidt and H. Caspers.)
No. 11058.—W. Bayliff, T. D. Bayliff, and B. Draper, animal, &c., trap.
No. 11059.—M. L. Squire, toothache, &c., cure.
No. 11062.—J. J. F. Walker and J. Sutherland, making toast.
No. 11066.—J. Effront, fermenting worts.
No. 11067.—The Non-intoxicant Beverage Company, non-intoxicating beverage. (E. Uhlmann.)
No. 11080.—W. W. Cabena, securing boot-laces, &c. (A. Menesdorffer.)
No. 11081.—A. Arnold, tool.
No. 11082.—J. Robinson, clothes-peg.
No. 11090.—W. Adams, starting horse-race. (J. E. Harries.)
No. 11099.—W. A. Thompson, rabbit-packing crate.

THROUGH NON-PAYMENT OF THIRD-TERM FEES.

No. 7985.—E. A. Ashcroft, electrolytic treatment of zinc-ores.

F. WALDEGRAVE,
Registrar.

Design registered.

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

No. 172.—Lever Brothers, Limited, of Balmain, State of New South Wales, Soap and Oil Manufacturers. Class C. 18th December, 1902.

F. WALDEGRAVE,
Registrar.

Applications for Registration of Trade Marks.

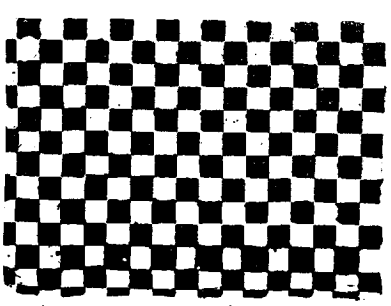
Patent Office,
Wellington, 21st January, 1903.

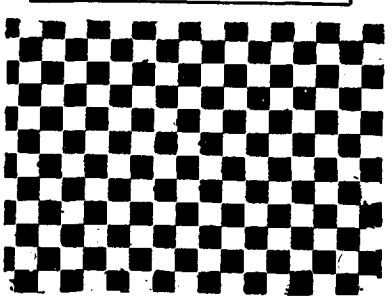
APPLICATIONS for registration of the following trade marks have been received. Notice of opposition to the registration of any of these applications may be lodged at this office within two months of the date of this *Gazette*. Such notice must be in duplicate, and accompanied by a fee of £1.

No. of application: 3856.

Date: 23rd July, 1902.

TRADE MARK.





The essential particulars of this trade mark are the chequered labels, and the signature "J. & G. Cox"; and applicants disclaim any right to the exclusive use of the added matter, except in so far as it consists of their own name and address.

NAME.

J. AND G. COX, LIMITED, of Gorgie Mills, Edinburgh, Scotland, and Eastcheap Buildings, London, E.C., England, Gelatine and Glue Manufacturers.

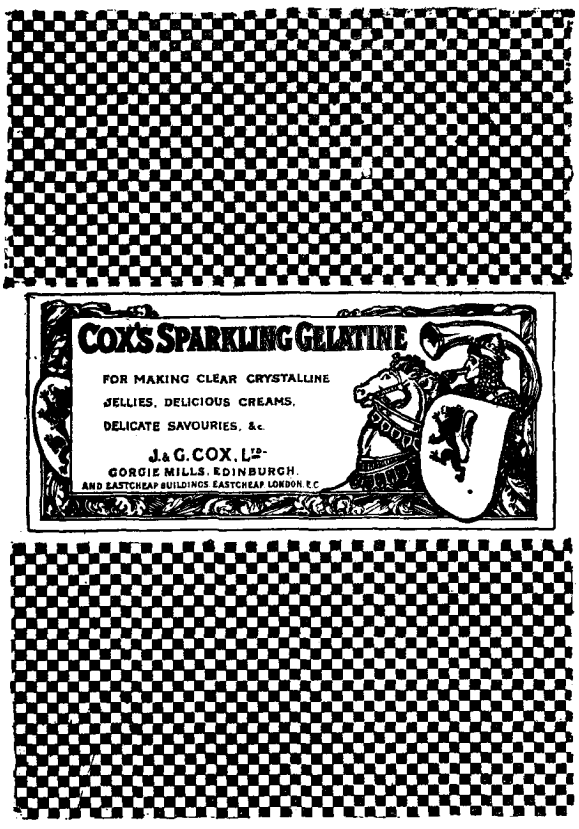
No. of class: 42.

Description of goods: Gelatine.

(By consent.)

No. of application: 3857.
Date: 23rd July, 1902.

TRADE MARK.



The essential particulars of this trade mark are the combination of devices; and applicants disclaim any right to the exclusive use of the added matter, except in so far as it consists of their own name and addresses.

NAME.

J. AND G. COX, LIMITED, of Gorgie Mills, Edinburgh, Scotland, and Eastcheap Buildings, London, E.C., England, Gelatine and Glue Manufacturers.

No. of class: 42.
Description of goods: Gelatine.

(By consent.)

No. of application: 3923.
Date: 4th September, 1902.

TRADE MARK.

LINOTYPE.

The applicants claim that the said trade mark has been used by them and their predecessors in business in respect of the articles mentioned from 1890.

NAME.

THE LINOTYPE COMPANY, LIMITED, of No. 188, Fleet Street, in the City of London, England, Manufacturers.

No. of class: 5.
Description of goods: Metal in ingots.

No. of application: 4053.
Date: 8th January, 1903.

TRADE MARK.

HANDYMAN.

NAME.

GEORGE HENRY CATT, of Villa Amalthea, Hythe, in the County of Southampton, and of 17, May Pond, Bermondsey, London, England, Manufacturer.

No. of class: 6.
Description of goods: Boot-finishing machinery.

No. of application: 4055.
Date: 9th January, 1903.

TRADE MARK.

The word

MARSUMA

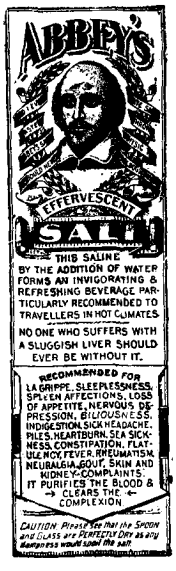
NAME.

HAVANNA CIGAR-MANUFACTURING COMPANY, of Havanna, near Congleton, Cheshire, England, Manufacturers.

No. of class: 45.
Description of goods: Smoking-tobacco, chewing-tobacco, cigars, cheroots, cigarettes, and snuff.

No. of application: 4056.
Date: 9th January, 1903.

TRADE MARK.



The essential particular of the trade mark is the combination of devices; and the applicants disclaim any right to the exclusive use of the added matter except their name.

NAME.

THE ABBEY EFFERVESCENT SALT COMPANY, LIMITED, of 144, Queen Victoria Street, London, England, Merchants.

No. of class: 3.

Description of goods: A medicinal saline preparation for human use.

No. of application: 4059.

Date: 15th January, 1903.

TRADE MARK.

NAME.

The persons trading as and constituting the firm of P. KLEEMO AND COMPANY, of No. 3, Wynyard Street, Sydney, in the State of New South Wales and Commonwealth of Australia, Wholesale Jewellers and General Importers.

No. of class: 10.

Description of goods: Horological instruments, especially watches and clocks.

F. WALDEGRAVE,
Registrar.

Trade Marks registered.

NO. 3096; 3489.—J. S. Vickery and Son. Class 3. (*Gazette* No. 87, of the 30th October, 1902.)

No. 3097; 3937.—W. and G. Turnbull and Co. Class 42. (*Gazette* No. 87, of the 30th October, 1902.)

No. 3098; 3939.—W. and G. Turnbull and Co. Class 42. (*Gazette* No. 87, of the 30th October, 1902.)

No. 3099; 3957.—J. T. Norton and Co. Class 3. (*Gazette* No. 87, of the 30th October, 1902.)

No. 3100; 3658.—G. W. Hean. Class 3. (*Gazette* No. 19, of the 6th March, 1902.)

No. 3101; 3556.—E. C. Frost. Class 42. (*Gazette* No. 91, of the 17th October, 1901.)

No. 3102; 3974.—United States Rubber Company. Class 38. (*Gazette* No. 87, of the 30th October, 1902.)

No. 3103; 3975.—The "Force" Food Company. Class 42. (*Gazette* No. 87, of the 30th October, 1902.)

No. 3104; 3983.—Salmon and Gluckstein, Limited. Class 45. (*Gazette* No. 87, of the 30th October, 1902.)

No. 3105; 3573.—W. D. Lysnar. Class 42. (*Gazette* No. 99, of the 14th November, 1901.)

No. 3106; 3884.—J. F. W. Cook. Class 3. (*Gazette* No. 78, of the 2nd October, 1902.)

No. 3107; 3978.—Sharland and Co., Limited. Class 50. (*Gazette* No. 87, of the 30th October, 1902.)

No. 3108; 3610.—E. Rich and Co., Limited. Class 42. (*Gazette* No. 94, of the 13th November, 1902.)

No. 3109; 3951.—Sargood, Son, and Ewen. Class 38. (*Gazette* No. 78, of the 2nd October, 1902.)

No. 3110; 3952.—Sargood, Son, and Ewen. Class 38. (*Gazette* No. 83, of the 16th October, 1902.)

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.]

NOS. 85/1103, 1324/1027, 1865/1471, 2243/1783, 2244/1784, 2451/1940.—George Charles Gilmore, trading as "Gilmore and Co.", Tea Merchants, of Customs Street, Auckland, New Zealand. [Gilmore, Younghusband, and Company.] 15th January, 1903.

Nos. 86/2488, 3630/2891.—Geo. G. Sandeman, Sons, and Co., Limited, of 20, St. Swithin's Lane, London, England, Wine Merchants. [Geo. G. Sandeman, Sons, and Co.] 20th January, 1903.

No. 561/470.—Tanqueray, Gordon, and Co., Limited, of 132, Goswell Road, London, England, Distillers. [R. C. W. Currie, trading as "Gordon and Co."] 20th January, 1903.

F. WALDEGRAVE,
Registrar.

Trade Mark Renewal Fee paid.

FEE paid for renewal of undermentioned Trade Mark for fourteen years from the 1st January, 1904:—

No. 89/993.—N. Hingley and Sons. 15th January, 1903.

F. WALDEGRAVE,
Registrar.

By Authority: JOHN MACKAY, Government Printer, Wellington.